

WELCOME

The IEEE Magnetics Society Conference, “Intermag Europe 2008”, will be held from Sunday, May 4th, until Thursday, May 8th, at the Palacio Municipal de Congresos in Madrid, Spain. Intermag is the premier conference on applied magnetism and related technologies. Members of the international scientific and engineering communities interested in recent developments in these topics are invited to attend the conference.

We have planned an exciting and informative set of symposia, tutorial sessions and invited talks, regular oral and poster presentations and technical exhibitions reviewing the latest developments in this field.

Intermag Europe 2008 is a unique event. We are delighted to announce that this year’s Nobel Laureates in Physics, Prof. Albert Fert and Prof. Peter Grünberg have confirmed their attendance at the 2008 Intermag Conference. A GMR Nobel Celebration has been arranged for the evening on Monday May 5th, where Prof. Grünberg will deliver a lecture on “From Spin Waves to Giant Magnetoresistance and Beyond” and Prof. Fert will lecture on “Emerging Directions in Spintronics”. Other technical events and celebrations in recognition of the Nobel Prize for the discovery of GMR are also planned. We hope that members of the IEEE Magnetics Society and researchers with interests in the field will join us for this special occasion.

Finally we also hope you will enjoy visiting Madrid and experiencing Spanish culture. On behalf of the Management Committee of Intermag Europe 2008, we look forward to seeing you in Madrid.

Manuel Vázquez

Ron Indeck

General Chairmen

LOCATION

Madrid is the cosmopolitan capital city of Spain. It is the home of the administration of the Spanish government and Parliament as well as the residence of the monarch. It is one of the most important cities in Spain in the financial and industrial sectors. Madrid is a cosmopolitan and multi-ethnic city with more than 4 million inhabitants and is characterised by intense cultural and artistic activities as well as a vibrant nightlife.

Madrid is also a centre for science and technology. In Madrid there are 6 public and 9 private universities and about 30,000 students study science and technology. More than 50 research centers in different branches and institutes provide a dynamic scientific community. For more information about science and technology in Madrid, go to www.madrimasde.org/English/default.asp

Intermag Europe 2008 will be held at the Palacio Municipal de Congresos, located in the “Campo de las Naciones”, the new financial hub of the city, which is well connected with the centre and only five minutes from Barajas Airport.

Further information about Madrid can be found on the web at: www.esmadrid.es or www.turismomadrid.es.

WEATHER

Springtime is the nicest season of the year in Madrid. The days are long and the temperatures pleasant, though it can cool down at night. The average temperature in May is around 16° C with a maximum of 22° C and minimum of 9° C. Rain is not uncommon in spring.

TRANSPORTATION IN MADRID

Underground/Subway:  The lines are differentiated by colour and are numbered from 1 to 13. Tickets can be purchased in every station from ticket offices or automated machines. Single tickets cost 1 €. Metrobus, which is a 10 journey travel card valid for underground and buses, costs 6.70 €. The underground/subway runs from 6:00 am to 1:30 am.

Line 8 (pink line) goes to the station “Campo de las Naciones” where the conference venue is located.

City Buses: The city buses are a good alternative to the subway. Bus single tickets can be paid directly to bus driver. The buses run from 6:00 am to 11:00 pm. Night buses (called “buhos”) run less frequently. The price is the same, 1 €. Traffic jams in Madrid are frequent

For more information please visit the following website:
<http://www.emtmadrid.es/>

Tourist Travel Pass: A Tourist Travel Pass can be used on all public transport in the city as many times as required within its period of validity. There are five types of pass valid for 1 to 7 days. The card can be purchased at all stations in the subway network, at the Centro de Atención al Viajero (Passenger Assistance Centre), at both airport stations (line 8) and at Tourist Offices.

Area A, comprising the services of the Metro and EMT de Madrid (buses).

TOURIST TRANSPORT CARD (PRICE IN EURO)

A Area					
	1 day	2 days	3 days	5 days	7 days
Adult	4.00	7.20	9.60	15.00	20.80

Madrid Public Transport Information:

Please visit www.ctm-madrid.es

You can also find an underground map at:

www.metromadrid.es/acc_resources/pdfs/Plano_Metro_2007.pdf

Taxis: Taxis in Madrid are white and are distinguished with a diagonal red band on the front doors. A green light on top of the taxi indicates if it is available. The taxi should always charge by the taxi-meter that runs according to distance covered, the urban area, the day of the week (higher fares on holidays), and the pickup point (higher fares for pickups in bus stations, train stations and airport). Passengers are never required to pay additional fares for luggage if there is enough space in the boot. Additional fares are shown on information signs on the back windows of the taxi.

Car Rental: Car rental is not recommended to get around Madrid due the traffic. Parking in Madrid is expensive and always difficult. A large part of the tourist area is not accessible by car.

ACCESS TO MADRID CENTRE FROM MADRID AIRPORT

By Underground/Subway

- From Terminals 1, 2 and 3 (T1, T2 and T3): Connection to underground (metro) line 8, the underground station is called “Aeropuerto T1-T2-T3”.
- From Terminal 4 (T4): Connection to underground line 8, the underground station is called “Aeropuerto T4”.

The metro fare to downtown Madrid is 2 Euros but involves a change of train.

By Bus: Number 200 to “Avenida de America” bus station. There you can find connection to underground lines: 4, 6, 7 and 9.

By Taxi: The approximate cost from the airport to the city centre is around 30 €.

ACCESS TO INTERMAG 2008 VENUE

Venue: Palacio Municipal de Congresos,
Avenida de la Capital de España Madrid, 7, 28042
Madrid.

Underground/Subway:  Line 8, Station “Campo de las Naciones”

Access Map: Please visit
http://www.madridespaciosycongresos.es/palacio/situacion_i.cfm

HOTEL ACCOMMODATION

Participants interested in making a hotel reservation, should check the accommodation offer on the website and follow the procedure. A hotel confirmation showing the amount received will be issued and sent as soon as the payment is received. For further information about hotel reservations please contact sureta@siasa.es.

ACCOMMODATION FOR STUDENTS

<http://www.student-accommodation-madrid.com/>
<http://www.madridflatmate.com/>

LUNCH, TAPAS AND DINNER

Spain has a different dining schedule than some other countries. Lunchtime typically starts at 1:30 pm and can finish as late as 4:00 pm. Dinner starts after 9:00 pm and many restaurants are not open until this time.

One of Madrid's main attractions is its great number of bars and taverns where you are able to relax after a busy day, enjoy a glass of wine or a beer accompanied by a tasty ‘tapa’. “Tapeo” has existed as a pleasant and healthy custom in Spain since the 13th century, when the Castillian King Alphonse X (“the Wise”) forced bartenders to serve something to eat when customers ordered wine. Today tapas are small snacks between meals, though on many occasions tapas can substitute for meals.

CONFERENCE REGISTRATION

Advance registration fees can be paid in € or US\$. The advanced registration deadline is March 31st 2008. Advanced registration and full payment must be received before March 31st. Registration payments received after this date or on-site will be at the higher rates.

Please note that the IEEE Magnetics Society has provided a special discount to the registration fee for Society members wishing to attend Intermag 2008. This \$100 discount is in addition to the usual IEEE member discount. Participants are advised to join the Society on-line at www.Intermagconference.com/intermag2008. Those registering on-site can join the Society at registration to take advantage of the discount.

REGISTRATION FEES	Advanced Registration Before 31 March '08	On-Site Registration
IEEE Magn. Soc. Members	390 €/ 570 \$	470 €
IEEE Members	460 €/ 670 \$	540 €
Non-IEEE Members	550 €/ 800 \$	650 €
Students IEEE Magn. Soc. Members Unemployed Retiree	175 €/ 255 \$	195 €
Students IEEE Members Unemployed Retiree	230 €/ 335 \$	250 €
Students non-IEEE Members Unemployed Retiree	275 €/ 400 \$	300 €

Advanced registration via the web is the most convenient way to register and is highly recommended. On the conference website you will find links to register on-line or to download a PDF file. www.Intermagconference.com/intermag2008

The registration fee includes:

- Access to all Scientific Sessions
- Digest CD
- Morning coffee
- Evening Bierstube
- GMR Nobel Celebration
- Awards Ceremony
- Plenary Lecture
- Magnetism Society Reception

All conference attendees including invited speakers must pay the appropriate registration fee.

All attendees will be required to wear Intermag 2008 name badges at all times.

The use of cameras, videotaping and/or recording devices in the technical sessions is prohibited.

On-site Registration:

Registration on-site can be paid only in Euros. Payment in Euros can be made in cash or by MasterCard, Visa or American Express credit cards only.

The Conference Registration Desk, located in the main lobby of the Palacio Municipal de Congresos, will be open during the following hours:

- Sunday May 4th. 4:00 pm - 7:00 pm
- Monday May 5th 8:00 am - 6:00 pm
- Tuesday May 6th 8:30 am - 6:00 pm
- Wednesday May 7th 8:30 am - 6:00 pm

Cancellation Policy:

Cancellations of registrations paid in Euros must be received by e-mail at sureta@siasa.es or fax (34 91458 10 88). Payments will be refunded less a 50 € service charge before March 31st. After March 31st, cancellations will be accepted but not refunded. Substitutions may be made prior to April 20th.

Cancellation of registrations paid in US\$ must be received in writing at YesEvents:

Intermag 2008 Conference c/o YesEvents
P.O. Box 32862
Baltimore, MD 21282 USA

Payments will be refunded less a \$75.00 service charge before March 31st. After 31st, cancellations will be accepted but not refunded. Substitutions may be made prior to April 20th.

VISA REQUIREMENTS

EU citizens need only their national identity card or passport to enter Spain. Citizens of the United States, Australia, Canada, Japan, South Korea and Singapore do not need a visa to visit Spain for up to 90 days.

Citizens from other countries should contact their local Spanish Embassy or Consulate for details regarding visa applications. Please contact the embassy or consulate as soon as possible in order to determinate your particular visa requirements.

For additional information please visit:
www.mae.es/en/webembajadasconsulados/

If you need a personal letter of invitation to obtain a visa, please contact visaintermag2008@icmm.csic.es, providing your full name, complete mailing address and reference number of the submitted digest. An original letter will be sent to you by post.

Please note that a letter of invitation will be provided to assist delegates obtaining visa or permission to attend the conference and should not be considered as an official invitation covering the registration fee or other expenses. Applications for invitation letters must be received by April 1st 2008.

Citizens from all countries must carry a valid identity card or passport at all times.

ORAL PRESENTATION

Invited talks are a 25 minutes presentation with 5 minutes discussion. Contributed talks are 12 minutes plus 3 minutes discussion. Session Chairs will keep all sessions strictly to time to allow delegates to move between sessions.

All accepted oral presentations are to be made using LCD projectors connected to the author's personal computer. Authors are

advised to bring as USB flash memory as a back-up. No alternative presentation facilities will be provided.

Only standard PC-style VGA connections to the LCD projector will be supplied. You must supply any adaptor required for your computer. Macintosh users must make sure that “mirroring” is activated.

SPEAKER PRACTICE ROOM

Speakers may use the Luxemburgo Room on the first floor to practice their presentations. Audiovisual equipment will be available for authors to use. This room will be open as follows:

Monday	8:00 am – 6:30 pm
Tuesday	8:30 am – 6:30 pm
Wednesday	8:30 am – 6:30 pm
Thursday	8:30 am – 1:00 pm

A booking sheet is available on the practice room door allowing users to book the room. Bookings are allowed for 20 minute periods only.

POSTER SESSIONS

Poster presentations will consist of visual materials about the work presented on a designated board. An author must be available to answer questions during a significant part of the session. An author should be present for the first and last 30 minutes of morning sessions and the last 60 minutes of afternoon sessions. The conference provides a small sign designating the paper number to be posted on each board. Mounting materials will be provided.

For the first time Intermag 2008 will include invited poster presentations. There will be one invited poster in each half day session. Invited posters will be allocated 2 poster boards.

Papers related to posters where the authors did not attend the conference or were not available to discuss their work will not be published.

Poster Area: Polivalente Room on the 3rd floor of the conference venue.

Posters should be displayed from 9:00 am – 1:00 pm or from 2:30 pm – 6:30 pm

Poster board size is 95cm high by 130cm wide. Note this is landscape style.

Authors should set up their posters at least 15 minutes before the session starts. Presenters must be by their posters from 9:00 am to 9:30 am and from 12:30 pm to 1:00 pm for the morning session and from 5:30 pm to 6:30 pm for the afternoon session.

Authors are reminded to remove their posters promptly at the end of their session. Posters not removed will be discarded.

PUBLICATIONS ROOM

The Publication Room will be located in the Dublin Room on the second floor. The status of all papers will be displayed and authors should check periodically on their papers. Authors may leave messages for the editor for their paper. Each editor will post a notice of times at which he/she can be found in the publication room. Editors will respond to messages and questions as promptly as possible. This room will be open as follows:

Monday to Wednesday:	9:00 am – 6:00 pm
Thursday:	9:00 am – 4:00 pm

Session Chairs are requested to visit the editor for their session to support the completion of the reviewing process for all papers in their session.

TUTORIAL

The IEEE Magnetics Society Education Committee has organized a tutorial on “Multiferroics”. The tutorial will be at a level for a novice in the subject but should be of interest to specialists and non-specialists.

The tutorial program is:

Session Chair:	J.W. Harrell
Date:	Sunday, May 4th, 2008
Time:	5:00 pm – 7:00 pm
Room:	Auditorio A

Speakers:

James Scott, Cambridge (UK)
 Wilfrid Prellier, CRISMAT (France)
 Gopalan Srinivasa, Oakland University (USA)

GMR NOBEL CELEBRATION

We are delighted to announce that this year’s Nobel Laureates in Physics, Professor Albert Fert and Professor Peter Grünberg have confirmed their attendance at the 2008 Intermag Conference in Madrid. A GMR Nobel Celebration (session YA) has been arranged for the evening on Monday, May 5th. This special session will be preceded by a symposium on The Importance of GMR (session BA).

Session YA

GMR Nobel Celebration

5:10 pm Monday May 5th: Auditorio A

Session chair: Manuel Vazquez,
 General Chair Intermag Europe 2008

5:10 pm Opening Remarks
 Prof. Carl Patton
 IEEE Magnetics Society President

- 5:20 pm “From Spin Waves to Giant Magneto-resistance and Beyond”
Prof Peter Grünberg, NL
Forschungszentrum Jülich
- 6:00 pm “Emerging Directions in Spintronics”
Prof Albert Fert, NL
CNRS, Université Paris-Sud
- 6:40 pm Recognition from the IEEE
Lew Terman
President IEEE
- 6:50 pm Closing Remarks
Prof. Manuel Vázquez
Conference Chair Intermag 2008
- 7:15 pm Celebratory Reception, Polivalente Room
Toast to Nobel Laureates
Prof. F. Marcellán (Secretary of State of Science and Technology, MEC)
Prof. C. Martínez (President of the Spanish National Research Council, CSIC)
- 7:45 pm Close

IEEE MAGNETICS SOCIETY ANNUAL GENERAL MEETING

This meeting is open to all Intermag participants. Please come to learn what the IEEE Magnetics Society is doing and the benefits of joining the Society. The meeting will be held on Tuesday, May 6th, at 6:30 pm - 7:30 pm in Auditorio A. Please sit towards the front of the Auditorium.

AWARDS AND PLENARY SESSION

4:40 pm Wednesday May 7th: Auditorio A
Session Chair: Bruce Gurney

IEEE Magnetics Society Awards

IEEE Reynold B. Johnson Information Storage Device Award

Prof. Stanley Charap
Professor of Electrical and Computer Engineering, Carnegie-Melon University, Emeritus

The IEEE Daniel E. Noble Award

Dr. James M. Daughton (NVE Corporation)
Dr. Stuart Parkin (IBM, San Jose)
Dr. Saied Tehrani (Freescale Semiconductor)

The Magnetics Society Achievement Award

Prof. Jack H. Judy
Professor of Electrical Engineering, University of Minnesota,
Emeritus

Newly Elected Fellows of the IEEE

Roy W. Chantrell, University of York
Vincent G. Harris, Northeastern University
Jinliang He, Tsinghua University
Thomas D. Howell, San Jose State University
Hiroaki Muraoka, Tohoku University
Lalita Udpa, Michigan State University
John Wikswo, Vanderbilt University
Jian-Gang Zhu, Carnegie Mellon University

2007 Magnetics Society Distinguished Lecturers

Matthias Bode, Argonne National Lab
Vincent Harris, Northeastern University
Sara Majetich, Carnegie Mellon University
Takao Suzuki, Toyota Technical Institute

IEEE Magnetics Society Best Student Paper Award

Following the establishment of this prestigious prize by the IEEE Magnetics Society in 2008, the selection of the five finalists has been made after a full review of all students entering the competition by the Programme Committee Co-Chairs for Intermag 2008. This selection has been based solely on the likely quality/impact of the work. The five finalists will receive a cash award from the Magnetics Society as well as recognition for their achievement.

The eventual winner of the award will be selected by a transnational panel of four young scientists who have recently completed their PhDs and who will visit each presentation, whether poster or oral, to assess the papers according to the following criteria:

1. The quality/impact of the work
2. The student contribution and involvement in the work
3. The quality of the presentation by the student.

Each criteria will make an equal contribution to the assessment. The assessment of the panel will be overseen by Prof. J W Harrell, the Chairman of the IEEE Magnetics Society Education Committee and Dr Bruce Gurney, the Chairman of the Awards Committee. The award will be made to the student achieving the highest overall ranking in the three criteria.

Please note that students associated in any way with any persons involved in the selection of the finalists or the eventual winner have been declared ineligible in the competition.

Finalist: Pedram Khalili Amiri Paper: CV – 01

Title: Integrated on-chip microstrip lines
with Co-Ta-Zr magnetic films

P. K. Amiri, B. Rejaei, Y. Zhuang, M. Vroubel,
D. Lee, S. Wang & J. Burghartz (Netherlands)

Finalist: Karen Livesey Paper: HC – 02
 Title: Nonlinear processes during switching
 of a thin Permalloy film in different geometries
 K. Livesey, H. Nembach, M. Kostylev, P. Martin-Pimentel, S.
 Hermsdoerfer, B. Leven, R. Stamps, B. Hillebrands (Australia)

Finalist: Hiroyuki Tomita Paper: AA – 04
 Title: Real Time Measurements of Spin-Transfer Switching
 in CoFeB/MgO/CoFeB Magnetic Tunnel Junctions
 H. Tomita, K. Konishi, T. Nozaki, M. Shiraishi, H. Kubota,
 A. Fukushima, S. Yuasa, Y. Suzuki (Japan)

Finalist: Takayuki Ishikawa Paper: AC – 07
 Title: Spin-dependent tunneling conductance in fully epitaxial
 Co₂MnSi/MgO/Co₂MnSi tunnel junctions
 T. Ishikawa, N. Itabashi, K. Matsuda, T. Uemura,
 M. Yamamoto (Japan)

Finalist: Benoit Georges Paper: CB – 06
 Title: Phase locking of a Spin Transfer Oscillator
 to an external microwave current : a milestone
 for the synchronization of a large assembly of STOs
 B. Georges, J. Grollier, M. Darques, V. Cros,
 C. Deranlot, G. Faini, A. Fert (France)

In addition, the 2008 Student Travel Grants will be presented.

Plenary Lecture

Session Chair: Josef Fidler

Following the awards ceremony at approximately 5.40 pm on
 Wednesday, May 7th the InterMag Plenary lecture will be present-
 ed. The speaker is Prof. Ludwig Schultz of IFW Dresden whose
 title will be:

“Riding on Magnetic Fields - Macroscopic Interaction
 of Ferromagnetic and Superconducting Permanent Magnets”

Abstract:

Different concepts for magnetic levitation are discussed. The con-
 ventional system is the Trans-rapid now running between Shang-
 hai Airport and the city centre. Our approach is a passive super-
 conducting magnetically levitated system using bulk super-
 conductors cooled to 77 K. At low temperatures, superconductors
 can freeze in a magnetic field of any configuration. Hence they act
 as permanent magnets but with a magnetic remanence, which is,
 for YBaCuO material, far larger than that of ferromagnetic perma-
 nent magnets. The ability to freeze in a magnetic field can be used
 for completely new applications. This will be experimentally
 demonstrated for different types of superconducting magnetically
 levitated trains, which can either be in an upright or a hanging
 position or, moving along a wall without any mechanical contact.
 With regard to scaling-up, the SupraTrans project will be presented.

Biography:

Ludwig Schultz studied physics at the University of Goettingen
 and received his Ph.D. in 1976 with a thesis on flux pinning in
 superconductors. He continued as a research assistant at the Insti-
 tute of Metal Physics of the University of Goettingen and as a

Intermag 2008 Exhibitors (as of February 20)

Company / Institution	Country	Booth
ATOMISTIX	Denmark	28
BARTINGTON INSTRUMENTS LIMITED	UK	14
DCA Instruments Oy	Finland	22
HERAUS. FNC	USA	16
HITACHI METALS, Ltd.	Japan	10
INTA Instituto Nacional de Técnica Aeroespacial	Spain	13
KLA-Tencor Corp.	USA	2
MAGNET-PHYSIK Dr. Steingroeven GmbH,	Germany	15
METROLAB INSTRUMENTS, S.A.	Switzerland	12
NANOMAGNETICS INSTRUMENTS Ltd.	UK - Turkey	7 & 8
NANOSCAN Ltd.	Switzerland	1
NEOARK Corporation	Japan	6
PRINCETON MEASUREMENTS CORP.	USA	5
QUANTUM DESING	USA	3
SERVICIENCIA, S.L.	Spain	9
SINGULUS NANO DEPOSITION TECHNOLOGIES GmbH	Germany	4
TECO, Rene Koch	Switzerland	11

IEEE MAGNETICS SOCIETY MEMBERSHIP

If you are not already a member of the IEEE Magnetics Society we advise you to join and take advantage of the special discount for this conference. The difference between the Magnetic Society member rate and the non-member rate is significantly more than the membership fee. Join now by going on-line at www.ieeemagnetics.org and follow the links. A membership desk will be available at registration but significant delays may occur.

Through the IEEE Magnetics Society you get unlimited access to all issues of the IEEE Transactions on Magnetics since the journal's inception in 1969 with unlimited downloads. This includes all Intermag Proceedings as well as other topical conferences published in the Transactions. Membership also includes a CD-ROM copy of the Transactions each year. By joining, you become a part of the world's largest and best known organization in magnetics. You also gain access to local chapter events, technical activities and student sponsorship for conference travel.

STUDENT TRAVEL GRANTS

The IEEE Magnetic Society will award travel grants of up to \$1000 each to a limited number of students who wish to attend InterMag Europe 2008. These grants are intended to partially offset travel costs. Support is for current graduate students only. Post-doctoral workers and undergraduate students are ineligible. Students who have previously received travel support from the Magnetics Society are also ineligible

Preference will be given to Student Members of the Magnetics Society. Preference will also be given to students nearing completion of their studies and presenting conference papers. The student’s supervisor must also be a member of the Magnetics Society. The student’s supervisor must write a brief letter of endorsement for the applicant. A second endorsement from a full member of the IEEE Magnetic Society is also required.

Shortly after the conference, grant recipients must submit a short account of their experience for possible inclusion in the IEEE Magnetic Society Newsletter. Forms and instructions for applicants are available at:

www.intermagconference.com/intermag2008.

Applications and all letters of endorsement must be submitted before March 7th 2008. Inquiries should be sent to the Student Travel Grants Co-Coordinator:

M. J. Carey, Hitachi GST, San Jose, CA
(matthew.carey@hitachigst.com).

Students wishing to apply should also visit the IEEE Magnetics Society website at: www.ieee.magnetics.org.

IEEE MAGNETICS SOCIETY

- PresidentCarl Patton
- Vice PresidentRandall Victora
- Secretary/TreasurerTakao Suzuki
- Past PresidentKevin O’Grady
- Executive DirectorDiane Melton

**ELECTED IEEE MAGNETICS SOCIETY
ADMINISTRATIVE COMMITTEE MEMBERS**

Terms expiring December 31, 2008

G. Bertotti; M. Coey; J. Fidler; S. Majetich; M. Pasquale; C. Ross;
D. Weller; R. Wood

Terms expiring December 31, 2009

C-R Chang; R. W. Chantrell; B. Dieny; R. Fontana; P. Freitas;
D. Jiles; J-U Thiele; S. Ueno

Terms expiring December 31, 2010

J. Chapman; O. Heinonen; B. Hillebrands; D. Litvinov; H. Muraoka; M. Pardavi-Horvath; B. Terris; U. Varshney

Appointed Committee Chairs: L. Folks; R. Goldfarb; B. Gurney; J.W. Harrell; R. Hasegawa; A. Hoffmann; R. Indeck; C. Korman; D. Lavers; R. D. McMichael

Council Representatives: A. Edelstein (Sensors); D. Litvinov and R. Rannow (Nanotechnology); R. Goldfarb and A. Zeller (Superconductivity)

Newsletter Editors: P. Dhagat; A. Jander

FUTURE CONFERENCES

- 2008 MMM Conference - Austin (Texas), November 10-14
- 2009 Intermag Conference - Sacramento (California), May 4-8
- 2010 Joint MMM/Intermag Conference - San Francisco (California), January 17-21
- 2010 MMM - Scottsdale, Arizona, October 31-November 4
- 2011 Intermag Asia Conference – Taipei, May
(No specific dates have been confirmed)

**INTERMAG EUROPE 2008 CONFERENCE
MANAGEMENT COMMITTEE**

Chairmen	Manuel Vázquez Ronald S. Indeck
Program Co-Chairs	Josef Fidler Bruce Terris Kevin O'Grady
Local Chair	María del Puerto Morales
Publication Co-Chairs	Jacques Miltat Sara Majetich
Treasurers	Oksana Chubykalo-Fesenko Jan-Ulrich Thiele
Exhibits and Industrial Support	Marta San Román Marina Díaz Michelena
Website, Printing and Publicity	Luis López Díaz Petru Andrei
Conference Coordinator	Mercedes del Portillo Siasa Congressos, S.A.
Conference Administration	Diane S. Melton Courtesy Associates

PROGRAM COMMITTEE MEMBERS

Josef Fidler (Co-Chair), Kevin O'Grady (Co-Chair), Bruce Terris (Co-Chair), Fatih Anaya, Antero Arkkio, Jose Manuel Barandiaran, Xiaoping Bian, Alfonso Cebollada, Roy Chantrell, John Chapman, Bernard Diény, Fatih Erden, Jürgen Fassbender, Dino Fiorani, Josep Fontcuberta, Paulo Freitas, Jesus M. Gonzalez, Simon Greaves, Oliver Gutfleisch, George Hadjipanayis, Ryusuke Hasagawa, Olle Heinonen, Laura Heyderman, Burkard Hillebrands, Ronnie Jansen, David Jiles, Alan B. Johnston, Ganping Ju, Des Mapps, Wolfram Maass, María del Puerto Morales, Bruno Marchon, Philip Marketos, Josep Nogues, Fernando C. Palacio, Larissa Panina, Amanda Petford-Long, Johannes Paulides, Theo Rasing, Dafiné Ravelosona, Manfred Ruehrig, Manfred Schabes, Rudolf Schaefer, Thomas Schrefl, John Snyder, Alexandru Stancu, Jonathan Z Sun, Tom Thomson, Raul Valenzuela, Masahiro Yamaguchi, Manuel Vazquez, Marylin Wun Fogle.

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LOCAL COMMITTEE

María del Puerto Morales (Chair), Agustina Asenjo, Giovanni Badini-Confalonieri, Julio Camarero, Federico Cebollada, Patricia Crespo, Jose Miguel García, Mar García, Miguel Angel García, Elvira González, Marian González, Yves Huttel, Marco Maicas, Pilar Marín, Benjamin Martínez, Javier Palomares, Jose Luis Prieto.

ADDITIONAL INFORMATION

If you would like to receive more information about Intermag 2008 or to be placed on the Intermag Conference mailing list, please contact Siasa Congresos, S.A. at:

INTERMAG 2008
Siasa Congresos, S.A.
Paseo de la Habana, 134
28036 Madrid, Spain
E-mail:sureta@siasa.es

You may also access complete conference information through the web at the Intermag home page at:

www.intemagconference.com/intermag2008

PROGRAM AT A GLANCE

Sunday

Registration Main Entrance Hall
 4:00 pm –
 7:00 pm

	Session	Session Title	Location
Sunday			
Tutorial			
5:00 pm – 7:00 pm	ZA	IEEE Magnetics Society Education Committee Tutorial: Multiferroics	Auditorio A

Monday

Oral Sessions

9:30 am – 12:30 pm	AA	Spin-Torque Switching	Auditorio A
	AB	Domain Walls in Nanowires	Madrid
	AC	Magnetic Tunnel Junctions - I	Roma
	AD	Thin Films: Interface and Transport Properties	Paris
	AE	Heat and Microwave Assisted Recording	Londres
	AF	Characterization and Measurement Techniques - I	Berlin
	AG	Transformers and Inductors - I	Amsterdam
	AH	Magnetoimpedance	Caracas

Monday

Poster Sessions

9:00 am – 1:00 pm	AL	Motors and Actuators - I	Polivalente Room
	AM	Magnetic Sensors - I	Polivalente Room
	AN	Magnetic Oxides & Heusler Alloys - I	Polivalente Room
	AO	Transport Theory and Semiconductors Spintronics	Polivalente Room
	AP	Longitudinal and Particulate Media	Polivalente Room
	AQ	Magnetic Nanoclusters and Nanoparticles - I	Polivalente Room
	AR	Soft Magnetic Materials & EMC	Polivalente Room
	AS	GMR for Multilayers and Nanostructures	Polivalente Room
	AT	Fundamental Properties for Applications	Polivalente Room
	AU	Permanent Magnet Materials – Applications - I	Polivalente Room
	AV	Intermetallics and Other Hard Magnets	Polivalente Room

Monday

Oral Sessions

2:30 pm – 5:00 pm	BA	Symposium on the Importance of GMR	Auditorio A
	BB	Head-Media Interface and Tribology - I	Madrid
	BC	MEMS and Miniature Magnetic Sensors	Roma
	BD	Magnetic Sensors - II	Paris
	BE	Molecular and Novel Materials - I	Londres

XVIII

BF	Magnetic Semiconductors - I	Berlin
BG	Microwave Materials and Devices - I	Amsterdam
BH	Multilayer Films and Superlattices - I	Caracas

Monday

GMR Nobel Celebration

5:10 pm	YA	GMR Nobel Celebration	Auditorio A
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Tuesday

Oral Sessions

9:30 am – 12:30 pm	CA	Symposium on Biomedical Applications	Auditorio A
	CB	Spin Torque Oscillators - I	Madrid
	CC	MgO Magnetic Tunnel Junctions - I	Roma
	CD	Magnetic Microscopy - I	Paris
	CE	Exchange Bias - I	Londres
	CF	Electrical Steels and Inductor Cores	Berlin
	CG	Thin films: Surface and Anisotropy Properties	Amsterdam
	CH	Magnetic Shape Memory Alloys	Caracas

Tuesday

Poster Sessions

9:00 am – 1:00 pm	CL	Permanent Magnet Machines - I	Polivalente Room
	CM	Magnetic Micro and Nanostructures	Polivalente Room
	CN	Micromagnetics – I	Polivalente Room
	CO	Nanostructured Hard Magnetic Materials - I	Polivalente Room
	CP	Hysteresis Modelling - I	Polivalente Room
	CQ	Soft Magnetic Materials and Applications - I	Polivalente Room
	CR	Magnetic Nanoclusters and Nanoparticles - II	Polivalente Room
	CS	Perpendicular Granular Media	Polivalente Room
	CT	Perpendicular High Ku Media	Polivalente Room
	CU	Bit Patterned Media - I	Polivalente Room
	CV	Microwave Materials and Devices – II	Polivalente Room
	CW	Characterization and Measurement Techniques - II	Polivalente Room

Tuesday

Oral Sessions

2:30 pm – 5:30 pm	DA	Bit Patterned Media - II	Auditorio A
	DB	Symposium on Magnetic Modeling	Madrid
	DC	GMR in Nanocontacts and Constrictions	Roma
	DD	Permanent Magnet Machines - II	Paris
	DE	Soft Magnetic Wires	Londres
	DF	Recording Systems and Servo - I	Berlin
	DG	Life Sciences: Techniques and Instrumentation - I	Amsterdam

Tuesday

Poster Sessions

2:30 pm – 6:30 pm	DL	Ultrathin Films and Surface Effects - I	Polivalente Room
	DM	Ultrathin Films and Surface Effects - II	Polivalente Room
	DN	Magnetic Microscopy - II	Polivalente Room

	DO	Magneto-Optic Materials and Devices	Polivalente Room
	DP	Spin Torque Oscillators – II	Polivalente Room
	DQ	Life Science and Applications - I	Polivalente Room
	DR	Magnetic Elements and Antidot Arrays	Polivalente Room
	DS	Microwave Systems	Polivalente Room
	DT	RE-TM Borides and Magnet Processing	Polivalente Room
	DU	Permanent Magnet Materials - Applications - II	Polivalente Room
	DV	Manganites	Polivalente Room
	DW	Transformers and Inductors - II	Polivalente Room

Tuesday

		IEEE Magnetics Society Annual General Meeting	
Annual General Meeting		(All Interomag attendees welcome)	
6:40 pm – 7:40 pm	XA		Auditorio A

Wednesday

Oral Sessions

9:30 am – 12:30 pm	EA	Symposium on Spin Transfer and Dynamics	Auditorio A
	EB	Motor and Actuators - II	Madrid
	EC	Magnetic Nanostructures - I	Roma
	ED	Perpendicular Media	Paris
	EE	Magnetic Nanoparticles - I	Londres
	EF	Recording Physics, Models and Theory - I	Berlin
	EG	Soft Magnetic Materials and Applications - II	Amsterdam
	EH	Magneto-Dielectric Materials	Caracas

Wednesday

Poster Sessions

9:00 am – 1:00 pm	EL	Permanent Magnet Machines - III	Polivalente Room
	EM	Exchange Bias - II	Polivalente Room
	EN	Shielding, Levitation and Transport	Polivalente Room
	EO	Molecular and Novel Materials - I	Polivalente Room
	EP	Magnetodynamics and Millimetre Wave Devices	Polivalente Room
	EQ	Magnetic Semiconductors - II	Polivalente Room
	ER	Magnetic Semiconductors - III	Polivalente Room
	ES	Recording Heads	Polivalente Room
	ET	Magnetoelastic and Magnetolectric Materials	Polivalente Room
	EU	Ferrite Dynamics and Applications	Polivalente Room
	EV	Magnetostrictive Shape Memory Alloys/Devices	Polivalente Room
	EW	Multiferroics, Ferrites and Other Materials	Polivalente Room
	EX	Magnetic Tunnel Junctions - II	Polivalente Room

Wednesday

Oral Sessions

2:30 pm – 4:30 pm	FA	Symposium on Spin Torque Transfer for MRAM	Auditorio A
	FB	Spin Injection and Spin Hall Effect	Madrid
	FC	Magneto-Electronic Devices	Roma

FD	Magnetic Oxides & Heusler Alloys - II	Paris
FE	Life Science and Applications - II	Londres
FF	Microwave Devices and FMR	Berlin
FG	Nanostructured Hard Magnetic Materials - II	Amsterdam
FH	Oxide Multiferroics and Ferrites	Caracas

WednesdayAwards and
Plenary Session

4:40 pm – 6:40 pm	WA	IEEE Magnetics Society Awards Ceremony Intermag Plenary Session	Auditorio A
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Plenary Reception

6:45 pm – 8:00 pm		Magnetics Society Plenary Reception	Polivalente Room
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Thursday

Oral Sessions

9:30 am – 12:30 pm	GA	Symposium on Bit Patterned Media	Auditorio A
	GB	MR Based Heads (GMR, MTJ, CPP)	Madrid
	GC	Ultrafast Dynamics	Roma
	GD	MRAM	Paris
	GE	Magnetic Nanoparticles - II	Londres
	GF	Head-Media Interface and Tribology - II	Berlin
	GG	Hysteresis Modelling - II	Amsterdam
	GH	Permanent Magnet Materials - Applications - III	Caracas

Thursday

Poster Sessions

9:00 am – 1:00 pm	GL	Multilayer Films and Superlattices - II	Polivalente Room
	GM	Permanent Magnet Machines - IV	Polivalente Room
	GN	Motors and Actuators - III	Polivalente Room
	GO	Life Sciences: Techniques and Instrumentation - II	Polivalente Room
	GP	Switched Reluctance Machines	Polivalente Room
	GR	Soft Nanocrystalline Alloys	Polivalente Room
	GS	Power and Control Magnetics	Polivalente Room
	GT	Spin Torque Excitations in Nanomagnets	Polivalente Room
	GU	Magnetocaloric Effect and Materials	Polivalente Room
	GV	Fast Switching of Films and Nanostructures	Polivalente Room
	GW	Computational Magnetics	Polivalente Room
	GX	Miscellaneous – I	Polivalente Room
	GY	Miscellaneous – II	Polivalente Room

Thursday

Oral Sessions

2:30 pm – 5:30 pm	HA	Symposium on the Roadmap for Spintronics	Auditorio A
	HB	Inductive Recording Heads and Materials	Madrid
	HC	Magnetization Dynamics	Roma
	HD	Micromagnetics – II	Paris
	HE	Permanent Magnet Materials	Londres
	HF	Life Science and Applications - III	Berlin
	HG	Magnetoelastic Materials and Devices	Amsterdam
	HH	Current Induced DW Motion	Caracas

Thursday

Poster Sessions

2:30 pm – 6:30 pm	HL	Recording Systems and Servo - II	Polivalente Room
	HM	Recording Systems, Coding and Channel - I	Polivalente Room
	HN	Magnetic Nanoclusters and Nanoparticles - III	Polivalente Room
	HO	Head-Media Interface and Tribology – III	Polivalente Room
	HP	Soft Films	Polivalente Room
	HQ	Domain Walls in Nanowires and Thin Films	Polivalente Room
	HR	MgO Magnetic Tunnel Junctions - II	Polivalente Room
	HS	Ab Initio Calculations	Polivalente Room
	HT	Recording Systems, Coding and Channel - II	Polivalente Room
	HU	Multilayer Films and Superlattices - III	Polivalente Room
	HV	Magneto-Optic, HAMR and Novel Recording	Polivalente Room
	HW	Recording Physics, Models and Theory - II	Polivalente Room

Thursday

Closing Reception

8:30 pm – 10:00 pm	Government of the Autonomous Community of Madrid (by invitation)	Real Casa de Correos, Plaza de la Puerta del Sol
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NOTES:

SUNDAY
AFTERNOON
5:00

AUDITORIO A

Session ZA
TUTORIAL ON MULTIFERROICS

J. W. Harrell, Chair

5:00

ZA-01. Multiferroic and Magnetoelectric Materials. (Invited)
*J.F. Scott¹. Earth Sciences, Cambridge University,
Cambridge, United Kingdom*

5:40

ZA-02. Multiferroic materials: from bulk to thin films. (Invited)
*W. Prellier¹. ENSICAEN, CNRS, Caen,
France*

6:20

ZA-03. Multiferroic Composites: Magnetoelectric Effects, Sensors and High Frequency Devices. (Invited)
*G. Srinivasan¹. Physics, Oakland University,
Rochester, MI*

MONDAY
MORNING
9:30

AUDITORIO A

Session AA
SPIN-TORQUE SWITCHING

Xian Jiang, Chair

9:30

AA-01. Magneto-optical and spin transfer switching properties of current-perpendicular-to plane spin valves with perpendicular magnetic anisotropy. (Invited)
K. Aoshima¹, N. Funabashi¹, K. Machida¹, Y. Miyamoto¹, N. Kawamura¹, K. Kuga¹, N. Shimidzu¹, T. Kimura² and Y. Otani². 1. Science & Technical Research Laboratories, Japan Broadcasting Corp., Setagaya, Tokyo, Japan; 2. The Institute for Solid State Physics, The Tokyo University, Kashiwa, Chiba, Japan

10:00

AA-02. Time-resolved magnetization switching induced by spin-transfer in Magnetic MgO tunnel junctions.

*T. Devolder*¹, *J. Hayakawa*^{2,3}, *K. Ito*², *H. Takahashi*², *S. Ikeda*³, *P. Crozat*¹, *J.V. Kim*¹, *C. Chappert*¹ and *H. Ohno*³
¹. *Institut d'Electronique Fondamentale, ORSAY Cedex, France*; ². *Advanced Research Laboratory, Hitachi, Ltd, Tokyo, Japan*; ³. *Laboratory for Nanoelectronics and Spintronics,, Research Institute of Electrical Communication, Tohoku University, Sendai, Japan*

10:15

AA-03. Coherent control of spin transfer torque magnetization dynamics.

*S. Serrano-Guisan*¹, *K. Rott*², *G. Reiss*², *B. Ocker*³, *J. Langer*³ and *H.W. Schumacher*¹
¹. *Physikalisch-Technische Bundesanstalt, Braunschweig, Germany*; ². *Department of Physics, University of Bielefeld, Bielefeld, Germany*; ³. *Singulus Nano Deposition Technologies GmbH, Kahl am Main, Germany*

10:30

AA-04. Real Time Measurements of Spin-Transfer Switching in CoFeB/MgO/CoFeB Magnetic Tunnel Junctions.

*H. Tomita*¹, *K. Konishi*¹, *T. Nozaki*¹, *M. Shiraishi*¹, *H. Kubota*², *A. Fukushima*², *S. Yuasa*² and *Y. Suzuki*¹
¹. *Osaka university, Toyonaka, Osaka, Japan*; ². *National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan*

10:45

AA-05. Observation of intermediate states in large magnetic tunnel junctions with composite free layer.

*X. Yao*¹, *R. Malmhall*², *R. Ranjan*² and *J. Wang*¹
¹. *MINT Center & Electrical and Computer Engineering Department, Univ. Of Minnesota, Minneapolis,, MN*; ². *Yadav Technology, Fremont, CA*

11:00

AA-06. Spin transfer switching in magnetic tunnel junctions with several compositions of the free layer.

*D. Watanabe*¹, *M. Oogane*¹, *Y. Ando*¹ and *T. Miyazaki*²
¹. *Applied Physics, Tohoku University, Sendai, Japan*; ². *WPI-AIMR, Tohoku University, Sendai, Japan*

11:15

- AA-07. Spin Torque Induced Magnetization Switching Variations.** *X. Wang*¹, *W. Zhu*¹, *M. Siegert*¹ and *D. Dimitrov*¹. *Seagate Technology, Bloomington, MN*

11:30

- AA-08. Spin-torque driven ferromagnetic resonance of Co/Ni synthetic layers in spin valves.** *W. Chen*¹, *G. de Loubens*¹, *J.L. Beaujour*¹, *A.D. Kent*¹ and *J.Z. Sun*². *Physics, New York University, New York, NY; 2. IBM T. J. Watson Research Center, IBM, Yorktown Heights, NY*

11:45

- AA-09. Spin torque transfer in deep submicron annular cpmr devices.** *M.T. Moneck*¹, *X. Zhu*¹ and *J. Zhu*¹. *Electrical & Computer Engineering, Carnegie Mellon University, Pittsburgh, PA*

12:00

- AA-10. Effective description of planar spin-transfer devices.** *Y. Bazaliy*^{1,2}. *1. Department of Physics and Astronomy, University of South Carolina, Columbia, SC; 2. Institute of Magnetism, National Academy of Science, Kyiv, Ukraine*

12:15

- AA-11. Magnetization reversal driven by spin-injection : a mesoscopic spin transfer effect.** *J. Węgrowe*¹. *LSI, Ecole Polytechnique, Palaiseau, France*

**MONDAY
MORNING
9:30**

MADRID

Session AB

DOMAIN WALLS IN NANOWIRES

Del Atkinson, Chair

9:30

- AB-01. Current-Induced Magnetic Domain Wall Motion at Low Current Density via Perpendicular Anisotropy.** *S. Jung*¹, *W. Kim*², *T. Lee*², *K. Lee*³ and *H. Lee*¹. *Physics, POSTECH, Pohang, South Korea; 2. Materials Science, KAIST, Daejeon, South Korea; 3. Materials Science and Engineering, Korea University, Seoul, South Korea*

9:45

- AB-02. Current-induced Domain Wall Transformations and Vortex Core Displacement.** *L. Heyne*¹, *D. Backes*^{1,2}, *T.A. Moore*¹, *S. Krzyk*¹, *M. Kläui*¹, *U. Rüdiger*¹, *L.J. Heyderman*², *A. Fraile Rodriguez*², *F. Nolting*², *O. Mentis*³, *M. Nino*³, *A. Locatelli*³, *K. Kirsch*⁴ and *R. Mattheis*⁴. *1. Universität Konstanz, Konstanz, Germany; 2. Paul Scherrer Institut, Villigen, Switzerland; 3. Sincrotrone Trieste, Trieste, Italy; 4. Institute of Photonic Technology, Jena, Germany*

10:00

- AB-03. Dynamics of domain walls in soft magnetic nanostripes: soliton approach.** *K. Gusliyenko*¹, *J. Lee*¹ and *S. Kim*¹. *1. Research Center for Spin Dynamics & Spin-Wave Devices and Nanospintronics Laboratory, Materials Science & Eng. Dept., Seoul National University, Seoul, South Korea*

10:15

- AB-04. Pinning and propagation of vortex domain walls in triangular anti-notches.** *K.J. O'Shea*¹, *J.N. Chapman*¹, *S. McVitie*¹ and *Y.H. Wu*². *1. Physics and Astronomy, University of Glasgow, Glasgow, United Kingdom; 2. Electrical and Computer Engineering, National University Singapore, Singapore, Singapore*

10:30

- AB-05. Domain wall pinning mechanism in ferromagnetic nanowires.** *D. Petit*¹, *A. Jausovec*¹, *E. Lewis*¹, *H.T. Zeng*¹, *L. O'Brien*¹, *D. Read*¹ and *R.P. Cowburn*¹. *1. Physics, Imperial College London, London, United Kingdom*

10:45

- AB-06. The dependence of wire width and trap geometry on domain wall pinning behaviour in nanowires.** *L.K. Bogart*¹, *D. Eastwood*¹, *D. Atkinson*¹, *D. McGrouther*², *K. O'Shea*², *S. McVitie*² and *J. Chapman*². *1. Physics, Durham University, Durham, United Kingdom; 2. Physics and Astronomy, University of Glasgow, Glasgow, United Kingdom*

11:00

- AB-07. Propagation field of notched permalloy nanowires.** *P. Warnicke*¹, *A. Himeno*², *S. Kasai*² and *T. Ono*². *1. Department of Engineering sciences, Division for solid state physics, Uppsala, Sweden; 2. Institute for Chemical Research, Division of materials research, Kyoto, Japan*

11:15

- AB-08. Measuring domain wall coherence lengths using a chirality filter.** *E. Lewis*¹, *D. Petit*¹, *A. Jausovec*¹, *L. O'Brien*¹, *H. Zeng*¹, *D. Read*¹ and *R. Cowburn*¹*I. Imperial College London, London, United Kingdom*

11:30

- AB-09. Dynamic of depinning of a magnetic domain wall from a single defect.** *F. Montaigne*¹, *J. Briones*¹, *D. Lacour*¹, *M. Hehn*¹, *M.J. Carey*² and *J. Childress*²*I. Laboratoire de Physique des Matériaux, Nancy-University, CNRS, Vandoeuvre lès Nancy, France; 2. Hitachi San Jose Research Center, San Jose, CA*

11:45

- AB-10. Direct observation of the Walker breakdown during field driven domain wall (DW) motion in Permalloy nanowires.** *R. Mattheis*¹ and *S. Glathe*¹*I. Photonic Instrumentation, IPHT, Jena, Germany*

12:00

- AB-11. Control of field driven domain wall (DW) motion by transversal fields: suppression of Walker breakdown and giant velocities.** *S. Glathe*¹, *R. Mattheis*¹ and *T. Mikolajick*²*I. Photonic Instrumentation, IPHT, Jena, Germany; 2. Institute of Electronic and Sensor Materials, TU Bergakademie Freiberg, Freiberg, Germany*

12:15

- AB-12. Domain-Wall Trapping by Localized Field on Submicron Permalloy Wire.** *L. Ji*¹, *A. Orlov*¹, *G.H. Bernstein*¹ and *W. Porod*¹*I. Electrical Engineering, University of Notre Dame, Notre Dame, IN*

MONDAY
MORNING
9:30

ROMA

Session AC
MAGNETIC TUNNEL JUNCTIONS - I

Wolfram Maass, Chair

9:30

- AC-01. Tunnel magnetoresistance over 100 % in MgO based magnetic tunnel junction films with perpendicular magnetic L1₀-FePt electrodes.** *M. Yoshikawa¹, E. Kitagawa¹, T. Nagase¹, T. Daibou¹, M. Nagamine¹, K. Nishiyama¹, T. Kai¹, N. Shimomura¹, M. Amano¹, S. Takahashi¹, T. Kishi¹ and H. Yoda¹*. *Corporate Research & Development Center, TOSHIBA Corporation, Kawasaki, Japan*

9:45

- AC-02. Interfacial Oxidation Enhanced Perpendicular Magnetic Anisotropy in Low Resistance Magnetic Tunnel Junctions Composed of Co/Pt Multilayer Electrodes.** *J. Park¹, C. Park² and J. Zhu¹*. *1. Carnegie Mellon University, Pittsburgh, PA; 2. Western Digital Corporation, Fremont, CA*

10:00

- AC-03. Large Tunneling Anisotropic Magnetoresistance in a Magnetic Tunnel Junction with a Single Ferromagnet CoPt.** *B. Park¹, J. Wunderlich¹, S. Joo², K. Jung², K. Shin², A. Shick³ and T. Jungwirth^{3,4}*. *1. Hitachi Cambridge Laboratory, Cambridge, United Kingdom; 2. Nano Device Research Center, KIST, Seoul, South Korea; 3. Institute of Physics ASCR, Pargue, Czech Republic; 4. School of Physics and Astronomy, University of Nottingham, Nottingham, United Kingdom*

10:15

- AC-04. Crossover from Kondo assisted suppression to cotunneling enhancement of tunneling magnetoresistance via ferromagnetic nanodots in MgO tunnel barriers.** *H. Yang^{1,2}, S. Yang¹ and S. Parkin¹*. *1. IBM Almaden Research Center, San Jose, CA; 2. ECE, National University of Singapore, Singapore, Singapore*

10:30

- AC-05. Magneto-Coulomb effects through isolated nanoparticles connected to ferromagnetic electrodes.** *A. Bernand-Mantel*¹, *P. Seneor*², *B. Dlubak*², *V. Cros*², *S. Fusil*², *K. Bouzehouane*², *C. Deranlot*², *A. Vaures*², *R. Guillemet*², *F. Petroff*² and *A. Fert*². *1. Kavli Institute of Nanoscience, Delft University of Technology, Delft, Netherlands; 2. Unite Mixte de Physique CNRS/Thales associated with University Paris-sud, Palaiseau, France*

10:45

- AC-06. Fabrication and characterization of magnetic tunnel junctions using Co₂MnSi electrode and MgO tunneling barrier.** *S. Tsunegi*¹, *Y. Sakuraba*², *M. Oogane*¹, *K. Takanashi*² and *Y. Ando*¹. *1. Applied physics, Tohoku University, Sendai, Japan; 2. Institute for Materials Research, Tohoku University, Sendai, Japan*

11:00

- AC-07. Spin-dependent tunneling conductance in fully epitaxial Co₂MnSi/MgO/Co₂MnSi tunnel junctions.** *T. Ishikawa*¹, *N. Itabashi*¹, *K. Matsuda*¹, *T. Uemura*¹ and *M. Yamamoto*¹. *1. Division of Electronics for Informatics, Hokkaido University, Sapporo, Japan*

11:15

- AC-08. Spin-polarized tunneling characteristics of the room temperature spin filter CoFe₂O₄.** *A.V. Ramos*¹, *R. Mattana*², *F. Petroff*², *T.S. Santos*^{3,4}, *G. Miao*³ and *J.S. Moodera*³. *1. DSM/DRECAM/SPCSI, CEA Saclay, Gif-sur-Yvette, France; 2. Unite Mixte de Physique, CNRS/Thales, Palaiseau, France; 3. Francis Bitter Magnet Laboratory, MIT, Cambridge, MA; 4. Argonne National Laboratory, Argonne, IL*

11:30

- AC-09. In Situ Lorentz Study of Disorder, Fluctuations, and Breakdown in Magnetic Tunnel Junctions.** *S.E. Russek*¹, *J.M. Shaw*¹ and *R. Geiss*¹. *1. National Institute of Standards and Technology, Boulder, CO*

11:45

- AC-10. Pulse Width Dependence of Barrier Breakdown in MgO Magnetic Tunnel Junctions.** *J. Hérault*¹, *R. Sousa*¹, *C. Papusoi*¹, *Y. Conraux*², *I. Prejbeanu*², *K. Mackay*², *J. Nozières*² and *B. Dieny*¹. *1. Spintec (URA 2512 CEA/CNRS), Grenoble, France; 2. Crocus Technology, Grenoble, France*

12:00

- AC-11. Spin dependent transport through an organic semiconductor tunnel barrier.** *C. Barraud*^{1,2}, *P. Seneor*^{1,2}, *R. Mattana*^{1,2}, *R. Guillemet*^{1,2}, *S. Fusil*^{1,2}, *K. Bouzeehouane*^{1,2}, *C. Deranlot*^{1,2}, *A. Vaures*^{1,2}, *F. Petroff*^{1,2}, *A. Fert*^{1,2}, *P. Graziosi*³, *L. Hueso*³, *I. Bergenti*³ and *V. Dediu*³. *1. Unité Mixte de Physique CNRS/Thales, Palaiseau, France; 2. Department of Physics, University of Paris-Sud 11, Orsay, France; 3. Istituto per lo Studio dei Materiali Nanostrutturati, ISMN-CNR, Bologna, Italy*

12:15

- AC-12. Theoretical studies on spin-dependent conductance in FePt/MgO/FePt(001) magnetic tunnel junctions.** *Y. Taniguchi*¹, *Y. Miura*¹, *K. Abe*¹ and *M. Shirai*¹. *Research Institute of Electrical Communication, Tohoku University, Sendai, Japan*

**MONDAY
MORNING
9:30**

PARIS

Session AD

THIN FILMS: INTERFACE AND TRANSPORT PROPERTIES

Sergej Demokritov, Chair

9:30

- AD-01. Fe-induced spin-polarized electronic states in a realistic semiconductor tunnel barrier.** *M. Marangolo*¹ and *F. Finocchi*¹. *INSP, Université Pierre et Marie Curie, Paris, France*

9:45

- AD-02. Spin polarised electrodes and interfaces in organic spintronic devices.** *I. Bergenti*¹, *A. Dediu*¹, *F. Borgatti*¹, *A. Riminucci*¹, *L.H. Hueso*⁵, *F. Casoli*², *Y. Zhan*³, *C. Pernechele*⁴ and *M. Solzi*⁴. *1. ISMN CNR, Bologna, Italy; 2. CNR-IMEM, Parma, Italy; 3. Department of Physics, IFM, Linköping University, Linköping, Sweden; 4. Dipartimento di Fisica, Università di Parma, Parma, Italy; 5. Department of Physics and Astronomy, University of Leeds, Leeds, United Kingdom*

10:00

- AD-03. Voltage control of the in-plane magnetic hysteresis in Fe/Au/Fe(001) and Fe (001) ultrathin films grown on GaAs (001) surface.** K. Ohta¹, Y. Suzuki¹, T. Maruyama¹, T. Nozaki¹, T. Shinjo¹, M. Shiraishi¹, S. Ha², C. You² and W. Van Roy³. *1. Engineering Science, Osaka University, Toyonaka, Japan; 2. Department of Physics, Inha University, Incheon 402-751, South Korea; 3. IMEC, B-3001 Leuven, Belgium*

10:15

- AD-04. Extraordinary increase of the resistivity and decrease of the Curie temperature in ultrathin LSMO films capped with Au.** M. Cantoni¹, S. Brivio¹, D. Petti¹, A. Cattoni¹, R. Bertacco¹, A.A. Sidorenko², G. Allodi², M. Ghidini² and R. De Renzi². *1. Physics, Politecnico di Milano, Como, Italy; 2. Physics, Università di Parma, Parma, Italy*

10:30

- AD-05. Influence of interfacial oxygen on spin filtering and antiferromagnetic coupling in single-crystalline Fe/MgO/Fe(001) magnetic tunnel junctions.** F. Bonell¹, S. Andrieu¹, C. Tiusan¹, A.M. Bataille¹, B. Kierren¹, F. Montaigne¹ and G. Lengaigne¹. *Nanomagnetism and Spintronics Team, Laboratoire de Physique des Matériaux - Université Henry Poincaré - UMR 7556, Vandoeuvre-lès-Nancy, France*

10:45

- AD-06. Interface magnetism in ultra-thin Mo/Co multilayers.** L. Baczewski¹, K. Mergia², J. Kisielewski³, A. Maziewski³ and F. Ott⁴. *1. Institute of Physics Polish Academy of Sciences, Warsaw, Poland; 2. Institute of Nuclear Technology and Radiation Protection, Athens, Greece; 3. Institute of Experimental Physics, University of Bialystok, Bialystok, Poland; 4. Laboratoire Leon Brillouin, CEA, Saclay, France*

11:00

- AD-07. Noncollinear Surface Spin Density of equiatomic NiMn alloy on Cu(001).** C. Gao¹, A. Ernst¹, A. Winkelmann¹, J. Henk¹, W. Wulfhekel^{1,2}, P. Bruno¹ and J. Kirschner¹. *1. Max Planck Institute of Microstructure Physics, Halle (Saale), Germany; 2. Physikalisches Institut, Universität Karlsruhe (TH), Karlsruhe, Germany*

11:15

- AD-08. Room temperature ferromagnetism in pristine and Mn-doped ZnO thin films.** *H. Nguyen*¹, *E. Chikoidze*² and *Y. Dumont*². *1. Faculté des Sciences et Techniques, Université F. Rabelais, Laboratoire LEMA, UMR 6157 CNRS/CEA, Tours, France; 2. GeMAC, UMR 8635, CNRS-University of Versailles, Meudon, France*

11:30

- AD-09. Tailoring the magnetic properties of all-ferromagnetic artificial FeCu(111) alloy thin films.** *M. Niño*^{1,2}, *J. Camarero*¹, *W. Kuch*³, *R. Abrudan*^{3,4}, *N. Mikuszeit*^{1,5}, *C. Tieg*^{4,6}, *M.P. Jigato*¹, *J. Kirschner*⁴, *J. de Miguel*¹ and *R. Miranda*^{1,7}. *1. Departamento de Física de la Materia Condensada, Instituto de Materiales "Nicolás Cabrera" and Universidad Autónoma de Madrid, Madrid, Spain; 2. ELETTRA-Sincrotrone Trieste, Basovizza, Italy; 3. Institut für Experimentalphysik, Freie Universität Berlin, Berlin, Germany; 4. Max-Planck Institut für Mikrostrukturphysik, Halle, Germany; 5. Institut für Angewandte Physik, Universität Hamburg, Hamburg, Germany; 6. European Synchrotron Radiation Facility-ESRF, Grenoble, France; 7. Instituto Madrileño de Estudios Avanzados en Nanociencia IMDEA-Nanociencia, Madrid, Spain*

11:45

- AD-10. Magnetic properties of ultra thin magnetite film grown by molecular beam epitaxy.** *S.K. Arora*¹, *W. HanChun*¹, *I.V. Shvets*¹, *O.N. Mryasov*², *H. Yao*³ and *W.Y. Ching*³. *1. Centre for Adaptive Nanostructures and Nanodevices (CRANN), School of Physics, Trinity College Dublin, Dublin, Dublin, Ireland; 2. Seagate Research Center, Seagate Technology, Pittsburgh, PA, 15222, PA; 3. Department of Physics, University of Missouri-Kansas City, Kansas City, MO, 64110, KS*

12:00

- AD-11. Structure and magnetism of ultra-thin chromium layers on W(110).** *B. Santos*^{1,2}, *J.M. Puerta*³, *J.I. Cerda*³, *R. Stumpf*⁴, *K. von Bergmann*⁵, *R. Wiesendanger*⁵, *M. Bode*^{5,6}, *K.F. McCarty*⁴ and *J. de la Figuera*^{1,2}. *1. Instituto de Química-Física Rocasolano, CSIC, Madrid, Madrid, Spain; 2. Centro de Microanálisis de Materiales, Universidad Autónoma de Madrid, Madrid, Madrid, Spain; 3. Instituto de Ciencia de Materiales de Madrid, CSIC, Madrid, Madrid, Spain; 4. Sandia National Laboratories, Livermore, CA; 5. Institute of Applied Physics and Microstructure Research Center, University of Hamburg, Hamburg, Germany; 6. Center for Nanoscale Materials, Argonne National Laboratory, Argonne, IL*

12:15

- AD-12. Quantum-size induced oscillations of the electron-spin motion in Au films on Co(001).** *L. Tati Bismaths*¹, *L. Joly*², *F. Scheurer*¹ and *W. Weber*¹. *1. Institut de Physique et Chimie des Matériaux de Strasbourg,, Strasbourg, France; 2. Swiss Light Source, Villigen, Switzerland*

**MONDAY
MORNING
9:30**

LONDRES

**Session AE
HEAT AND MICROWAVE ASSISTED
RECORDING**

Duane Karns, Chair

9:30

- AE-01. Monolithically-fabricated hybrid head for near field assisted magnetic recording. (Invited)** *S. Miyanishi*¹, *K. Innami*¹, *T. Naka*¹, *T. Kitazawa*¹, *M. Yagura*¹, *N. Teraguchi*¹, *Y. Murakami*¹ and *A. Takahashi*¹. *Advanced Technology Research Laboratories, SHARP CORPORATION, Tenri, Nara, Japan*

10:00

- AE-02. Exploiting far- and nar-fiel optics to develop energy efficient transducer for heat-assisted magnetic recording.** *R. Ikkawi*¹, *N. Amos*¹, *A. Krichevsky*¹, *A. Lavrenov*¹, *D. Litvinov*² and *S. Khizroev*¹. *1. Electrical Engineering, University of California, Riverside, Riverside, CA; 2. Center for Nanomagnetic Systems, University of Houston, Houston, TX*

10:15

- AE-03. Design and characterization of a media thermal stack for confining lateral thermal heat flow.** *D. Karns*¹, *G. Ju*¹, *A. Itagi*¹ and *B. Lu*¹. *1. Seagate Technologies, Pittsburgh, PA*

10:30

- AE-04. Domain structure in TbFeCo/FePt-grains composite film and Cu doping effect on Curie temperature of FePt grains.** *A. Itoh*¹, *A. Tsukamoto*¹, *F. Chino*², *S. Iwase*², *Y. Sano*² and *K. Okayama*². *1. Dep. of Electronics and Computer Science, College of Science and Technology, Nihon University, Funabashi, Chiba, Japan; 2. Dep. of Electronics, Graduate School of Nihon University, Funabashi, Chiba, Japan*

10:45

- AE-05. Magnetic properties of amorphous magnetic film on self-assembled convex pattern.** *N. Iwata*¹, *D. Honda*¹, *Y. Murakami*¹ and *A. Takahashi*¹. *1. Advanced Technology Research Laboratories, SHARP CORPORATION, Tenri, NARA, Japan*

11:00

- AE-06. Comparison of Dual and Thermal Gradient Recording Methods for Thermally Assisted Magnetic Recording.** *F. Akagi*¹, *T. Matsumoto*¹ and *M. Igarashi*¹. *1. Hitachi, Ltd., Tokyo, Japan*

11:15

- AE-07. Investigation of magnetic reversal modes for Heat Assisted Magnetic Recording.** *R.F. Evans*¹, *P. Asselin*², *D. Hinzke*¹, *U. Nowak*¹ and *R.W. Chantrell*¹. *1. Physics, University Of York, York, England, United Kingdom; 2. Seagate Research, Pittsburgh, PA*

11:30

- AE-08. Modeling of thermally-activated switching of single phase, exchange-coupled and graded media.** *O. Chubykalo-Fesenko*¹, *U. Atxitia*¹ and *D. Suess*². *1. POMT, Instituto de Ciencia de Materiales de Madrid, CSIC, Madrid, Spain; 2. Vienna University of Technology, Vienna, Austria*

11:45

- AE-09. Application of plasmon resonances to all-optical magnetic recording.** *I. Mayergoyz*¹, *Z. Zhang*¹, *P. McAvoy*¹ and *C. Krafft*². *1. ECE Department and UMIACS, University of Maryland, College Park, MD; 2. Laboratory for Physical Sciences, College Park, MD*

12:00

- AE-10. Narrow Track Confinement by AC Field Generation Layer in Microwave Assisted Magnetic Recording.** *Y. Tang*¹ and *J. Zhu*¹. *1. Electrical and Computer Engineering, Carnegie Mellon University, Pittsburgh, PA*

12:15

- AE-11. LLG Simulation of Microwave Assisted Switching in Isolate Particle.** *M. Igarashi*¹, *Y. Suzuki*¹, *H. Miyamoto*¹, *Y. Maruyama*², *H. Fukui*² and *Y. Shiroishi*². *1. Hitachi, Ltd., Kokubunji, Tokyo, Japan; 2. Hitachi Global Storage Technology, Odawara, Kanagawa, Japan*

**MONDAY
MORNING
9:30**

BERLIN

**Session AF
CHARACTERIZATION AND
MEASUREMENT TECHNIQUES I**

Ernie Hill, Chair

9:30

- AF-01. Hyperfine field distribution in the Heusler compound Co₂FeAl probed by ⁵⁹Co NMR.** *S. Wurmehl*¹, *J.T. Kohlhepp*¹, *H. Swagten*¹, *B. Koopmans*¹, *C. Blum*², *B. Balke*², *G.H. Fecher*² and *C. Felser*². *1. Applied Physics, Eindhoven University of Technology, Eindhoven, Netherlands; 2. Institut für Anorganische und Analytische Chemie, Johannes Gutenberg-University, Mainz, Germany*

9:45

- AF-02. Shedding light on magnetoelastic coupling and magnetostriction at an atomic level.** *S. Pascarelli*¹, *M. Ruffoni*¹, *A. Trapananti*¹, *O. Mathon*¹, *Y. Joly*², *R. Pettifer*³, *M. Pasquale*⁴, *A. Magni*⁴, *C.P. Sasso*⁴, *F. Celegato*⁴ and *E. Olivetti*⁴. *1. European Synchrotron Radiation Facility, Grenoble, France; 2. Institut NEEL, CNRS/UJF, Grenoble, France; 3. Dept. of Physics, Univ. of Warwick, Coventry, United Kingdom; 4. INRIM, IENGF, Torino, Italy*

10:00

- AF-03. Detection of magnetic reversal at a DW pinning site in Ni80Fe20 nanowires using concurrent Magneto-Optical Kerr Effect (MOKE) and electrical measurements.** *H.T. Zeng*¹, *D. Read*¹, *D. Petit*¹, *L. O'Brien*¹, *E. Lewis*¹, *A. Jausovec*¹ and *R. Cowburn*¹. *Physics, Imperial College London, London, United Kingdom*

10:15

- AF-04. Material selective sensitivity of magneto-optical Kerr effect in NiFe/Au/Co/Au periodic multilayers.** *K. Postava*^{1,2}, *M. Tekielak*¹, *P. Mazalski*¹, *A. Maziewski*¹, *A. Stupakiewicz*¹, *M. Urbaniak*³, *B. Szymanski*³ and *F. Stobiecki*³. *1. Laboratory of Magnetism, University of Bialystok, Bialystok, Poland; 2. Department of Physics, Technical University of Ostrava, Ostrava - Poruba, Czech Republic; 3. Institute of Molecular Physics, Polish Academy of Sciences, Poznan, Poland*

10:30

- AF-05. Magnetic images of a surface crack on a heated specimen with the use of an area type magnetic camera with high spatial resolution.** *J. Lee*¹ and *J. Hwang*². *1. Department of Information and Communication Engineering, Chosun University, Gwangju, South Korea; 2. Department of Information and Communication Engineering, Graduate School of Chosun University, Gwangju, South Korea*

10:45

- AF-06. Magnetostriction of Iron at Low Temperatures Observed with X-Ray Diffraction.** *E. Arakawa*¹ and *N. Aizawa*¹. *Physics Dept., Tokyo Gakugei University, Koganei, Tokyo, Japan*

11:00

- AF-07. Enhancement of magneto-optical Kerr signal from the nano-structure by employing anti-reflection coated substrate.** *C. You*¹ and *D. Kim*¹. *Department of Physics, Inha University, Incheon, South Korea*

11:15

- AF-08. Selective Magnetometry using a single x-ray absorption edge.** *J. Chaboy*¹, *M. Laguna-Marco*¹, *C. Piquer*¹, *R. Boada*¹, *H. Maruyama*² and *N. Kawamura*³*1. ICMA, Zaragoza, Zaragoza, Spain; 2. Graduate School of Science, Hiroshima University, Higashi-Hiroshima, Japan; 3. SPring-8/JASRI, Sayo, Hyogo, Japan*

11:30

- AF-09. Open-circuit one-port network analyzer ferromagnetic resonance.** *C. Bilzer*¹, *T. Devolder*¹, *P. Crozat*¹ and *C. Chappert*¹*1. Institut d'Electronique Fondamentale, ORSAY Cedex, France*

11:45

- AF-10. Discrimination of metallic coins using the scan type magnetic camera.** *J. Lee*¹ and *J. Jun*²*1. Department of Information and Communication Engineering, Chosun University, Gwangju, South Korea; 2. Department of Information and Communication Engineering, Graduate School of Chosun University, Gwangju, South Korea*

12:00

- AF-11. Apparent Image Effect in Closed-Circuit Magnetic Measurements.** *A.K. Higgins*¹, *C.H. Chen*¹, *C.D. Graham*² and *R.M. Strnat*³*1. University of Dayton Magnetics Lab, Dayton, OH; 2. University of Pennsylvania, Philadelphia, PA; 3. Magnetic Instrumentation, Inc, Indianapolis, IN*

12:15

- AF-12. A GMR Based System for Pulsed Eddy Current NDE of Aircraft Structures.** *G. Yang*¹, *L. Udpa*¹ and *S. Udpa*¹*1. msu, East Lansing, MI*

MONDAY
MORNING
9:30

AMSTERDAM

Session AG
TRANSFORMERS AND INDUCTORS I

Saibal Roy, Chair

9:30

- AG-01. Fabrication and analysis of high-performance integrated solenoid inductor with magnetic core.** *(Invited)* D. Lee¹, K. Hwang² and S.X. Wang¹. *Materials Science and Engineering, Stanford University, Stanford, CA; 2. Intel Corporation, Folsom, CA*

10:00

- AG-02. Thin Film Integrated Power Inductor on Si and Its Performance in a 8MHz Buck Converter.** N. Wang¹, T. O'Donnell¹, R. Meere¹, F. Rhen¹, S. Roy¹ and C. O'Mathuna¹. *Microsystems Centre, Tyndall National Institute, Cork, Ireland*

10:15

- AG-03. CoNiFe applied in Microinductors for integrated dc-dc converters.** T. El mastouli¹, J. Laur¹, J. Sanchez¹, M. Brunet¹, D. Bourrier¹ and M. Dilhan¹. *ISGE, Laboratory for Analysis and Architectures of Systems (LAAS - CNRS), Toulouse Cedex 4, France*

10:30

- AG-04. High Q and High Current NiZnCu ferrite inductor for On-chip power module.** S. Bae^{1,2}, Y. Hong^{1,2}, J. Lee^{1,2}, G.S. Abo^{1,2}, J. Jalli^{1,2}, A. Lyle^{1,2}, H. Han^{1,2} and G.W. Donohoe³. *1. Department of Electrical and Computer Engineering, University of Alabama, Tuscaloosa, AL; 2. MINT Center, University of Alabama, Tuscaloosa, AL; 3. Department of Electrical and Computer Engineering, University of Idaho, Moscow, ID*

10:45

- AG-05. Synthesis of Bi-Zn-Al-B-Si-O nano-glass by sol-gel method for multilayer chip inductors.** S. An¹ and S. Wi¹. *EMC R&D Group, Samsung Electro-Mechanics, Gyunggi-Do, South Korea*

11:00

- AG-06. Electrically Tunable Thin Film Magnetic Core using Synthetic Antiferromagnet Structure.** *N. An*¹, *A. Jander*¹ and *P. Dhagat*¹. *Electrical Engineering & Computer Science, Oregon State University, Corvallis, OR*

11:15

- AG-07. The effect of magnetic coating layer thickness on the performance of tunable magnetic inductors.** *N. Ning*¹, *X. Li*¹, *H. Seet*¹, *W. Ng*¹ and *Y. Xu*². *Mechanical Engineering, National University of Singapore, Singapore, Singapore; 2. Electrical and Computer Engineering, National University of Singapore, Singapore, Singapore*

11:30

- AG-08. Audible noise from amorphous metal and silicon steel based transformer core.** *D. Azuma*¹ and *R. Hasegawa*¹. *Metglas, Inc., Conway, SC*

11:45

- AG-09. Development of a Novel Three-Phase Laminated Core Variable Inductor.** *K. Nakamura*¹, *S. Hisada*¹, *K. Arimatsu*², *T. Ohinata*², *K. Sakamoto*² and *O. Ichinokura*¹. *Graduate School of Engineering, Tohoku University, Sendai, Japan; 2. Tohoku Electric Power Co., Inc., Sendai, Japan*

12:00

- AG-10. Magneto-mechanical resonance in a 3-phase transformer core under PWM voltage excitation.** *X. Yao*¹, *P.P. Thant*², *A.J. Moses*¹ and *F. Anayi*¹. *School of Engineering, Cardiff University, Wolfson Centre for Magnetics, Cardiff, Wales, United Kingdom; 2. Drilling & Measurements, Schlumberger, Aberdeen, Scotland, United Kingdom*

12:15

- AG-11. Modeling the mutual impedances of non-coaxial inductors for induction heating applications.** *C. Carretero*^{1,3}, *J. Acero*¹, *R. Alonso*², *J. Burdío*¹ and *F. Monterde*³. *1. Dept. of Electronics Engineering and Communications, University of Zaragoza, Zaragoza, Spain; 2. Dept. of Applied Physics, University of Zaragoza, Zaragoza, Spain; 3. Bosch-Siemens Home Appliances Group, Montañana (Zaragoza), Spain*

MONDAY
MORNING
9:30

CARACAS

Session AH
MAGNETOIMPEDANCE

Larissa Panina, Chair

9:30

AH-01. High-frequency transverse incremental permeability and magnetoimpedance effect in CoFeHfO magnetic oxide nanofilms. A. Le¹, M. Phan², V. Manuel³, H. Lee⁴, Q. Nguyen¹ and S. Yu¹. *BK 21 Physics Program and Department of Physics, Chungbuk National University, Cheongju 361-763, South Korea; 2. Advanced Composites Centre for Innovation and Science, University of Bristol, Queen's Building, Bristol, United Kingdom; 3. De Instituto de Ciencia de Materiales de Madrid, CSIC, Campus de Cantoblanco, 28049 Madrid, Spain; 4. Department of Physics Education, Kongju National University, Kongju 314-701,, South Korea*

9:45

AH-02. Width dependence of magneto-impedance in sandwiched films. D. de Cos¹, A. Garcia-Arribas¹ and J. Barandiaran¹. *Electricidad y Electronica, Universidad del Pais Vasco, Bilbao, Spain*

10:00

AH-03. Annealing effects on the microwave absorption properties of nanocrystalline Fe₇₉Si₁₆B₅ microwires. M. Han¹, L. Deng¹ and D. Liang¹. *State Key Laboratory of Electronic Thin Films and Integrated Devices, University of Electronic Science and Technology of China, Chengdu, Sichuan, China*

10:15

AH-04. Microwave absorption of amorphous microwires carrying a low frequency ac current. A.G. Gorriti¹, I. Carabias¹, P. Marin¹ and A. Hernando¹. *Instituto de Magnetismo Aplicado, Las Rozas, Madrid, Spain*

10:30

- AH-05. Magneto Impedance Behavior in Co/Cu/Co/NiFe Pseudo Spin Valve with a nano-oxide layer after Annealing Treatment.** *W. Chien*^{1,4}, *R. Hung*², *C. Lo*^{2,4}, *Y. Yao*^{1,3}, *K. Chang*⁴, *E. Lai*⁴, *Y. Chen*⁴, *K. Hsieh*⁴, *C. Lu*⁴ and *P. Lin*^{1,4}. *1. Department of Materials Science and Engineering, National Chiao Tung University, Hsinchu, Taiwan; 2. Electronics and Optoelectronics Research Laboratories, Industrial Technology Research Institute, Hsinchu, Taiwan; 3. Department of Materials Engineering, Tatung University, Taipei, Taiwan; 4. Emerging Central Lab, Macronix International Co. Ltd, Hsinchu, Taiwan*

10:45

- AH-06. Analysis of the intrinsic field sensitivity and noise of magnetoimpedance sensors.** *L. Melo*¹, *D. Menard*², *A. Yelon*², *B. Dufay*³, *O. Mareschal*³, *S. Saez*³ and *C. Dolabdjian*³. *1. Electrical Engineering, Ecole Polytechnique de Montreal, Montreal, QC, Canada; 2. Engineering Physics, Ecole Polytechnique de Montreal, Montreal, QC, Canada; 3. GREYC, ENSICAEN and University of Caen, Caen, France*

11:00

- AH-07. Magneto impedance study in magneto tunneling junctions with different thickness of its barrier layer.** *W. Chien*¹, *Y. Yao*², *J. Wu*², *C. Lo*³, *P. Lin*¹ and *X. Han*⁴. *1. The Department of Materials Science and Engineering, National Chiao Tung University, Hsinchu, Taiwan; 2. Department of Materials Engineering, Tatung University, Taipei, Taiwan; 3. Electronics and Optoelectronics Research Laboratories, Industrial Technology Research Institute, Hsinchu, Taiwan; 4. Institute of Physics, Chinese Academy of Sciences, Beijing, China*

11:15

- AH-08. Development of thin microwires with enhanced magnetic softness and GMI.** *V. Zhukova*², *M. Ipatov*¹, *J. Gonzalez*¹, *J. Blanco*² and *A. Zhukov*^{1,3}. *1. Dept. of Phys. Materials, Basque Country University, San Sebastian, Spain; 2. Dpto. de Física Aplicada, EUPDS, Basque Country University, San Sebastian, Spain; 3. TAMAG Ibérica S.L., Parque Tecnológico de Miramón, Paseo Mikeletegi 56, 1 Planta., San Sebastian, Spain*

11:30

- AH-09. Dependence of magneto-impedance on magnetic states in manganeses.** *J. Li*¹, *H. Chou*¹ and *C. Lin*¹. *Department of Physics and Center of Nanoscience, National Sun Yat-sen University, Kaohsiung, Taiwan*

11:45

AH-10. Temperature Dependence of Magnetoimpedance and Anisotropy in Nanocrystalline Finemet Wire.

*B. Hernando*¹, *J. Olivera*¹, *M. Sánchez*¹, *V.M. Prida*¹ and *R. Varga*²*1. Fisica, Universidad de Oviedo, Oviedo, Asturias, Spain; 2. Inst. Physics, Fac.Sci., UPJS, Park Angelinum, Kosice, Slovakia*

12:00

AH-11. Asymmetrical magnetoimpedance in CoFeSiB/CoNi layered microwires.

*J. Torrejon*¹, *G. Badini*¹ and *L.V. Panina*²*1. Magnetism, ICMM (CSIC), Madrid, Spain; 2. School of Computing, Communication and Electronics, University of Plymouth, Plymouth, United Kingdom*

12:15

AH-12. Role of the interdomain wall in the giant magnetoimpedance effect of thin microwires.

*H. Chiriac*¹, *T. Óvári*¹ and *S. Corodeanu*¹*1. National Institute of Research and Development for Technical Physics, Iasi, Romania*

**MONDAY
MORNING
9:00**

POLIVALENTE**Session AL****MOTORS AND ACTUATORS I
(POSTER SESSION)**

Elena Lomonova, Chair

AL-01. Development of an Axial-flux Spindle Motor for the Slim Optical Disc Drive.

*G. Yan*¹, *G. Huang*¹, *H. Wang*¹ and *L. Hsu*²*1. Micro/Meso Mechanical Manufacturing Section, Metal Industries Research & Development Center, Kaohsiung, Taiwan; 2. Electric Motor Technology Research Center, National Cheng Kung University, Tainan, Taiwan*

AL-02. Developments of a direct driven linear tubular generator for wave energy extraction.

*C. Liu*¹, *S. Yan*¹, *C. Lin*¹, *H. Lin*¹, *M. Lai*¹ and *C. Hwang*²*1. Electrical Engineering, National Sun Yat-Sen University, Kaohsiung, Taiwan; 2. Electrical Engineering, Feng Chia University, Taichung, Taiwan*

- AL-03. Mechanical resonance in non-oriented electrical steels induced by magnetostriction under pwm excitations.** S. Somkun¹, A. Moses¹ and P. Anderson¹.
Wolfson Centre for Magnetics, Cardiff University, Cardiff, United Kingdom
- AL-04. Analysis of concentric magnetic gears using three dimensional scalar magnetic potential finite element method.** L. Xinhua^{1,2}, C. K.t¹, J. J.z² and J. Linni¹.
Department of Electrical and Electronic Engineering, The University of Hong Kong, Hong Kong, China; 2. School of Automation, Shanghai University, Shanghai, China
- AL-05. Reduction of the Torque Ripple and Unbalanced Magnetic Force of a Rotatory Two-Phase Transverse Flux Machine by Using Herringbone Teeth.** G. Jang¹, H. Ahn¹, J. Chang², S. Chung² and D. Kang².
1. Dept. of Mechanical Engineering, PREM Lab., Hanyang University, Seoul, South Korea; 2. Korea Electrotechnology Research Institute, Changwon, South Korea
- AL-06. EVALUATION OF INDUCTION HEATING APPLICATION OF LINEAR INDUCTION MOTOR BY USING FEM CALCULATION.**
T. Yamada¹ and K. Fujisaki^{2,3}.
1. Nittetsu Plant Designing Corporation, Futtsu, Japan; 2. Nippon Steel Corporation, Futtsu, Japan; 3. Graduated School of Environmental Studies, Tohoku University, Sendai, Japan
- AL-07. Calculation of Stator End-winding Reactance of an Induction Machine Based on Magnetic Energy by 3-D Finite Element Analysis.** R. Lin¹ and A. Arkkio¹.
Helsinki University of Technology, Espoo, Finland
- AL-08. Investigation of carrier loss of induction motors considering skin effect in electrical steel sheets.**
K. Yamazaki¹ and N. Fukushima¹.
1. Dept. of Electrical, Electronics and Computer Engineering, Chiba Institute of Technology, Narashino, Chiba, Japan
- AL-09. Characteristics Analysis of 3DOF Spherical Motor for robotic wrist motor.** S. Won¹ and J. Lee¹.
Electrical Eng., Hanyang University, Seoul, South Korea
- AL-10. Electro-Magnetically Excited Vibration Testing for a Vibro-Acoustic Investigation on PMSMs in Hard Disk Drives.** S. Suwankawin¹ and T. Jintanawan².
1. Electrical Engineering, Chulalongkorn University, Bangkok, Thailand; 2. Mechanical Engineering, Chulalongkorn University, Bangkok, Thailand

AL-11. A Study on the Multi-Objective Optimal Design of Interior Permanent Magnet Synchronous Motor.

K. Kim¹ and J. Lee¹. Dept. of electrical engineering, hanyang university, seoul, South Korea

AL-12. Analysis on Operating Characteristics of Auto

Focusing VCM Actuator. *Y. Choi¹, Y. Kim¹, G. Cho¹, Z. Piao¹, B. Min¹, H. Baek¹ and B. Chae². I.*

Department of Electrical Engineering, Chosun University, Gwangju, South Korea; 2. Department of Electrical and Control Engineering, Korea Polytechnic V College, Gwangju, South Korea

AL-13. Development of Laser Beam Steering System Using

Three Magnetostrictive Actuators. *J. Jung¹, Y. Park¹ and K. Im¹. I. Mechatronics Engineering, Chungnam National University, Daejeon, South Korea*

**MONDAY
MORNING
9:00**

POLIVALENTE

Session AM**MAGNETIC SENSORS I
(POSTER SESSION)**

Giovanni Badini-Confalonieri, Chair

AM-01. Magnetization process and induced pulse voltage of FeCoV wire implemented in tiny sensor chip.

H. Tanaka¹, T. Kusunoki¹, T. Yamada¹, Y. Takemura¹, S. Abe², S. Kohno³ and H. Kondo³. I. Department of Electrical & Computer Engineering, Yokohama National University, Yokohama, Japan; 2. Kanagawa University, Yokohama, Japan; 3. Nikkoshi Co., Ltd., Tokyo, Japan

AM-02. The effect of ultrasonic resonance on impedance in magnetic rods.

H. Osada¹, S. Nakamura¹, H. Hatafuku¹, S. Chiba¹ and H. Oka¹. I. Iwate University, Morioka, Japan

AM-03. Electrical Isolators based on Tunneling Magnetoresistance Technology.

C. Reig¹, M.D. Cubells-Beltrán¹, D. Ramírez¹, S. Cardoso² and P.P. Freitas². I. Electronic Engineering, Universitat de València, Burjassot, Spain; 2. Microsistemas e Nanotecnologias, INESC, Lisboa, Portugal

- AM-04. Introduction of a Base-Model for Eddy Current Testing of Printed Circuit Boards.** H. Bayani¹, M. Nishino¹, S. Yamada¹ and M. Iwahara¹. *Division of Biological Measurement and Applications, Kanazawa University, Kanazawa, Japan*
- AM-05. Orthogonal Fluxgate with Tube Core Operated in Fundamental Mode.** E. Paperno¹, E. Wiess¹ and A. Plotkin¹. *Electrical and Computer Engineering, Ben-Gurion University of the Negev, Beer-Sheva, Israel*
- AM-06. Test of multiturn sensors by a system generating rotating electromagnetic fields with high rotational frequencies.** H. Koebe¹, D. Schmidt¹, M. Scherzinger², K. Bauer² and R.M. Mattheis¹. *1. Photonic Instrumentation, IPHT, Jena, Germany; 2. Novotechnik, Ostfildern, Germany*
- AM-07. External and internal bias field effect on giant magneto impedance profile.** H. Kim¹, S. Park¹, D. Kim¹ and W. Jeung¹. *Division of Materials Science & Engineering, Korea Institute of Science and Technology, Seoul, South Korea*
- AM-08. Magnetic Gradiometer for Magnetic Moment Measurement using Two Cesium Magnetometer in Earth's Magnetic Field Background.** P. Park¹, Y. Kim¹, W. Kim¹ and V.Y. Shifrin². *1. Electromagnetic Metrology Group, Korea Research Institute of Standards and Science(KRISS), Daejeon, South Korea; 2. D. I. Mendeleev Institute for Metrology (VNIIM), St. Petersburg, Russian Federation*
- AM-09. Surface flaws detection using AC magnetic field sensing by a thin film inductive micro sensor.** K. Kim¹, Y. Cha¹, J. Kim², J. Sohn² and Y. Yoo². *1. Physics, Yeungnam University, Gyeongsan, South Korea; 2. Institute of Nova Magnetics, Nova Magnetics, Incheon, South Korea*
- AM-10. Linear magnetoresistance of NiO-spin valve device.** S. Lee¹, Y. Park², D. Hwang³ and J. Rhee⁴. *1. Oriental Biomedical Engineering, Sangji University, Wonju, Gangwondo, South Korea; 2. Oriental Western Biomedical Engineering, Sangji University, Wonju, Gangwondo, South Korea; 3. Applied Physics and Electronics, Sangji University, Wonju, Gangwondo, South Korea; 4. Physics, Sookmyung Women's University, Seoul, Seoul, South Korea*

- AM-11. Temperature Characteristics of Magnetic Rotation Angle Sensors With Spin-Valve GMR Films.** *Y. Abe*², *T. Ono*² and *T. Kawai*¹. *1. New Business Development Center, Hitachi Metals, Tokyo, Japan; 2. OE Device Center, Hitachi Metals, Mooka, Japan*
- AM-12. A simple design of an orthogonal fluxgate magnetometer of fundamental mode.** *I. Sasada*¹ and *H. Kashima*¹. *1. Applied Science for Electronics and Materials, Kyushu University, Kasuga, Japan*
- AM-13. Nitride based (AlGaIn/GaN) micro-Hall sensor.** *A. Bengoechea*¹, *C. Aroca*¹, *M.A. Sanchez-Garcia*¹, *E. Lopez*² and *P. Sanchez*¹. *1. ISOM, Universidad Politecnica de Madrid, Madrid, Madrid, Spain; 2. Fisica de Materiales, Universidad Complutense de Madrid, Madrid, Madrid, Spain*
- AM-14. Enhancement of sensitivity in a magnetic sensor by combining planar Hall resistance and giant Magnetoresistance.** *H. Tran Quang*¹, *S. Oh*¹, *D. Nguyen Huu*² and *C. Kim*¹. *1. Department of Materials Science and Engineering, Chungnam National University, Daejeon, South Korea; 2. College of Technology, Vietnam National University, Hanoi, Viet Nam*
- AM-15. Detection of magnetic particles for biological applications using a local-Hall device.** *S. Joo*^{1,2}, *Y. Kim*¹, *W. Lee*¹, *J. Lee*¹, *J. Hong*^{1,2}, *K. Rhie*^{1,2} and *K. Shin*². *1. Applied Physics, Korea university, Seoul, South Korea; 2. Center for Spintronics Research, KIST, Seoul, South Korea*
- AM-16. Fabrication and Characterization of Silicon Micro Hall Sensors for Scanning Hall Probe Microscopy (SHPM) Using Multiple Feedback Techniques.** *R. Akram*¹, *M. Dede*¹ and *A. Oral*¹. *1. Department of Physics, Bilkent University, 06800, Ankara, Turkey*
- AM-17. Magneto-impedance property in a micromachined magnetic LC-sensor device.** *A. Le*¹, *S. Yu*¹, *H. Lee*² and *V. Manuel*³. *1. BK 21 Physics Program and Department of Physics, Chungbuk National University, Cheongju 361-763, South Korea; 2. Department of Physics Education, Kongju National University, Kongju 314-701, South Korea; 3. De Instituto de Ciencia de Materiales de Madrid, CSIC, Campus de Cantoblanco, 28049 Madrid, Spain*

MONDAY
MORNING
9:00

POLIVALENTE

Session AN
MAGNETIC OXIDES & HEUSLER
ALLOYS I
(POSTER SESSION)
Atsufumi Hirohata, Chair

- AN-01. Half-metallic magnetic materials and hybrid spintronic Structures. (Invited) Y. Xu¹** *1. Department of Electronics, The University of York, York, United Kingdom*
- AN-02. Searching for quaternary Heusler alloys with half-metallicity.** *X. Dai¹, G. Liu¹, G. Fecher¹ and C. Felser¹* *1. Institut für Anorganische und Analytische Chemie, Johannes Gutenberg-Universität Mainz, Mainz, Germany*
- AN-03. Universal scaling of the anomalous Hall effect in Fe₃O₄.** *A. Fernández-Pacheco^{1,2}, J.M. De Teresa², J. Orna^{1,2}, L. Morellón^{1,2}, P.A. Algarabel², J.A. Pardo^{1,3} and M.R. Ibarra^{1,2}* *1. Instituto de Nanociencia de Aragón, Zaragoza, Spain; 2. Instituto de Ciencias de los Materiales de Aragón, Zaragoza, Spain; 3. Departamento de Ciencia y Tecnología de Materiales y Fluidos, Universidad de Zaragoza, Zaragoza, Spain*
- AN-04. Optimization of the Postgrowth Oxidation Preparation Process of Fe₃O₄/GaAs(100) Hybrid Structure.** *S. Hassan¹, Y. Xu¹, K. Wilson³, S. Thompson² and G. Van der Laan⁴* *1. Electronics, University of York, York, United Kingdom; 2. Physics, University of York, York, United Kingdom; 3. Chemistry, University of York, York, United Kingdom; 4. Daresbury Laboratory, Warrington, United Kingdom*
- AN-05. Magnetic and transport properties of polycrystalline CaRu_{1-x}MoxO₃.** *Y. Ying¹, Y. Lee¹, K. Kim², H. Pan³ and Y. Zhang³* *1. Quantum Photonic Science Research Center and BK21 Program Division of Advanced Research and Education in Physics, Hanyang University, Seoul, South Korea; 2. Sunmoon University, Asan, South Korea; 3. National High Magnetic Field Laboratory, University of Science and Technology of China, Hefei, China*

- AN-06. Atomic and electronic structure in ferromagnetic/superconducting oxide interfaces.** *M. Varela*¹, *J. Garcia-Barriocanal*², *A.R. Lupini*¹, *W. Luo*^{3,1}, *Z. Sefrioui*², *S.T. Pantelides*^{3,1}, *C. Leon*², *J. Santamaria*² and *S.J. Pennycook*^{1,3}. *1. Materials Science and Technology Division, Oak Ridge National Laboratory, Oak Ridge, TN; 2. Departamento de Física Aplicada III, Universidad Complutense de Madrid, Madrid, Spain; 3. Department of Physics and Astronomy, Vanderbilt University, Nashville, TN*
- AN-07. Magnetic phase coupled to an electric memory state in d^0 oxide ZrO_2 films.** *Y. Jo*¹, *M. Jung*¹, *I. Hwang*², *B. Park*² and *S. Lee*³. *1. Korea Basic Science Institute, DAEJEON, South Korea; 2. Konkuk University, SEOUL, South Korea; 3. Pohang University of Science and Technology, POHANG, South Korea*
- AN-08. Perovskite-oxide pseudo spin valve structure.** *Y. Chan*¹, *W. Cheng*¹, *H. Lau*¹ and *C. Leung*¹. *Department of Applied Physics, The Hong Kong Polytechnic University, Hong Kong, China*
- AN-09. Grain-size effects on magnetic properties of sputtered Co_2MnSi films.** *S. Ladak*² and *A. Hirohata*¹. *1. Department of Electronics, University of York, York, United Kingdom; 2. Department of Physics, University of York, York, United Kingdom*
- AN-10. Effect of Nd doping on the spin polarization of Co_2MnSi Heusler alloy.** *A. Rajanikanth*^{1,2}, *Y.K. Takahashi*² and *K. Hono*^{2,1}. *1. International Center for Young Scientists, NIMS, Tsukuba, Ibaraki, Japan; 2. Magnetic Materials Center, NIMS, Tsukuba, Ibaraki, Japan*
- AN-11. Anisotropy and magnetic dynamic properties of Co_2MnGe Heusler compound.** *M. Belmeguenai*^{2,1}, *F. Zighem*¹, *G. Woltersdorf*², *Y. Roussigné*¹, *S. Chérif*¹, *K. Westerholt*³ and *G. Bayreuther*². *1. LPMTM Université Paris13, Villetaneuse, France; 2. Institut für Experimentelle Physik, Universität Regensburg, Regensburg, Germany; 3. Ruhr-Universität Bochum, Bochum, Germany*
- AN-12. The effects of annealing temperature on structural and chemical properties of the $Co_2Cr_{0.6}Fe_{0.4}Al$ surface and its relevance for the electron spin polarization at the surface.** *J. Wüstenberg*¹, *J. Fischer*¹, *A. Conca*², *M. Jourdan*², *M. Aeschlimann*¹ and *M. Cinchetti*¹. *1. Institute of Physics, University of Kaiserslautern, Kaiserslautern, Germany; 2. Institute of Physics, Johannes Gutenberg University Mainz, Mainz, Germany*

- AN-13. The Different Capping Layer Influence on the Magnetic, Electronic and Structural Properties of the Co₂MnGa/GaAs(100) Hybrid Structure.** *S. Hassan*¹, *J.S. Claydon*¹, *W. Zhang*¹, *Y. Xu*¹, *C.D. Damsgaard*², *J.B. Hansen*², *C.S. Jacobsen*² and *G. Van der Laan*³. *1. Electronics, University of York, York, United Kingdom; 2. Physics, Technical University of Denmark, Lyngby, Denmark; 3. Daresbury Laboratory, Warrington, United Kingdom*

**MONDAY
MORNING
9:00**

POLIVALENTE

**Session A0
TRANSPORT THEORY AND
SEMICONDUCTORS SPINTRONICS
(POSTER SESSION)**

*Dafine Ravelosona, Chair
Joerg Wunderlich, Chair*

- AO-01. Penetration depth of transverse spin current in ferromagnetic metals.** *T. Tomohiro*^{1,2}, *Y. Satoshi*³, *I. Hiroshi*¹ and *A. Yasuo*³. *1. Nanotechnology Research Institute, National Institute for Advanced Industrial Science and Technology, Tsukuba, Japan; 2. Institute of Applied Physics, University of Tsukuba, Tsukuba, Japan; 3. Department of Applied Physics, Graduate School of Engineering, Tohoku University, Sendai, Japan*
- AO-02. Effect of Spin Memory Loss at Interfaces of Ferromagnet/Normal Metal on Spin-Transfer Torque.** *S. Lee*¹ and *K. Lee*¹. *1. Korea University, Seoul, South Korea*
- AO-03. Magnetic and structural properties of fully epitaxial Fe₃O₄/MgO/GaAs(100) for spin injection.** *P. Wong*¹, *W. Zhang*¹, *Y. Xu*¹ and *S.M. Thompson*². *1. Spintronics and Nanodevice Laboratory, Department of Electronics, University of York, York, United Kingdom; 2. Department of Physics, University of York, York, United Kingdom*
- AO-04. The effect of screening on extracted tunneling barrier parameters.** *S. Bonetti*¹, *J. Persson*¹ and *J. Åkerman*¹. *1. Microelectronics and Applied Physics, Royal Institute of Technology (KTH), Kista-Stockholm, Sweden*

- AO-05. Rectification effect in the medium with noncoplanar magnetic structure.** *O.G. Udalov*¹ and *A.A. Fraerman*¹. *Institute for physics of microstructures RAS, Nizhny Novgorod, Nizhegorodskaya oblast', Russian Federation*
- AO-06. Physical and electrical study of Permalloy/Al₂O₃/Si diodes for spin injection into silicon.** *N. Bruyant*¹, *R. Benabderahmane*¹, *M. Kanoun*¹, *C. Baraduc*¹, *H. Achard*² and *A. Bsiesy*³. *1. SPINTEC, CEA CNRS, Grenoble, France; 2. LETI-Minatec, CEA, Grenoble, France; 3. SPINTEC, Université Joseph Fourier, Grenoble, France*
- AO-07. Efficient spin injection and spin filtering in semiconductors by utilizing the k^3 -Dresselhaus spin-orbit effect.** *T. Fujita*^{1,2}, *M. Jalil*¹ and *S. Tan*². *1. Electrical and Computer Engineering Department, National University of Singapore, Singapore, Singapore; 2. Data Storage Institute, Singapore, Singapore*
- AO-08. Electric field effect on spin diffusion in a semiconductor channel.** *J. Kwon*¹, *H. Koo*¹, *J. Eom*^{2,1}, *J. Chang*¹ and *S. Han*¹. *1. Center for Spintronics Research, Korea Institute of Science and Technology, Seoul, South Korea; 2. Department of Physics, Sejong University, Seoul, South Korea*
- AO-09. Effect of dynamical nuclear polarization on the transport through double quantum dots.** *J. Inarrea*^{1,2} and *G. Platero*². *1. Fisica, Universidad Carlos III, Leganes, Spain; 2. CSIC, Madrid, Madrid, Spain*
- AO-10. Spin Current Characteristics in a Quantum Dot-Ferromagnetic Contacts Sandwich Structure.** *W. Chen*¹, *M. Jalil*¹ and *S. Tan*². *1. Electrical & Computer Engineering, National University of Singapore, Singapore, Singapore; 2. Data Storage Institute, Singapore, Singapore*
- AO-11. Transport of carbon nanotubes coupled to ferromagnetic electrodes.** *S. Sun*¹. *1. Department of Applied Physics, National university of Kaohsiung, Taiwan, Kaohsiung, Taiwan*
- AO-12. The Effects of Cotunneling and Spin Flip on The Spin Polarized Transport in A Ferromagnetic Single Electron Tunneling Transistor.** *M. Ma*¹ and *M. Jalil*¹. *1. Department of Electrical and Computer Engineering, Information Storage Materials Laboratory, Singapore, Singapore*

- AO-13. Self-sustained spin-polarized current oscillations in diluted magnetic semiconductor superlattices.** R. Escobedo¹, M. Carretero^{2,3}, L.L. Bonilla^{2,3} and G. Platero⁴. *1. Matemática Aplicada, Universidad de Cantabria, Santander, Cantabria, Spain; 2. G. Milan Institute of Modeling, Simulation and Industrial Mathematics, Universidad Carlos III de Madrid, Leganés, Madrid, Spain; 3. Unidad Asociada al Instituto de Ciencia de Materiales de Madrid, CSIC, Madrid, Madrid, Spain; 4. Instituto de Ciencia de Materiales, CSIC, Madrid, Madrid, Spain*
- AO-14. Modeling of Spin-Transfer Torque in Magnetic Multilayers with Noncollinear Magnetizations.** H. Morise¹ and S. Nakamura¹. *1. Corp. R&D Ctr., Toshiba Corp., Kawasaki, Kanagawa, Japan*
- AO-15. FMR studies of single permalloy layers sandwiched by Al.** H.J. Hurdequint¹, N. Sergeeva¹ and J. Ben Youssef². *1. Laboratoire de Physique des Solides, CNRS-Universite Paris-Sud, Orsay, France; 2. Laboratoire de Magnetisme de Bretagne, CNRS-Universite de Bretagne-Ouest, Brest, France*
- AO-16. Verifying a sole effect of tunnel barrier on spin transport by spin-polarised photoexcitation.** K. Lee¹, T. Trypiniotis¹, H. Kurebayashi¹, S.N. Holmes^{1,2}, W.S. Cho¹, J.A. Bland¹, K.I. Lee³ and K.H. Shin³. *1. Physics, Cavendish Laboratory, Cambridge, United Kingdom; 2. Toshiba Research Europe Limited, Toshiba Cambridge Research Laboratory, Cambridge, United Kingdom; 3. Center for Spintronics Research, Korea Institute of Science and Technology, Seoul, South Korea*
- AO-17. Polarization dependence of phonon replica peaks in spin-LEDs.** R. Mansell¹, J. Laloë¹, S.N. Holmes², A. Petrou³, I. Farrer¹, G. Jones¹ and T. Bland¹. *1. Department of Physics, University of Cambridge, Cambridge, United Kingdom; 2. Toshiba Cambridge Research Laboratory, Cambridge, United Kingdom; 3. Department of Physics, SUNY, Buffalo, NY*
- AO-18. Comparison of room temperature polymeric spin-valves with different organic components.** D. Dhandapani¹, N.A. Morley¹, A. Rao¹, A. Das², M. Grell² and M.R. Gibbs¹. *1. Engineering Materials, University of Sheffield, Sheffield, United Kingdom; 2. The Department of Physics and Astronomy, University of Sheffield, Sheffield, United Kingdom*

- AO-19. Measurement of the spin polarization of rare earth – transition metal Laves phase compounds by point contact Andreev reflection.** *C.G. Morrison*¹, K.N. Martin¹, G.J. Bowden¹, P.A. de Groot¹ and R.C. Ward²*1. School of Physics and Astronomy, University of Southampton, Southampton, Hampshire, United Kingdom; 2. Clarendon Laboratory, University of Oxford, Oxford, Oxfordshire, United Kingdom*

**MONDAY
MORNING
9:00**

POLIVALENTE

**Session AP
LONGITUDINAL AND PARTICULATE
MEDIA
(POSTER SESSION)
Dimitris Niarchos, Chair**

- AP-01. Vapor phase synthesis of L1₀ FePt nanopowders and their magnetic properties.** *J. Yu*¹, *D. Lee*¹, *B. Kim*¹ and *T. Jang*²*1. Department of Powder Materials Research, Korea Institute of Materials Science, Changwon, Gyeongnam, South Korea; 2. Dept. of Electronic Materials Engineering, Sunmoon University, Asan, Choongnam, South Korea*
- AP-02. Two easy axes effect on nanosized spherical particles for advanced tape storage.** *Y. Wang*¹ and *J. Zhu*¹*1. Electrical and Computer Engineering, Carnegie Mellon University, Pittsburgh, PA*
- AP-03. Synthesis and self-assembly of phase-, size- and shape-controlled L1₀-FePt nanorods by a modified polyol process.** *L.C. Varanda*¹ and *M. Jafelici Jr.*²*1. Físico-Química, Instituto de Química de São Carlos - USP, São Carlos, São Paulo, Brazil; 2. Físico-Química, Instituto de Química de Araraquara - UNESP, Araraquara, São Paulo, Brazil*
- AP-04. Playback performance of facing targets sputtered tape media on moving tape substrate with a high speed.** *S. Matsunuma*¹, *T. Inoue*², *T. Doi*², *T. Matsuu*³, *A. Hashimoto*³, *H. Fujiura*³, *K. Hirata*³ and *S. Nakagawa*³*1. R&D Division, Hitachi Maxell, Tsukubamirai, Ibaraki, Japan; 2. Advanced Tape Division, Hitachi Maxell, Oyamazaki, Kyoto, Japan; 3. Department of Physical Electronics, Tokyo Institute of Technology, Meguro, Tokyo, Japan*

AP-05. A possibility of >15Gbit/in² recording density system with fine MP tape and GMR head. *N. Sekiguchi*¹, *M. Terakawa*¹, *T. Akasaka*¹, *T. Fukuda*¹, *Y. Kamoshita*¹, *H. Ohnuma*¹, *K. Maeshima*¹ and *M. Yamaga*¹. *CDG, SONY, Tagajo, Japan*

AP-06. Investigation of thermal de-magnetization effects in data recorded on barium ferrite recording media. *M.L. Watson*¹, *T.W. Feebeck*¹, *R.A. Beard*¹ and *S.M. Kientz*¹. *Storage Group, Sun Microsystems, Louisville, CO*

**MONDAY
MORNING
9:00**

POLIVALENTE

**Session AQ
MAGNETIC NANOCLUSTERS AND
NANOPARTICLES I
(POSTER SESSION)
Marcelo Knobel, Chair**

AQ-01. Influence of the capping molecule on the magnetic behavior of thiol capped gold nanoparticles. *P. Crespo*¹, *E. Guerrero*², *M. Muñoz-Márquez*², *A. Hernando*¹ and *A. Fernández*². *1. Instituto de Magnetismo Aplicado, Universidad Complutense de Madrid, P.O. Box 28230 Las Rozas, Madrid, Madrid, Spain; 2. Instituto de Ciencia de Materiales de Sevilla, CSIC-US, Av. Américo Vespucio 49, 41092-Sevilla, Sevilla, Spain*

AQ-02. XMCD study of thiol capped Au nanoparticles. *V. Bouzas*¹, *M. Garcia*¹, *P. Andrea*⁴, *D. Haskel*², *G. Ruggeri*⁴ and *C. de Julian Fernandez*³. *1. Dpt. Materials Science, University Complutense, Madrid, Madrid, Spain; 2. Advanced Photon source, Argonne National Laboratory, Argonne, IL; 3. Molecular Magnetism Laboratory, University of Florence, Florence, Florence, Italy; 4. Dpt. of Chemistry and Industrial Chemistry, University of Pisa, Pisa, Pisa, Italy*

AQ-03. Local structure, optical and magnetic studies of Ni nanostructures embedded in SiO₂ matrix by ion implantation. S.K. Sharma¹, R. Kumar², M. Knobel³, P. Kumar⁴, P. Thakur⁵, K.H. Chae⁶, W.K. Choi⁷, D. Kanjilal⁸ and R. Kumar⁹. *1. DFMC, Unicamp, Campinas, SP, Brazil; 2. Materials Science Division, IUAC, New Delhi, Delhi, India; 3. DFMC, Unicamp, SP, Campinas, Brazil; 4. Materials Science Division, IUAC, New Delhi, Delhi, India; 5. Materials Science and Technology Research Division, KIST, Cheongrang, Seoul, Korea, South Korea; 6. Materials Science and Technology Research Division, KIST, Cheongrang, Seoul, Korea, South Korea; 7. Thin Film Materials Research Center, KIST, Cheongrang, Seoul, Korea, South Korea; 8. Materials Science Division, IUAC, New Delhi, Delhi, India; 9. Physics, Ch. Charan Singh University, Meerut, Meerut, India*

AQ-04. Surface contribution to magnetic anisotropy energy in Fe₃O₄ nanoparticles. N. Pérez^{1,2}, P. Guardia^{1,2}, A.G. Roca³, M.P. Morales³, C.J. Serna³, F. Bartolomé⁴, L.M. García^{4,5}, A. Labarta^{1,2} and X. Batlle^{1,2,1}. *1. Física Fonamental, Universitat de Barcelona, Barcelona, Catalunya, Spain; 2. Institut de Nanociència i Nanotecnologia IN2UB, Universitat de Barcelona, Barcelona, Catalunya, Spain; 3. Instituto de Ciencia de Materiales de Madrid, CSIC, Madrid, Madrid, Spain; 4. Instituto de Ciencia de Materiales de Aragón, CSIC, Zaragoza, Aragón, Spain; 5. Física de la Materia Condensada, Universidad de Zaragoza, Zaragoza, Aragón, Spain*

AQ-05. Microscopic, structural and magnetic investigation of polymer-encapsulated iron oxide nanoparticles. A.R. Rodriguez¹, J.H. Coaquira², J.G. Santos¹, L.B. Silveira¹, E.M. Marmolejo¹, W. Tennpohl¹, J.P. Sinnecker³, M.A. Novak³, D. Rabelo⁴ and P.C. Morais^{2,1}. *1. Physics, Fundação Universidade Federal de Rondônia, Ji-Paraná, RO, Brazil; 2. Physics, Universidade de Brasília, Brasília, DF, Brazil; 3. Physics, Universidade Federal de Rio de Janeiro, Rio de Janeiro, RJ, Brazil; 4. Chemistry, Universidade Federal de Goiás, Goiânia, GO, Brazil*

AQ-06. Magnetite Nanoparticles With No Surface Spin Canting. A. Roca¹, D. Niznansky², M. González-Fernández¹, M. Morales¹ and C. Serna¹. *1. Instituto de Ciencia de Materiales de Madrid (CSIC), Madrid, Spain; 2. Department of Inorganic Chemistry, Charles University, Prague, Czech Republic*

- AQ-07. Synthesis and characterization of anisotropic magnetic nanoparticles for lab-on-a-bead applications.** *N. Kataeva*¹, *J. Schotter*¹ and *H. Brueckl*¹. *Nano-System-Technologies, Austrian Research Centers GmbH, Vienna, Austria*
- AQ-08. Magnetic Properties of γ -Fe₂O₃ Nanoparticles Precipitated in Alginate Hydrogels.** *L.E. Wenger*¹, *G.M. Tsoi*¹, *P.P. Vaishnav*², *R. Naik*³, *U. Senaratne*³, *E.C. Buc*³ and *V.M. Naik*⁴. *Physics, University of Alabama at Birmingham, Birmingham, AL; 2. Physics, Kettering University, Flint, MI; 3. Physics & Astronomy, Wayne State University, Detroit, MI; 4. Natural Sciences, University of Michigan-Dearborn, Dearborn, MI*
- AQ-09. Intermatrix synthesis of magnetic nanocrystals by frontal polymerization and subsequent pyrolysis on iron containing monomer.** *E.D. Maciejewska*¹, *M. Leonowicz*¹, *A. Pomogailo*² and *G. Dzhardimalieva*². *1. Faculty of Material Science and Engineering, Warsaw University of Technology, Warsaw, Poland; 2. Institute of Chemical Physics RAS, Chernogolovka, Russian Federation*
- AQ-10. Synthesis of L10 (FePt)_{1-x}Aux Nanoparticle Monolayer on Polyimide Substrate.** *J. Kim*¹, *R. Kim*¹, *N. Oh*¹, *H. An*¹, *C. Yoon*¹, *Y. Kim*¹ and *C. Kim*¹. *Materials Science and Engineering, Hanyang University, Seoul, South Korea*
- AQ-11. Co-CoO Nanoparticles Prepared by Reactive Gas Phase Aggregation.** *J.A. De Toro*¹, *J.P. Andrés*¹, *J.A. González*¹, *P.S. Normile*¹, *T. Muñoz*¹, *P. Muñoz*¹, *A.J. Barbero*¹ and *J.M. Riveiro*¹. *Departamento de Física Aplicada, Universidad de Castilla-La Mancha, Ciudad Real, Spain*
- AQ-12. Magnetism of ϵ -Fe₂O₃ nanoparticles modified by Al and Ga substitution.** *J. Poltíerová Vejpravová*¹, *P. Brazda*², *D. Niznansky*², *S. Danis*¹, *S. Burianová*¹ and *V. Sechovsky*¹. *1. Faculty of Mathematics and Physics, DCMP, Charles University Prague, Prague 2, Czech Republic; 2. Faculty of Science, DIC, Charles University Prague, Prague 2, Czech Republic*
- AQ-13. The first ternary intermetallic Heusler nanoparticles: Co₂FeGa.** *L. Basit*¹, *A. Yella*¹, *S.A. Nepijko*², *V. Ksenofontov*¹, *G.H. Fecher*¹, *W. Tremel*¹ and *C. Felser*¹. *1. Chemistry, Inst. for Inorganic & Analytical Chemistry, Mainz, Germany; 2. Physics, Institute of Physics, Johannes Gutenberg - University, Mainz, Germany*

- AQ-14. Giant diamagnetism in AuFe nanoparticles.** *J. Wu*¹, *M. Jung*², *J. Min*³, *H. Liu*^{1,4}, *J. Cho*³ and *Y. Kim*³. *1. Institute for Nano Science, Korea University, Seoul 136-713, South Korea; 2. Quantum Materials Research Team, Korea Basic Science Institute, Daejeon 305-333, South Korea; 3. Department of Materials Science and Engineering, Korea University, Seoul 136-713, South Korea; 4. College of Chemistry and Chemical Engineering, Henan University, Kaifeng 475001, China*
- AQ-15. XMCD studies of core-shell FeRh nanoparticles.** *A. Smekhova*¹, *D. Ciuculescu*², *F. Wilhelm*¹, *C. Amiens*², *A. Rogalev*¹ and *B. Chaudret*². *1. European Synchrotron Radiation Facility, Grenoble, France; 2. Laboratoire de Chimie de Coordination du CNRS, Toulouse, France*
- AQ-16. Surface-induced magnetic anisotropy of impurities.** *A. Szilva*¹, *L. Szunyogh*¹, *G. Zarand*¹ and *C. Muñoz*². *1. Department of Theoretical Physics, Budapest University of Technology and Economics, Budapest, Hungary; 2. Instituto de Ciencia de Materiales de Madrid, Consejo Superior de Investigaciones Científicas, Madrid, Spain*
- AQ-17. Exchange bias in inverted AFM-core|FiM-shell nanoparticles.** *G. Salazar-Alvarez*¹, *A. López-Ortega*², *J. Sort*³, *S. Suriñach*², *M.D. Baró*² and *J. Nogués*⁴. *1. Institut Català de Nanotecnologia, Bellaterra, Barcelona, Spain; 2. Departament de Física, Universitat Autònoma de Barcelona, Bellaterra, Barcelona, Spain; 3. Institució Catalana de Recerca i Estudis Avançats (ICREA) and Departament de Física, Universitat Autònoma de Barcelona, Bellaterra, Barcelona, Spain; 4. Institució Catalana de Recerca i Estudis Avançats (ICREA) and Institut Català de Nanotecnologia, Universitat Autònoma de Barcelona, Bellaterra, Barcelona, Spain*

MONDAY
MORNING
9:00

POLIVALENTE

Session AR
SOFT MAGNETIC MATERIALS AND
EMC
(POSTER SESSION)
Aready Zhukov, Chair

- AR-01. Analysis of Conduction Noise Attenuation by Magnetic Composite Sheets on Microstrip Line by Finite Element Method.** *S. Kim¹, S. Kim¹ and G. Ryu¹*. *Materials Engineering, Chungbuk National University, Cheongju, South Korea*
- AR-02. Microwave Absorbers of Two-layer (Dielectric/Magnetic) Composite Laminates for Wide Oblique Incidence Angles.** *S. Kim¹ and J. Kim¹*. *Materials Engineering, Chungbuk National University, Cheongju, South Korea*
- AR-03. Left-handed properties in the combined structures of cut-wire pair and continuous wire.** *V. Dinh Lam¹, J. Kim¹, N. Thanh Tung¹, S. Lee¹ and Y. Lee¹*. *Hanyang University, Seoul, South Korea*
- AR-04. Electromagnetic interference and shielding of valve hall in HVDC converter station.** *C. Gao¹, Z. Zhao¹ and S. Wang²*. *1. North China Electric Power University, Baoding, China; 2. Northeast Electric Power Design Institute, Changchun, China*
- AR-05. Study of coupling on parallel microstrip lines due to magnetic absorber sheet.** *V.B. Bregar¹, J. Koselj¹ and B. Drnovsek¹*. *1. Nanotesla Institute, Ljubljana, Slovenia*
- AR-06. The influence of the construction of secondary reaction plate on the transverse edge effect in Single-sided linear induction motor.** *S. Lee¹, H. Lee², S. Go¹, K. Kim¹, D. Jung¹ and J. Lee¹*. *1. Hanyang university, Seoul, South Korea; 2. Korea Railroad Research Institute, Uiwang, South Korea*

- AR-07. RF conduction in-line noise suppression effects for the NiFe and Fe magnetic composite.** K. Kim¹, J. Ryu², S. Lee², S. Lee², Y. Choa³ and S. Oh⁴.
Physics, Yeungnam University, Gyeongsan, South Korea; 2. Composite Materials, Korea Institute of Materials Science, Changwon, South Korea; 3. Dept. of Chemical Engineering, Hanyang University, Ansan, South Korea; 4. Dept. of Materials Science and Engineering, Seoul National University of Technology, Seoul, South Korea
- AR-08. Optimal bulk content of sulfur for high magnetic induction in inhibitor-free 3% Si-Fe strips.** S. Kim¹, J. Soh¹, J. Oh¹, S. Cho¹, S. Han² and N.H. Heo¹.
Advanced Materials Group, Korea Electric Power Research Institute, Daejeon, CN, South Korea; 2. Chungnam National University, Daejeon, CN, South Korea
- AR-09. Performance Improvement of PM Synchronous Motor by Using Soft Magnetic Composite Material.** G.V. Cvetkovski¹ and L.B. Petkovska¹.
Faculty of Electrical Engineering and Information Technologies, Ss. Cyril & Methodius University, Skopje, Macedonia
- AR-10. Magnetic entropy change of V substituted Ni-Mn-Ga Heusler alloy.** S. Min¹, Y. Zhang¹, K. Kim^{2,3}, Y. Kim^{2,3}, S. Yu¹, K. Lee⁴ and Y. Kim⁵.
1. BK21 Physics Program and Department of Physics, Chungbuk National University, Cheongju, South Korea; 2. School of Electrical & Computer Engineering, Chungbuk National University, Cheongju, South Korea; 3. CBNU BK21 Chungbuk Information Technology Center, Chungbuk National University, Cheongju, South Korea; 4. Superconductivity Lab., Korea Research Institute of Standard and Science, Taejon, South Korea; 5. Engineering, Korea Institute of Science and Technology, Seoul, South Korea
- AR-11. Ferroresonance phenomena in electric circuits including amorphous cores.** N. Banu¹, E. Barbisio¹, O. Bottauscio², M. Chiampi¹, G. Crotti² and D. Giordano².
1. Ingegneria Elettrica, Politecnico di Torino, Torino, Italy; 2. Electromagnetics, Istituto Nazionale di Ricerca Metrologica, Torino, Italy

AR-12. Harmonic Distortion of Magnetizing Current in Combined Wound Toroidal Cores. J. Chojnacki¹, P. Liszewski¹, M. Soinski², W. Pluta², R. Rygal², S. Zurek³ and P. Pinkosz⁴. *1. ABB Sp. z o.o., 04-713 Warsaw, Pzaszynsz Branch, Poland; 2. Czestochowa University of Technology, Faculty of Electrical Engineering, 42-200 Czestochowa, Poland; 3. Wolfson Centre for Magnetics, School of Engineering, Cardiff University, Cardiff, CF24 2AA, United Kingdom; 4. Magneto Ltd, 42-224 Czestochowa, Poland*

AR-13. The Characterisation of NiFe Cores for High Current Micro-inductors. B. Jamieson¹, T. O'Donnell¹, N. Wang¹, J. Godsell¹ and S. Roy¹. *1. Microsystems Centre, Tyndall National Institute, Cork, Ireland*

**MONDAY
MORNING
9:00**

POLIVALENTE

**Session AS
GMR FOR MULTILAYERS AND
NANOSTRUCTURES
(POSTER SESSION)**

Thomas McLaughlin, Chair

AS-01. FABRICATION OF 8X8 ARRAY OF SPIN VALVE PILLARS AND MR CHARACTERIZATION. A. Lyle^{1,2}, Y. Hong^{1,2}, B.C. Choi³, J. Rudge³, G.S. Abo^{1,2}, S. Gee^{1,4}, H. Han^{1,2}, J. Jalli^{1,2} and G.W. Donohoe⁵. *1. Electrical and Computer Engineering, University of Alabama, Tuscaloosa, AL; 2. MINT Center, University of Alabama, Tuscaloosa, AL; 3. Physics and Astronomy, University of Victoria, Victoria, BC, Canada; 4. Seagate Technology, Bloomington, MN; 5. Electrical and Computer Engineering, University of Idaho, Moscow, ID*

AS-02. Two-dimensional imaging of giant magnetoresistance with improved sensitivity. R.A. Armstrong¹, S.M. Stirk¹, R.T. Mennicke¹, A.F. Lee², J.A. Matthew¹ and S.M. Thompson¹. *1. Physics, University of York, York, United Kingdom; 2. Chemistry, University of York, York, North Yorkshire, United Kingdom*

AS-03. Magnetic degradation of GMR spin-valve multilayers due to electromigration induced failures.

*J. Jiang*¹, *S. Bae*¹ and *H. Ryu*² *1. Electrical and Computer Engineering, National University of Singapore, Singapore, Singapore; 2. IT Convergence & Components Laboratory, ETRI, Daejeon, Yuseong-Gu, South Korea*

AS-04. High spin polarization of epitaxial films with artificial alternate monatomic [Fe/Co]_n superlattice.

*I. Chu*¹, *A. Rajanikanth*², *Y. Takahashi*², *K. Hono*², *M. Doi*¹ and *M. Sahashi*¹ *1. Department of Electronic Engineering, Tohoku University, Sendai, Japan; 2. National institute for materials Science, Tsukuba, Japan*

AS-05. Microstructure, magnetoresistance and interlayer coupling studies in FePt/Os/FePt thin films.

*C. Shih-Yuan*¹, *Y. Yeong-Der*², *W. Jenn-Ming*¹ and *Y. Chin-Chung*³ *1. Materials Science and Engineering, National Tsing Hua University, Taipei, Taiwan; 2. Materials Engineering, Tatung University, Taipei, Taiwan; 3. Applied Physics, National University of Kaohsiung, Kaohsiung, Taiwan*

AS-06. Novel Granular Thin Film Device Structure.

*S. Regunathan*¹ and *V. Ng*¹ *1. Information Storage Materials Laboratory, Dept of Electrical and Computer Engg, National University of Singapore, Singapore, Singapore*

**MONDAY
MORNING
9:00**

POLIVALENTE

**Session AT
FUNDAMENTAL PROPERTIES FOR
APPLICATIONS
(POSTER SESSION)**

Roy Chantrell, Chair
Oksana Fesenko Chubykalo, Chair

AT-01. Nature and entropy content of the magnetic transitions in pure and pseudo-binary Laves phases RCo₂

*M. Parra-Borderías*¹, *F. Bartolomé*¹, *J. Herrero-Albillos*² and *L.M. García*¹ *1. Instituto de Ciencia de Materiales de Aragón, CSIC-Universidad de Zaragoza, Zaragoza, Spain; 2. Department of Materials Science, University of Cambridge, Cambridge, United Kingdom*

- AT-02. Estimating magnetic entropy change by a mean-field scaling method and the effect of magnetic irreversibility in first-order transitions.** *J.S. Amaral¹, N.O. Silva^{1,2} and V.S. Amaral¹*. *Physics and CICECO, Universidade de Aveiro, Aveiro, Portugal; 2. Materia Condensada, Facultad de Ciencias, Zaragoza, Spain*
- AT-03. Magnetic and structural phase transitions in magnets with a NaCl structure.** *F.A. Kassan-Ogly¹ and B.N. Filippov²*. *1. Department of Theoretical and Mathematical Physics, Institute of Metal Physics, Ekaterinburg, Sverdlovskaya oblast, Russian Federation; 2. Lab. of Micromagnetics, Institute of Metal Physics, Ekaterinburg, Sverdlovsk region, Russian Federation*
- AT-04. The magnetic phase transition and electronic properties of CoS₂-xSex.** *M. Otero-Leal², F. Rivadulla¹ and J. Rivas²*. *1. Depto. Química-Física, Universidad de Santiago de Compostela, Santiago de Compostela, La Coruña, Spain; 2. Física Aplicada, Universidad de Santiago de Compostela, Santiago de Compostela, La Coruña, Spain*
- AT-05. Symmetry breaking effects in epitaxial magnetic thin films.** *E. Jiménez¹, N. Mikuszeit^{1,2}, D. Ecija¹, J. Gallego³, N. Sacristán^{1,4}, J. Vogel⁵, J. Camarero¹ and R. Miranda^{1,6}*. *1. Departamento de Física de la Materia Condensada and Instituto de Materiales "Nicolás Cabrera", Universidad Autónoma de Madrid, Madrid, Spain; 2. Institut für Angewandte Physik, Universität Hamburg, Hamburg, Germany; 3. Instituto de Ciencia de Materiales de Madrid ICMM, CSIC, Madrid, Spain; 4. Escuela Universitaria de Informática, Universidad de Valladolid, Segovia, Spain; 5. Institut Néel, CNRS, Grenoble, France; 6. Instituto Madrileño de Estudios Avanzados en Nanociencia, IMDEA-Nanociencia, Madrid, Spain*
- AT-06. Cobalt doped β -peptide nanotubes: a new class of spintronic materials.** *B. Sanyal¹, P.I. Arvidsson^{2,3} and O. Eriksson¹*. *1. Department of Physics, Uppsala University, Uppsala, Sweden; 2. Department of Biochemistry and Organic Chemistry, Uppsala University, Uppsala, Sweden; 3. Discovery CNS & Pain Control, AstraZeneca R&D, Söljehuset, Sweden*
- AT-07. Magnetotransport Properties of Y₂Fe_{17-x}Co_x Single Crystals.** *J. Stankiewicz¹, K.P. Skokov², A.G. Khokholkov², J. Bartolomé¹ and Y.G. Pastushenkov²*. *1. Instituto de Ciencia de Materiales, CSIC - Universidad de Zaragoza, Zaragoza, Spain; 2. Faculty of Physics, Tver State University, Tver, Russian Federation*

- AT-08. Weiss oscillations modulated by microwave radiation.** *J. Inarrea*^{1,2} and *G. Platero*². *1. Physics, Universidad Carlos III, Leganes, Spain; 2. CSIC, Leganes. Madrid, Spain*
- AT-09. Nonlinear modulation of spin-orbit interaction in a semiconductor channel.** *H. Koo*¹, *J. Kwon*¹, *J. Eom*^{2,1}, *J. Chang*¹ and *S. Han*¹. *1. Center for Spintronics Research, Korea Institute of Science and Technology, Seoul, South Korea; 2. Department of Physics, Sejong University, Seoul, South Korea*
- AT-10. Ordinary Magnetoresistance of Individual Single-Crystalline Bi Nanowires.** *J. Ham*¹, *D. Kim*², *W. Shim*¹, *J. Kim*¹, *K. Lee*¹, *W. Jeung*² and *W. Lee*¹. *1. Department of Materials Science and Engineering, Yonsei University, Seoul, South Korea; 2. Division of Material Research, KIST, Seoul, South Korea*
- AT-11. The effects of spin relaxation on spin transfer switching of a non-collinear giant magnetoresistance device.** *N. Chung*^{1,2}, *M.B. Abdul Jalil*¹, *S. Tan*², *J. Guo*¹ and *B. AL Sundaram*². *1. Information Storage Materials Laboratory, Electrical and Computer Engineering Department, National University of Singapore, Singapore, Singapore; 2. Spintronics, Media and Interfaces Division, Data Storage Institute, Singapore, Singapore*
- AT-12. Patterning of magnetic structures on austenitic stainless steel by ion beam nitriding.** *E. Menéndez*¹, *A. Martinavicius*², *M.O. Liedke*², *G. Abrasonis*², *J. Fassbender*², *J. Sort*³, *S. Suriñach*¹, *M.D. Baró*¹ and *J. Nogués*⁴. *1. Physics, Universitat Autònoma de Barcelona, Bellaterra, Spain; 2. Institute of Ion Beam Physics and Materials Research, Forschungszentrum Dresden-Rossendorf, Dresden, Germany; 3. Physics, Institució Catalana de Recerca i Estudis Avançats (ICREA) and Universitat Autònoma de Barcelona, Bellaterra, Spain; 4. Institució Catalana de Recerca i Estudis Avançats (ICREA) and Institut Català de Nanotecnologia, Bellaterra, Spain*
- AT-13. Synthesis and characterization of particulate magneto polymer composite at microwave frequencies.** *S. Borah*¹ and *N.S. Bhattacharyya*¹. *1. Physics, Tezpur University, Tezpur, Assam, India*

- AT-14. Nanocrystals formation in $Ce_{100-x}Al_x$ ($x=45, 50$) ribbons by rapid solidification from the liquid state.** B. Idzikowski¹, Z. Sniadecki¹ and D. Kaczorowski². *Institute of Molecular Physics, Polish Academy of Sciences, Poznan, Poland; 2. Institute of Low Temperature and Structure Research, Polish Academy of Sciences, Wroclaw, Poland*
- AT-15. Noise enhanced stability of magnetic systems.** M. Trapanese¹. *Dipartimento di Ingegneria Elettrica, Elettronica e delle Telecomunicazioni, University of Palermo, Palermo, Italy*

**MONDAY
MORNING
9:00**

POLIVALENTE

Session AU

**PERMANENT MAGNET MATERIALS —
APPLICATIONS I
(POSTER SESSION)**

Roland Groessinger, Chair

- AU-01. Implementing mixture design to predict magnetic properties of hybrid bonded magnets.** J. Hsu¹, P. Sharma¹ and A. Verma². *Physics, National Taiwan University, Taipei, Taiwan; 2. Moserbaer India Ltd, Greater Noida, India*
- AU-02. Establishment of multipole magnetizing method and apparatus using a heating system for Nd-Fe-B isotropic bonded magnets.** H. Komura¹, M. Kitaoka¹, T. Kiyomiya¹ and Y. Matsuo¹. *R & D, FDK Corporation, Kosai, Japan*
- AU-03. Investigation of eddy current loss in divided Nd-Fe-B sintered magnets for synchronous motors due to insulation resistance and frequency.** K. Yamazaki¹, M. Shina¹, M. Miwa² and J. Hagiwara². *Dept. of Electrical, Electronics and Computer Engineering, Chiba Institute of Technology, Narashino, Chiba, Japan; 2. TDK Corporation, Ichikawa, Chiba, Japan*
- AU-04. Outer Rotor Consequent-pole Bearingless Motor Improved Start-up Characteristics.** T. Yamada¹, Y. Nakano¹, J. Asama¹, A. Chiba¹, T. Fukao¹, T. Hoshino² and A. Nakajima². *Electrical Engineering, Tokyo University of Science, Chiba, Japan; 2. Japan Aerospace Exploration Agency(JAXA), Tokyo, Japan*

- AU-05. Study of the Static Force by the Difference in the Winding Structure of Permanent Magnet Type Linear Synchronous Motor.** *K. Suzuki*¹, *Y. Kim*² and *H. Dohmeki*¹. *1. Department of Electrical and Electronic Engineering, Musashi Institute of Technology, Tokyo, Japan; 2. Department of Electrical Engineering, College of Engineering Chosun University, Gwangju, South Korea*
- AU-06. Proposal of the Air-core Type Linear Synchronous Motor Using the Air Levitation System.** *K. Suzuki*¹, *Y. Kim*² and *H. Dohmeki*¹. *1. Department of Electrical and Electronic Engineering, Musashi Institute of Technology, Tokyo, Japan; 2. Department of Electrical Engineering, College of Engineering Chosun University, Gwanju, South Korea*
- AU-07. Thrust Optimization of Linear Oscillatory Actuator Using Permeance Analysis Method.** *M. Norhisam*¹, *F. Azhar*¹, *H. Hashim*¹, *M. Nirei*², *H. Wakiwaka*³ and *A. Razak J.*⁴. *1. Electrical & Electronic Engineering Department, Universiti Putra Malaysia, Serdang, Selangor, Malaysia; 2. Faculty of Engineering, Nagano National College of Technology, Tokuma, Nagano, Japan; 3. Faculty of Engineering, Shinshu University, Wakasato Nagano, Japan; 4. Research and Development, Malaysian Palm Oil Board, Kajang, Malaysia*
- AU-08. Optimal design of barrier shape improve torque of interior permanent magnet synchronous motor.** *C. Jin*¹ and *J. Lee*¹. *Hanyang University, Seoul, South Korea*
- AU-09. Feasibility Study of a Passive Magnetic Bearing Using the Ring Saturated Permanent Magnets.** *T. Azukizawa*¹, *S. Yamamoto*¹ and *N. Matsuo*¹. *Kobe University, Kobe, Japan*
- AU-10. Design Considerations of Axial Ring magnet.** *C. Li*¹, *M. Devine*¹ and *G. Hatch*¹. *Dexter Magnetic Technologies, Hicksville, NY*

MONDAY
MORNING
9:00

POLIVALENTE

Session AV
INTERMETALLICS AND OTHER HARD
MAGNETS
(POSTER SESSION)

Reiko Sato, Chair

- AV-01. Effect of microstructure refinement on magnetic properties of Fe-Pt thin films.** *FT. Yuan*¹, H.W. Huang², W.M. Liao⁴, H.W. Chang¹, D.H. Wei¹, S.K. Chen², Y.D. Yao³ and H.Y. Lee⁴*1. Institute of Physics, Academia Sinica, Taipei, Taiwan; 2. Materials Science and Engineering, Feng Chia University, Taichung, Taiwan; 3. Material Engineering, Tatung University, Taipei, Taiwan; 4. National Synchrotron Radiation Research Center, Hsinchu, Taiwan*
- AV-02. Magnetization reversal mechanism and intrinsic properties of FePt (110) epitaxial thin films.** S. Fong^{1,2}, K. Cheng^{1,2}, D. Wei^{1,4}, C. Yu³, C. Lin², F. Yuan¹, H. Chang¹, Y. Liou¹, T. Chin² and Y. Yao⁴*1. Institute of Physics, Academia Sinica, Taipei, Taiwan; 2. Department of Materials Science and Engineering, National Tsing Hua University, HsinChu, Taiwan; 3. Department of Applied Physics, National University of Kaohsiung, Kaohsiung, Taiwan; 4. Department of Materials Engineering, Tatung University, Taipei, Taiwan*
- AV-03. Effect of Au underlayer on magnetic properties and ordering of CoPt thin films.** *FT. Yuan*¹, H.W. Huang², A.C. Sun³, D.H. Wei¹, H.W. Chang¹, S.K. Chen² and Y.D. Yao⁴*1. Academia Sinica, Physics, Taipei, Taiwan; 2. Materials Science and Engineering, Feng Chia University, Taichung, Taiwan; 3. Physics, National Taiwan University, Taipei, Taiwan; 4. Materials Engineering, TaTung University, Taipei, Taiwan*
- AV-04. Strain effect on the spin reorientation of epitaxial Nd-Fe-B films.** A. Kwon¹, V. Neu¹, V. Matias², J. Hänisch², R. Hühne¹, B. Holzapfel¹, L. Schultz¹ and S. Fähler¹*1. Institute for Metallic Materials, IFW Dresden, Dresden, P.O. Box 270116, D-01171, Germany; 2. Los Alamos national laboratory, NM 87545, NM*

- AV-05. Magnetic properties and structure of Nd-Fe-B thin films with Ta buffer layer prepared on MgO(100) substrate.** *H. Ishioka*¹, *T. Sato*², *H. Kato*¹, *H. Fujino*¹ and *T. Shima*¹. *1. Faculty of Engineering, Tohoku Gakuin University, Tagajo, Japan; 2. Toyota Central R&D Lab, Nagakute, Japan*
- AV-06. In field magnetic domain observation of Nd-Fe-B thin film by magnetic force microscopy.** *T. Iwasa*¹, *H. Ishioka*¹, *H. Kato*¹, *T. Sato*² and *T. Shima*¹. *1. Faculty of Engineering, Tohoku Gakuin University, Tagajo, Japan; 2. Toyota Central R&D Labs., Nagakute, Japan*
- AV-07. Improvement in magnetic properties of PLD-made Nd-Fe-B thick film magnets.** *M. Nakano*¹, *H. Takeda*¹, *F. Yamashita*², *T. Yanai*¹ and *H. Fukunaga*¹. *1. Electronics and Electrical Engineering, Nagasaki University, Nagasaki, Japan; 2. Matsushita Electric Industrial Co., Ltd., Osaka, Japan*
- AV-08. Electrodeposited Co-Pt-(P) thick films prepared by low temperature process.** *T. Tomimatsu*¹, *M. Nakano*¹, *T. Yanai*¹, *N. Fujita*² and *H. Fukunaga*¹. *1. Electronics and Electrical Engineering, Nagasaki University, Nagasaki, Japan; 2. Nara National College of Technology, Yamatokouriyama, Japan*
- AV-09. Some magnetic properties of YTiFe_{11-x}Si_xC carbides.** *B.C. Cizmas*¹, *L. Bessais*² and *C. Djega-Mariadassou*². *1. Department of Physics, Transilvania University of Brasov, Brasov, Romania; 2. ICMPE, UMR7182 CNRS, Université de Paris XII, Thiais, France*
- AV-10. A magnetic and Mössbauer spectral study of the Lu(Fe_{1-x}Al_x)₂ compounds.** *C.L. Piquer*¹, *M. Laguna-Marco*^{1,2}, *J. Chaboy*¹, *R. Boada*¹ and *F. Plazaola*³. *1. Instituto de Ciencia de Materiales de Aragón, 50009 Zaragoza, Zaragoza, Spain; 2. Advanced Photon Source, Argonne National Laboratory, 9700 S, Cass Avenue, Argonne 60439, IL; 3. Departamento de Electricidad y Electrónica, Universidad del País Vasco (UPV/EHU), Apartado 644, 48080 Bilbao, Vizcaya, Spain*
- AV-11. Magnetic properties of YCo_xNi_{3-x} compounds.** *E. Burzo*¹, *R. Tetean*¹ and *I.G. Deac*¹. *1. Faculty of Physics, Babes-Bolyai University, Cluj Napoca, Romania*
- AV-12. Magnetostriction in Sm₂Fe₁₇ before and after nitrogeation.** *H. Chen*¹, *J. Xu*¹, *Y. Zhang*¹, *H. Du*¹, *C. Wang*¹ and *Y. Yang*¹. *1. Physics School, Peking University, Beijing, China*

- AV-13. Magnetic properties of Zr-doped Lu₂Fe₁₇ single crystal and its hydride.** *E. Tereshina*^{1,2}, *A. Andreev*¹ and *H. Drulis*³ *1. Institute of Physics of the Academy of Sciences of the Czech Republic, Prague, Czech Republic; 2. Department of Condensed Matter Physics, Faculty of Mathematics and Physics, Charles University, Prague, Czech Republic; 3. Institute of Low Temperature and Structure Research, Wroclaw, Poland*
- AV-14. Crystalline and local structure of SmCo₅ based alloys.** *V.P. Menushenkov*¹, *A.P. Menushenkov*², *R.V. Chernikov*², *V.V. Sidorov*² and *T.A. Sviridova*¹ *1. State Technological University "Moscow Institute of Steel and Alloys", Moscow, Russian Federation; 2. Moscow Engineering Physics Institute (State University), Moscow, Russian Federation*
- AV-15. Impact of Aluminium on the magnetic properties of RT₂ compounds (R = rare-earth, T = transition metal) through the modification of the electronic structure.** *R. Boada*¹, *J. Chaboy*¹, *M.A. Laguna-Marco*^{1,2}, *C. Piquer*¹ and *F. Jiménez-Villacorta*³ *1. Física de la Materia Condensada, Instituto de Ciencia de Materiales de Aragón, Zaragoza, Zaragoza, Spain; 2. Advanced Photon Source, Argonne National Laboratory, Chicago, IL; 3. SpLine / Spanish CRG (BM25), European Synchrotron Radiation Facility, Grenoble, France*

MONDAY
AFTERNOON
2:30

AUDITORIO A

Session BA
SYMPOSIUM ON THE IMPORTANCE OF
GMR

Sarah Thompson, Chair

2:30

- BA-01. A History of Magnetic Recording Areal Density Improvements — A Transducer Perspective. (Invited)** *R. Fontana*¹ *1. IBM Almaden Research Center (retired), San Jose, CA*

3:00

BA-02. The Spin Valve GMR Sensor. (Invited) B. Gurney¹I.
*San Jose Research Center, Hitachi Global Storage
 Technologies, San Jose, CA*

3:30

**BA-03. GMR spin valves, tunneling magnetoresistive devices,
 and beyond: transport, magnetism, and materials
 science. (Invited) O. Heinonen¹, E.W. Singleton¹,
 B.W. Karr¹, Z. Gao¹, H. Cho¹ and Y. Chen¹I.** *Seagate
 Technology, Bloomington, MN*

4:00

**BA-04. GMR and TMR Sensors for non-storage applications.
 (Invited) M. Ruehrig¹, G. Rieger¹ and J. Wecker¹I.**
*Corporate Technology MMI, Siemens AG, Erlangen,
 Germany*

4:30

**BA-05. Spintronic devices for memory and logic
 applications. (Invited) B. Dieny¹, R. Sousa¹ and
 G. Prenat¹I.** *SPINTEC, CEA/CNRS/UJF/INPG,
 Grenoble, France*

**MONDAY
 AFTERNOON
 2:30**

MADRID

**Session BB
 HEAD-MEDIA INTERFACE AND
 TRIBOLOGY -I**

Bo Liu, Chair

2:30

**BB-01. A dynamic scratch test to study read/write head
 degradation due to head disk interactions.**
A. Wallash¹, H. Zhu¹ and D. Chen²I. *Advanced
 Technology, Hitachi GST, San Jose, CA; 2. Mechanical
 Engineering Department, UC Berkeley, Berkeley, CA*

2:45

- BB-02. Effect of Segregant Surface Energy on PMR Media Roughness.** *Q. Dai*¹, *H. Do*¹, *K. Takano*¹ and *B. Marchon*¹. *Hitachi GST, San Jose, CA*

3:00

- BB-03. Stress Induced Permanent Magnetic Signal Degradation of PMR System.** *S. Lee*¹, *S. Hong*¹, *N. Kim*¹, *J. Ferber*¹, *X. Che*¹ and *B.D. Strom*². *Samsung Information Systems America, San Jose, CA; 2. Apple Inc., Cupertino, CA*

3:15

- BB-04. Scratch Induced Demagnetization of Perpendicular Magnetic Disk.** *M. Furukawa*¹, *J. Xu*¹, *Y. Shimizu*¹ and *Y. Kato*¹. *Central Research Laboratory, Hitachi, Ltd., Fujisawa-shi, Kanagawa-ken, Japan*

3:30

- BB-05. Lubricant dynamics on a slider: “the waterfall effect”** *B. Marchon*¹, *X. Guo*¹, *A. Moser*¹, *R. Kroeker*² and *F. Crimi*². *1. San Jose Research Center, Hitachi GST, San Jose, CA; 2. Server Business Unit, Hitachi GST, San Jose, CA*

3:45

- BB-06. Effect of Thermal Bonding on Frictional Properties of Monolayer Lubricant Films Coated on Magnetic Disk Surfaces.** *H. Zhang*¹, *Y. Mitsuya*², *A. Fuwa*¹, *Y. Fujikawa*¹ and *K. Fukuzawa*¹. *1. Nagoya University, Nagoya, Japan; 2. Nagoya Industrial Science Research Institute, Nagoya, Japan*

4:00

- BB-07. Experimental Comparisons of Spreading and Replenishment Flows of Molecularly Thin Lubricant Films Coated on Magnetic Disks.** *Y. Mitsuya*¹, *H. Zhang*², *J. Ohgi*² and *K. Fukuzawa*². *1. Nagoya Industrial Science Research Institute, Nagoya, Japan; 2. Micro-Nano Systems Engineering, Nagoya University, Nagoya, Japan*

4:15

BB-08. Coverage Analysis of Molecularly Thin Lubricant Films using Molecular Dynamics Simulations and CAICISS Measurements. *Y. Ikai*¹, N. Nakamura¹, H. Chiba¹ and T. Imamura¹. *Fujitsu Laboratories Ltd., Atsugi 243-0197, Japan*

4:30

BB-09. Time Dependence of Head-Media Interference at Low Fly Heights. *J. He*¹, J. Hopkins¹, S. Duan¹ and K. Johnson¹. *HGST, San Jose, CA*

4:45

BB-10. Air bearing surface designs for less humidity sensitivity. *S. Zhang*¹, G. Tyndall¹ and M. Suk¹. *Advanced Technology, Samsung Information Systems America, San Jose, CA*

**MONDAY
AFTERNOON
2:30**

ROMA

**Session BC
MEMS AND MINIATURE MAGNETIC
SENSORS**

Eckhard Quandt, Chair

2:30

BC-01. Electroplated Co-rich CoPt thick films and patterned arrays for magnetic MEMS. *N. Wang*^{1,2} and D.P. Arnold¹. *1. Interdisciplinary Microsystems Group, Dept. of Electrical and Computer Engineering, University of Florida, Gainesville, FL; 2. Materials Science and Engineering, University of Florida, Gainesville, FL*

2:45

- BC-02. Optical technique for measuring magnetic MEMS vibrations.** *V. de Manuel*¹, *R. del Real*², *M. Díaz-Michelena*³, *I. Arruego*⁴, *I. Lucas*⁵ and *H. Guerrero*⁶*1. Space Programs and Space Sciences, INTA, Torrejón de Ardoz, Madrid, Spain; 2. Space Programs and Space Sciences, INTA, Torrejón de Ardoz, Madrid, Spain; 3. Space Programs and Space Sciences, INTA, Torrejón de Ardoz, Madrid, Spain; 4. Space Programs and Space Sciences, INTA, Torrejón de Ardoz, Madrid, Spain; 5. Space Programs and Space Sciences, INTA, Torrejón de Ardoz, Madrid, Spain; 6. Space Programs and Space Sciences, INTA, Torrejón de Ardoz, Madrid, Spain*

3:00

- BC-03. Design of Axial Flux Machine for Micro Flywheel Energy Storage System.** *J. Yi*¹, *K.W. Lee*², *S. Jeong*², *M. Noh*¹ and *S.S. Lee*²*1. Mechatronics Engineering, Chungnam National University, Daejeon, South Korea; 2. Mechanical Engineering, KAIST, Deajeon, South Korea*

3:15

- BC-04. Magnetic hysteresis loop micro sensor for wafer level testing of magnetic films.** *E. Flick*¹, *K. Feindt*² and *H.H. Gatzen*¹*1. Leibniz Universitaet Hannover, Institute for Microtechnology, Garbsen, Germany; 2. innomas GmbH, Ilmenau, Germany*

3:30

- BC-05. Thin Film Magneto-Impedance Sensor Integrated with L-10 FePt Thin Film Bias Magnet.** *K. Ohmori*¹, *K. Tan*², *K. Itoi*¹, *K. Nagasu*¹, *Y. Uemichi*¹, *T. Aizawa*¹ and *R. Yamauchi*¹*1. Microdevice department, Electron Device laboratory, Fujikura Ltd., Sakura, Chiba, Japan; 2. Akita research institute of advanced technology(AIT), Akita, Japan*

3:45

- BC-06. PWM Type Amorphous Wire CMOS IC Magneto-Impedance Sensor Having High Temperature Stability.** *Y. Nakamura*¹, *T. Uchiyama*¹, *C.M. Cai*² and *K. Mohri*³*1. Nagoya University, Nagoya, Japan; 2. Aichi Steel Co., Tokai, Japan; 3. Aichi Micro Intelligent Co., Tokai, Japan*

4:00

- BC-07. Microfabrication process and characteristics of thin-film noise suppressor integrated onto the re-wiring layer of a LSI chip.** *M. Yamaguchi*¹, *T. Fukushima*¹, *T. Akiba*² and *A. Nakamura*²*1. Dept. of Electrical and Communication Engineering, Tohoku University, Sendai, Miyagi, Japan; 2. Division of Process & Device Analysis Engineering Development, Renesas Technology Corp., Kodaira, Tokyo, Japan*

4:15

- BC-08. Investigation of Magneto Impedance Sensors in Micro Scale for an Application to Chip-cytometer.** *D. Kim*^{1,2}, *H. Kim*¹, *D. Chun*¹, *W. Lee*² and *W. Jeung*¹*1. Functional Materials Research Center, Korea Institute of Science and Technology, Seoul, South Korea; 2. Material Science & Engineering, Yonsei University, Seoul, South Korea*

4:30

- BC-09. Development of Low Noise GMI Sensor and Its Applications.** *H. Aoyama*¹, *M. Yamamoto*¹, *Y. Honkura*¹ and *K. Sumi*²*1. Electronic & magnetic product division, Aichi Steel Corporation, Tokai, Aichi, Japan; 2. Toyota Central Research Laboratory, Nagakute, Aichi, Japan*

4:45

- BC-10. 3-Axis Compact Electric Compass Using Magneto-Impedance Sensor.** *M. Yamamoto*¹ and *Y. Honkura*¹*1. Aichi Steel Corporation, Aichi-ken, Japan*

MONDAY
AFTERNOON
2:30

PARIS

Session BD
MAGNETIC SENSORS II

Joachim Wecker, Chair

2:30

- BD-01. Giant magnetoresistive sensors for DNA microarray.** L. Xu¹, H. Yu², S. Han¹, S. Osterfeld¹, R.L. White¹, N. Pourmand² and S.X. Wang¹. *1. Materials Science and Engineering, Stanford University, Stanford, CA; 2. Stanford Genome Technology Center, Stanford University, Palo Alto, CA*

2:45

- BD-02. Device for individualized detection of articles containing magnetic microwires based on ferromagnetic resonance.** P. Marín^{1,2}, D. Cortina³, J. Calvo³ and A. Hernando^{1,2}. *1. Instituto de Magnetismo Aplicado, Universidad Complutense de Madrid, Las Rozas, Madrid, Spain; 2. Departamento de Física de Materiales, Universidad Complutense de Madrid, Madrid, Spain; 3. Micromag 2000, S.L., Las Rozas, Spain*

3:00

- BD-03. Two-domain model for orthogonal fluxgate.** M. Butta¹ and P. Ripka¹. *1. CVUT v Praze - FEL - MagLab, Praha, Czech Republic*

3:15

- BD-04. Fabrication and characterization of magnetic tunnel junction field sensors with a Co₂MnSi thin film.** M. Masuda¹, T. Uemura¹, K. Matsuda¹ and M. Yamamoto¹. *1. Division of Electronics for Informatics, Graduate School of Information Science and Technology, Hokkaido University, Sapporo, Japan*

3:30

BD-05. High sensitive thin film wattmeter using magnetic thin film. *H. Tsujimoto*¹, *H. Toratani*¹ and *Y. Deguti*¹. *Faculty of Engineering, Osaka City University, Osaka, Japan*

3:45

BD-06. Acoustic Interferometer Based on Magnetostrictive Delay Lines. *C. Petridis*¹, *V. Vassiliou*¹, *M. Kollár*² and *E. Hristoforou*¹. *1. Mining and Metallurgy Engineering, National Technical University of Athens, Athens, Greece; 2. Electrical Engineering and Information Technology, Slovak University of Technology in Bratislava, Bratislava, Slovakia*

4:00

BD-07. 2D magnetic sensor based on planar Hall effect and surface nano-structuration. *J. Briones*¹, *F. Montaigne*¹, *M. Hehn*¹, *G. Lengaigne*¹ and *D. Lacour*¹. *Laboratoire de Physique des Matériaux, Nancy-University, CNRS, Vandoeuvre lès Nancy, France*

4:15

BD-08. Advanced Techniques for Modelling and Detection of Cracks in Hot Wire Steel. *R. Marklein*¹ and *M. Rahman*¹. *Department of Electrical Engineering and Computer Science, University of Kassel, Kassel, Germany*

4:30

BD-09. Thermally modulated flux concentrator for minimizing 1/f noise in magnetic sensors. *W. Wang*¹ and *Z. Jiang*¹. *Electrical Engineering, University of Wisconsin - Milwaukee, Milwaukee, WI*

4:45

- BD-10. Nanoscale InAs Hall Crosses Excited with Localized Magnetic and Electric Fields.** *L. Folks*¹, *A.S. Troup*², *T.D. Boone*¹, *J.A. Katine*¹, *G.J. Sullivan*³, *M. Field*³, *E. Marinero*¹ and *B.A. Gurney*¹. *San Jose Research Center, Hitachi Global Storage Technologies, San Jose, CA; 2. Hitachi Cambridge Laboratory, Cambridge, United Kingdom; 3. Teledyne Scientific Company, Thousand Oaks, CA*

**MONDAY
AFTERNOON
2:30**

LONDRES

Session BE**MOLECULAR AND NOVEL MATERIALS-I**

Fernando Palacio, Chair

2:30

- BE-01. Field dependence of the magnetocaloric effect beyond the mean field approach: a universal curve for the magnetic entropy change. (Invited)** *V. Franco*¹ and *A. Conde*¹. *Department of Condensed Matter Physics, Sevilla University, Sevilla, Spain*

3:00

- BE-02. Isothermal and adiabatic measurements and modeling of sign switching magnetocaloric effect in NiMnSn.** *L. Giudici*^{1,2}, *C.P. Sasso*¹, *M. Kuepferling*¹, *M. Pasquale*¹ and *V. Basso*¹. *1. Electromagnetism Department, INRIM, Torino, Italy; 2. Physics Department, Politecnico di Torino, Torino, Italy*

3:15

- BE-03. Magnetocaloric properties of La(Fe,Co,Si)₁₃ bulk material prepared by powder metallurgy.** *M. Katter*¹, *V. Zellmann*¹, *G. Reppel*¹ and *K. Uestuener*¹. *Vacuumschmelze GmbH & Co. KG, Hanau, Germany*

3:30

- BE-04. Magnetocaloric Properties and Structure of the $Gd_5Ge_{1.8}Si_{1.8}Sn_{0.4}$ Compound.** *V. Provenzano*¹, T. Zhang^{1,2}, A.J. Shapiro¹, Y.G. Chen² and R.D. Shull¹. *1. Magnetic Materials Group, NIST, Gaithersburg, MD; 2. School of Materials Science and Engineering, Sichuan University, Chengdu, China*

3:45

- BE-05. Ferromagnetism in graphite induced by ion irradiation.** *M.A. Ramos*¹, A. Climent-Font², A. Muñoz-Martin², M. Garcia-Hernandez³, A. Asenjo³ and P.D. Esquinazi^{2,4}. *1. Fisica de la Materia Condensada, Universidad Autonoma Madrid, Madrid, Spain; 2. Centro de Microanalisis de Madrid (CMAM), Universidad Autonoma Madrid, Madrid, Spain; 3. Instituto de Ciencia de Materiales de Madrid (ICMM), Consejo Superior de Investigaciones Cientificas (CSIC), Madrid, Spain; 4. Superconductivity and Magnetism Division, Institut für Experimentelle Physik II, Fakultät für Physik und Geowissenschaften, University of Leipzig, Leipzig, Germany*

4:00

- BE-06. Magnetic properties of $TiO_2/\gamma-Fe_2O_3$ nanocomposites designed for photocatalytic applications.** *V. Sechovsky*¹, V. Tyrpekl², J. PoltieroVa Vejpravova¹, S. Danis¹, B. Bittova¹ and D. Niznansky². *1. Department of Condensed Matter Physics, Charles University in Prague, Prague 2, Czech Republic; 2. DIC, Charles University Prague, Prague, Czech Republic*

4:15

- BE-07. Elastic model for complex hysteresis in molecular magnets.** *C. Enachescu*¹, L. Stoleriu¹, A. Stancu¹ and A. Hauser². *1. Department of Physics, Alexandru Ioan Cuza University, Iasi, Romania; 2. Department of Physical Chemistry, Universite de Geneve, Geneva, Switzerland*

4:30

BE-08. Various relaxation behaviors in one dimensional chain-like molecular magnet**[Fe^{II}(Δ)Fe^{II}(Λ)(ox)₂(phen)₂]_n at low temperature.***J. Her*^{1,3}, *C. Sun*^{1,3}, *C. Chou*^{1,3}, *C. Chan*^{1,3}, *C. Lin*^{1,3}, *H. Yang*^{1,3}, *L. Li*^{2,4}, *K. Lin*^{2,4} and *S. Taran*^{1,3} *I.**Department of Physics, National Sun Yat-sen University, Kaohsiung, Taiwan; 2. Department of Chemistry, National Chung-Hsing University, Taichung, Taiwan; 3. Center for Nanoscience and Nanotechnology, National Sun Yat-sen University, Kaohsiung, Taiwan; 4. Center of Nanoscience and Nanotechnology, National Chung-Hsing University, Taichung, Taiwan***MONDAY
AFTERNOON
2:30****BERLIN****Session BF
MAGNETIC SEMICONDUCTORS - I**

Jodseph Fontcuberta, Chair

2:30

BF-01. Study of the origin of the spin polarization in the Co-doped (La,Sr)TiO₃ diluted magnetic oxide. *O. Copie*¹,*G. Herranz*¹, *M. Bibes*¹, *R. Mattana*¹, *F. Petroff*¹, *K. Bouzehouane*¹, *H. Jaffres*¹, *E. Jacquet*¹, *J. Maurice*¹, *V. Cros*¹, *M. Basletic*², *E. Tafra*², *A. Hamzic*², *A. Barthelemy*¹ and *P. Bencok*³ *I. Unité Mixte de Physique CNRS THALES, Palaiseau, France; 2.**Department of Physics, Faculty of Science, University of Zagreb, Zagreb, Croatia; 3. European Synchrotron Radiation Facility, Grenoble, France*

2:45

BF-02. Ultrafast laser spectroscopy of GaMnAs.*E. Rozkotová*¹, *P. Horodyská*¹, *P. Němec*¹, *D. Sprinzl*¹, *F. Trojánek*¹, *P. Malý*¹, *V. Novák*², *K. Olejník*², *M. Cukr*² and *T. Jungwirth*² *I. Faculty of Mathematics and Physics, Charles University in Prague, Prague, Czech Republic; 2. Institute of Physics, AS CR, Prague, Czech Republic*

3:00

BF-03. Preparation and properties of cobalt doped ZnO**nanowires.** *I. Enculescu*¹, *E. Matei*¹, *M. Sima*¹,
*S. Granville*², *J. Ansermet*² and *R. Neumann*³*I.**National Institute for Materials Physics, Magurele, Ilfov, Romania; 2. Institut de Physique des Nanostructures, EPFL, Lausanne, Switzerland; 3. Materials Research, GSI, Darmstadt, Germany*

3:15

BF-04. Room temperature ferromagnetism of FeCo-codoped ZnO nanorods prepared by chemical vapor**deposition.** *J. Chen*¹, *Y. Yan*², *J. Liu*¹, *M. Yu*¹, *A. West*¹
and *W. Zhou*¹*I. Advanced Materials Research Institute,**University of New Orleans, New Orleans, LA; 2. National Renewable Energy Laboratory, Golden, CO*

3:30

BF-05. Magnetic interactions in (Zn,Co)O - effects of heat treatment and co-doping.*M. Wikberg*¹, *P. Svedlindh*¹,
V. Coleman^{2,3}, *R. Knut*², *O. Karis*², *D. Iusan*²,*B. Sanyal*² and *G. Westin*³*I. Engineering Sciences, Uppsala University, Uppsala, Sweden; 2. Physics, Uppsala University, Uppsala, Sweden; 3. Materials Chemistry, Uppsala University, Uppsala, Sweden*

3:45

BF-06. Growth of Zn_{1-x}Mn_xO nanorod arrays in aqueous solution.*Y. Fang*¹, *J. Persson*¹, *M. Göthelid*¹ and
*J. Åkerman*¹*I. Department of Microelectronics and Applied Physics, Royal Institute of Technology, Stockholm-Kista, Sweden*

4:00

BF-07. Investigation of ferromagnetism in N and Mn co-**sputtered ZnO.** *J. Persson*¹, *S. Bonetti*¹, *M. Göthelid*¹,
*O. Tjernberg*¹, *J. Åkerman*¹, *M. Wikberg*² and*O. Karis*²*I. Material Physics, KTH, Kista, Sweden; 2. Departement of physics, Uppsala University, Uppsala, Sweden*

4:15

- BF-08. Andreev and Optical Measurement of Spin polarisation in ZnO Based Dilute Magnetic Semiconductors.** *J.R. Neal*¹, *K. Yates*², *A.J. Behan*¹, *D.S. Score*¹, *H.J. Blythe*¹, *A.M. Fox*¹, *L.F. Cohen*² and *G.A. Gehring*¹. *1. Physics and Astronomy, The University of Sheffield, Sheffield, United Kingdom; 2. Blackett Laboratory, Imperial College, London, United Kingdom*

4:30

- BF-09. Magnetic behaviour of Fe implanted TiO₂ thin films.** *R. Sanz*¹, *M. Hernandez-Vélez*^{1,2}, *T. Kubart*³, *D. Martin*³ and *J. Jensen*³. *1. Department of optical, magnetic and transport properties, Instituto de Ciencia de Materiales, CSIC, Madrid, Spain; 2. Fisica Aplicada, Universidad Autónoma, Madrid, Spain; 3. Department of Engineering Sciences, Ångström Laboratory, Uppsala University, Uppsala, Sweden*

4:45

- BF-10. (Ga,Mn)As ultrathin films with high Mn concentration.** *J. Deng*^{1,2}, *W. Wang*¹, *L. Chen*¹, *J. Lu*¹, *Y. Ji*¹ and *J. Zhao*¹. *1. Institute of Semiconductors, Chinese Academy of Sciences, Beijing, China; 2. Department of Physics, University of Science and Technology of China, Hefei, China*

**MONDAY
AFTERNOON
2:30**

AMSTERDAM

**Session BG
MICROWAVE MATERIALS AND
DEVICES I**

Nian-Xiang Sun, Chair

2:30

- BG-01. Non-resonant parametric recovery of spin-wave signals.** *S. Schäfer*¹, *A.V. Chumak*¹, *A.A. Serga*¹ and *B. Hillebrands*¹. *1. Fachbereich Physik and Forschungsschwerpunkt MINAS, Technische Universität Kaiserslautern, Kaiserslautern, Germany*

2:45

- BG-02. Reflectivity of microwave signal in ferromagnetic wires.** *A. Yamaguchi*^{1,2}, *N. Higashio*¹, *K. Motoi*¹, *T. Kishimoto*¹ and *H. Miyajima*¹. *1. Department of Physics, Keio University, Yokohama, Kanagawa, Japan; 2. PRESTO, Tokyo, Japan*

3:00

- BG-03. Ferromagnetic resonance on FeSiB thin films displaying spin reorientation transition.** *M. Coisson*¹, *F. Celegato*¹, *P. Tiberto*¹ and *F. Vinai*¹. *1. Electromagnetics, INRIM, Torino, TO, Italy*

3:15

- BG-04. Correlation receiver of below-noise pulsed signals based on the parametric interactions of spin waves in magnetic films.** *G.A. Melkov*¹, *V.I. Vasyuchka*¹, *V.A. Moiseienko*¹ and *A.N. Slavin*². *1. Faculty of Radiophysics, Kiev National Taras Shevchenko University, Kiev, Ukraine; 2. Department of Physics, Oakland University, Rochester, MI*

3:30

- BG-05. Electronically Tunable Miniaturized Antennas on Magnetolectric Substrates with Enhanced Performance.** *N. Sun*¹, *G. Yang*¹, *A. Daigle*¹, *J. Lou*¹, *M. Liu*¹, *O. Obi*¹, *S. Stoute*¹, *C. Pettiford*¹, *J. Wang*¹ and *K. Naishadham*². *1. Electrical and Computer Eng., Northeastern University, Boston, MA; 2. RF communications Groups, Draper Laboratory, Cambridge, MA*

3:45

- BG-06. On the study of left handed coplanar waveguide zeroth order resonator on ferrite substrate.** *M.A. Abdalla*¹ and *Z. Hu*¹. *1. School of Electrical and Electronic Engineering, University of Manchester, Manchester, United Kingdom*

4:00

BG-07. Observation of bright and dark spin wave envelope solitons in periodic magnetic film structures.

A. Ustinov¹, N. Grigorieva¹ and B. Kalinikos¹.
*Physical Electronics and Technology, St.Petersburg
Electrotechnical University, St.Petersburg, Russian
Federation*

4:15

BG-08. Measurement System of FMR Linewidth ΔH_{ω} of Ferrite using a Shorted Stripline.

S. Takeda¹ and
H. Suzuki². *1. Magnontech, Ltd., Kumagaya, Japan; 2.
KEYCOM Corp., Tokyo, Japan*

4:30

BG-09. On the study of ferrite coupled coplanar waveguide.

M.A. Abdalla¹ and Z. Hu¹. *School of Electrical and
Electronic Engineering, University of Manchester,
Manchester, United Kingdom*

MONDAY
AFTERNOON
2:30

CARACAS

Session BH
MULTILAYER FILMS AND
SUPERLATTICES I

A. Cebollada, Chair

2:30

BH-01. (110)-textured La₂/3Ca₁/3MnO₃ thin films. Optimal electrodes in manganite tunnel junctions.

*I.C. Infante*¹, *F. Sánchez*¹, *J. Fontcuberta*¹, *M. Wojcik*², *E. Jedryka*², *S. Estradé*³, *F. Peiró*³, *J. Arbiol*^{3,4}, *V. Laukhin*⁵ and *J.P. Espinós*⁶
1. *Magnetic Materials and their Applications, Institut de Ciència de Materials de Barcelona, Bellaterra, Barcelona, Spain*; 2. *Institute of Physics, Polish Academy of Sciences, Warszawa, Warszawa, Poland*; 3. *Dept. d'Electrònica, EME/CeRMAE/IN2UB, Universitat de Barcelona, Barcelona, Barcelona, Spain*; 4. *TEM-MAT, Serveis Científicotècnics, Universitat de Barcelona, Barcelona, Barcelona, Spain*; 5. *Institució Catalana de Recerca i Estudis Avançats (ICREA), Barcelona, Barcelona, Spain*; 6. *Instituto de Ciencia de Materiales de Sevilla ICMSE (CSIC-USE), Sevilla, Sevilla, Spain*

2:45

BH-02. Observation of large tunneling magnetoresistance in Fe-MgO-Fe epitaxial multilayers using STM double tunneling experiments.

J. Lee^{1,2}, *C. Krafft*² and *R.D. Gomez*^{1,2}
1. *Electrical and Computer Engineering, University of Maryland, College Park, MD*; 2. *Laboratory for Physical Sciences, College Park, MD*

3:00

BH-03. Multifunctional Ni/Au Multilayered Nanowires.

*M. Cho*¹, *J. Cho*^{2,3}, *J. Wu*⁴, *J. Min*², *J. Lee*², *B. An*² and *Y. Kim*²
1. *Program in Micro/Nano System, Korea University, Seoul, South Korea*; 2. *Department of Materials Science and Engineering, Korea University, Seoul, South Korea*; 3. *Korea Electronic Technology Institute, Korea University, Gyeonggi, South Korea*; 4. *Institute for Nano Science, Korea University, Seoul, South Korea*

3:15

- BH-04. Novel phenomena in multi-layer composite structure observed by anomalous Hall effect measurement.** *S. Das*¹, *T. Ichihara*¹, *H. Suzuki*¹ and *Y. Matsuda*². *Central Research Laboratory, Hitachi Ltd., Odawara, Kanagawa, Japan; 2. Head Development, Hitachi Global Storage Technologies, Odawara, Kanagawa, Japan*

3:30

- BH-05. Band and bubble domains in AF coupled [Co/Pt]/Ru multilayers.** *C. Bran*^{1,2}, *O. Hellwig*³, *U. Wolff*¹, *L. Schultz*¹ and *V. Neu*¹. *1. IFW Dresden, Dresden, Germany; 2. IMPRS "Dynamical Processes in Atoms, Molecules and Solids", Dresden, Germany; 3. Hitachi Global Storage Technologies, San Jose, CA*

3:45

- BH-06. Exchange-spring behavior in Fe-FePt thin films studied via synchrotron radiation.** *B. Laenens*¹, *N. Planckaert*¹, *J. Demeter*¹, *K. Temst*¹, *A. Vantomme*¹, *C. Strohm*², *R. Ruffer*² and *J. Meersschaut*¹. *1. Instituut voor Kern- en Stralingsfysica and INPAC, Katholieke Universiteit Leuven, Celestijnenlaan 200D, B-3001 Leuven, Belgium; 2. ESRF, Rue Jules Horowitz 6, Boîte Postale 220 38043 Grenoble, France*

4:00

- BH-07. How to retrieve more information on magnetic films from microwave permeability measurements.** *O. Acher*¹, *V. Dubuget*^{1,2} and *S. Dubourg*¹. *1. Departement Matériaux, CEA, Monts, France; 2. UMR 6157 LEMA, Tours, France*

4:15

- BH-08. The effect of FePt layer on the transition temperature of FeRh layer.** *N.T. Nguyen*¹, *Y.Y. Hnin*¹ and *T. Suzuki*¹. *1. Information Storage Materials Laboratory, Toyota Technological Institute, Nagoya, Japan*

4:30

- BH-09. Effects of perpendicular interlayer coupling on canting angles of TbCo sublattice magnetization by x-ray magnetic circular dichroism.** *M. Lin*¹, *P. Huang*¹, *Y. Wu*¹, *H. Hou*¹, *C. Lai*¹, *H. Lin*² and *F. Chang*². *1. Department of Materials Science and Engineering, National Tsing Hua University, Hsinchu, Taiwan; 2. National Synchrotron Radiation Research Center, Hsinchu, Taiwan*

4:45

- BH-10. Magnetization reversal in thermally processed Fe/SmCo spring magnets.** *J.E. Davies*¹, *Y. Choi*², *J.P. Liu*³, *J.S. Jiang*², *S.D. Bader*², *R.D. Shull*¹ and *K. Liu*⁴. *1. Metallurgy/Magnetic Materials, NIST, Gaithersburg, MD; 2. Materials Science Division, Argonne National Laboratory, Argonne, IL; 3. Physics Department, University of Texas, Arlington, TX; 4. Physics Department, University of California, Davis, CA*

MONDAY
AFTERNOON
5:10

AUDITORIO A

Session YA
NOBEL PRIZE CELEBRATION
Manuel Vazquez, Chair

TUESDAY
MORNING
9:30

AUDITORIO A

Session CA
SYMPOSIUM ON BIOMEDICAL
APPLICATIONS
Axel Hoffman, Chair

9:30

CA-01. Non-invasive Measurement of Tissue Iron Concentrations with Magnetic Resonance Imaging. *(Invited) T.G. St Pierre¹*. School of Physics, University of Western Australia, Perth, WA, Australia

10:00

CA-02. Exploring the frontiers of magnetic nanoparticles prepared in microemulsions: from ferrofluids to biomedical applications. *(Invited) J. Rivas^{1,2}* and M. Lopez Quintela^{2,1}. *1. Laboratory of Magnetism and Nanotechnology(NANOMAG), University of Santiago de Compostela, Santiago de Compostela, A Coruña, Spain; 2. Laboratory of Magnetism and Nanotechnology(NANOMAG), University of Santiago de Compostela, Santiago de Compostela, A Coruña, Spain*

10:30

CA-03. Spintronic biochips for biomolecular recognition

detection. (Invited) P. Freitas^{1,2}, V. Martins^{1,3}, F. Cardoso^{1,2}, S. Cardoso¹, V. Chu¹, J. Conde^{1,3}, J. Loureiro^{1,2}, J. Germano^{5,4}, L. Sousa^{5,4} and M. Piedade^{5,4}. 1. INESC MN, Lisbon, Portugal; 2. Physics Department, Instituto Superior Tecnico, Lisbon, Portugal; 3. Chemical and Bioengineering Department, Instituto Superior Tecnico, Lisbon, Portugal; 4. Electrical Engineering Department, Instituto Superior Tecnico, Lisbon, Portugal; 5. INESC ID, LISBON, Portugal

11:00

CA-04. In vivo sensing, moving and heating of magnetic nanoparticles in the human body. (Invited)

Q. Pankhurst¹. 1. London Centre for Nanotechnology, London, United Kingdom

11:30

CA-05. Room-temperature detection of single magnetic biomolecular labels with Hall devices*. (Invited)

G. Mihajlovic¹, K. Aledealat², P. Xiong², S. von Molnár², M. Field³, G.J. Sullivan³, K. Ohtani⁴ and H. Ohno⁴. 1. Materials Science Division, Argonne National Laboratory, Argonne, IL; 2. Center for Materials Research and Technology (MARTECH) and Department of Physics, Florida State University, Tallahassee, FL; 3. Teledyne Scientific Company LLC, Thousand Oaks, CA; 4. Laboratory for Electronics Intelligent Systems, Research Institute of Electrical Communication, Tohoku University, Sendai, Japan

TUESDAY
MORNING
9:30

MADRID

Session CB
SPIN TORQUE OSCILLATORS - I

Andrew Kent, Chair

9:30

- CB-01. Spin transfer induced microwave emission and spin diode effects in MgO based magnetic tunnel junctions.** B. Georges¹, V. Cros¹, J. Grollier¹, A. Fert¹, A. Fukushima², H. Kubota², K. Yakushiji², S. Yuasa² and K. Ando². *1. UMR CNRS-Thales, Palaiseau, France; 2. National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan*

9:45

- CB-02. Quantized spin wave modes in magnetic tunnel junctions.** A. Helmer¹, T. Devolder¹, J. Hayakawa^{2,3}, K. Ito², H. Takahashi², S. Ikeda³, P. Crozat¹, J.V. Kim¹, C. Chappert¹ and H. Ohno³. *1. Institut d'Electronique Fondamentale, Université Paris-Sud, Orsay, France; 2. Advanced Research Laboratory, Hitachi, Ltd, Tokyo, Japan; 3. Laboratory for Nanoelectronics and Spintronics, Research Institute of Electrical Communication, Tohoku University, Sendai, Japan*

10:00

- CB-03. Low field spin-transfer induced precession in a pinned SAF layer for high frequency devices.** A.M. Deac^{1,3}, W.H. Rippard¹ and J.A. Katine². *1. NIST, Boulder, CO; 2. Hitachi San Jose Research Center, San Jose, CA; 3. Institut fuer Festkoerperforschung, Forschungszentrum Juelich GmbH, Juelich, Germany*

10:15

- CB-04. Spin-polarized current induced excitations in a synthetic antiferromagnet.** D. Gusakova^{1,2}, D. Houssameddine¹, U. Ebels¹, M. Cyril², B. Dieny¹ and L. Buda-Prejbeanu¹. *1. SPINTEC URA 2512, Grenoble, France; 2. LIMN/DIHS/LETI CEA-Grenoble, Grenoble, France*

10:30

- CB-05. Tuning the Coherence of Spin-Torque-Driven Dynamics in Nanomagnetic Oscillators. (Invited)**
*K. Thadani*¹, *G. Finocchio*³, *Z.P. Li*², *O. Ozatay*²,
*J.C. Sankey*¹, *I.N. Krivorotov*⁴, *Y.T. Cui*²,
*R.A. Buhrman*² and *D.C. Ralph*¹. *Physics, Cornell University, Ithaca, NY; 2. Applied & Engineering Physics, Cornell University, Ithaca, NY; 3. University of Messina, Messina, Italy; 4. University of California-Irvine, Irvine, CA*

11:00

- CB-06. Phase locking of a Spin Transfer Oscillator to an external microwave current : a milestone for the synchronization of a large assembly of STOs.**
*B. GEORGES*¹, *J. Grollier*¹, *M. Darques*¹, *V. Cros*¹,
*C. Deranlot*¹, *G. Faini*² and *A. Fert*¹. *1. Unité Mixte de Physique CNRS/Thales (CNRS-UMR137), Palaiseau, France; 2. Phynano team, Laboratoire de Photonique et Nanostructures, LPN - CNRS, Marcoussis, France*

11:15

- CB-07. Magnetic point-contact precession frequency vs. magnetic field angle – The prospect for spin torque oscillator operation at 65 GHz.** *S. Bonetti*¹,
*J. Persson*¹, *F.B. Mancoff*² and *J. Åkerman*¹. *1. Microelectronics and Applied Physics, Royal Institute of Technology (KTH), Kista-Stockholm, Sweden; 2. Technology Solutions Organization, Freescale Semiconductor Inc., Chandler, AZ*

11:30

- CB-08. Asymmetric lineshapes in spin-torque nano-oscillators near threshold.** *J. Kim*¹, *Q. Mistral*¹,
*C. Chappert*¹, *V.S. Tiberkevich*² and *A.N. Slavin*². *1. Institut d'Electronique Fondamentale, CNRS / Univ. Paris Sud, Orsay, France; 2. Department of Physics, Oakland University, Rochester, MI*

11:45

- CB-09. Experimental and theoretical study of spin-torque microwave excitation linewidths in nanocontacts subject to out-of-plane external fields.** *M. Pasquale*¹, *C. Serpico*², *P. Anzalone*³, *G. Bertotti*¹, *M. Pufall*⁴ and *W. Rippard*⁴. *1. Divisione Elettromagnetismo, INRIM, Torino, Italy; 2. Dipartimento di Ingegneria Elettrica, Università di Napoli "Federico II", Napoli, Italy; 3. Dipartimento di Ingegneria Elettrica Industriale, Politecnico di Torino, Torino, Italy; 4. Electromagnetics Division, NIST, Boulder, CO*

12:00

- CB-10. The frequency of microwave oscillation on domain wall magnetoresistance elements.** *H. Endo*¹, *K. Shirafuji*¹, *H. Suzuki*¹, *M. Doi*¹, *M. Takagishi*², *H.N. Fuke*², *H. Iwasaki*² and *M. Sahashi*¹. *1. Department of Electronic Engineering, Tohoku University, Sendai, Japan; 2. Corporate Research & Development Center, Toshiba Corporation, Kawasaki, Japan*

12:15

- CB-11. Spin wave Doppler shift.** *V. Vlaminck*¹ and *M. Bailleul*¹. *1. GEMME, IPCMS, Strasbourg, France*

TUESDAY
MORNING
9:30

ROMA

Session CC

MgO MAGNETIC TUNNEL JUNCTIONS I

Bernard Dieny, Chair

9:30

- CC-01. Equilibrium and out-of-equilibrium spintronic phenomena in single crystal MgO based magnetic tunnel junctions. (Invited)** C. Tiusan¹, F. Greullet¹, F. Bonell¹, M. Hehn¹, S. Andrieu¹, C. Bellouard¹, F. Montaigne¹, D. Halley², M. Bowen², W. Weber², E. Snoeck³, F. Aliev⁴, E. Popova⁵ and A. Schuhl^{6,1}.
Nancy Université- CNRS, Laboratoire de Physique des Matériaux - UMR7556, Vandoeuvre les Nancy, Lorraine, France; 2. Institut de Physique et Chimie des Matériaux, Strasbourg, Alsace, France; 3. CEMES, Toulouse, France; 4. University of Madrid, Madrid, Spain; 5. Université de Versailles, Laboratoire de Magnétisme et d'Optique de Versailles, Versailles, France; 6. SPINTEC, Grenoble, France

10:00

- CC-02. Nature of Voltage Dependence of Spin Transfer Torque in Magnetic Tunnel Junctions. (Invited)** M. Chshiev¹, I. Theodonis^{2,3}, N. Kioussis², A. Kalitsov² and W. Butler¹.
1. Center for Materials for Information Technology, University of Alabama, Tuscaloosa, AL; 2. Department of Physics and Astronomy, California State University, Northridge, CA; 3. Department of Physics, National Technical University, Zografou, Athens, Greece

10:30

- CC-03. Magnetic tunnelling junctions based on MgO(001) epitaxial barriers: from the interfacial spin dependent electronic structure to the ultimate TMR.** A. Cattoni¹, D. Petti¹, M. Cantoni¹, S. Brivio¹ and R. Bertacco¹.
1. Center LNESS - Department of Physics, Politecnico di Milano, Como, Italy

10:45

- CC-04. Magnetic Tunnel Junctions with MgO Tunnel Barriers and NiFeSiB/CoFeB Hybrid Free Layers.** *J. Cho*¹, *D. Kim*¹, *T. Wang*¹, *S. Isogami*², *M. Tsunoda*², *M. Takahashi*² and *Y. Kim*¹. *1. Department of Materials Science and Engineering, Korea University, Seoul, South Korea; 2. Department of Electronic Engineering, Tohoku University, Sendai, Japan*

11:00

- CC-05. The Surface Electronic Structure: a Key Parameter in Low Resistance Area Single Crystal Magnetic Tunnel Junctions.** *P. Zermatten*¹, *M. Miron*¹, *G. Gaudin*¹, *A. Schuhl*¹, *F. Greullet*², *M. Hehn*² and *C. Tiusan*². *1. SPINTEC, CEA/CNRS, Grenoble, France; 2. LPM, CNRS/UHP, Nancy, France*

11:15

- CC-06. Transport characterization of the single and double magnetic tunnel junctions using point contact spectroscopy.** *A. Iovan*¹, *S. Cherepov*¹, *A. von Bieren*¹, *S. Andersson*¹ and *V. Korenivski*¹. *1. Nanostructure Physics, KTH, Stockholm, Sweden*

11:30

- CC-07. Magnetotransport properties of MgO-based epitaxial magnetic tunnel junctions with a nonmagnetic electrode.** *R. Matsumoto*^{1,2}, *A. Fukushima*¹, *T. Nagahama*¹, *Y. Suzuki*^{1,2}, *K. Ando*¹ and *S. Yuasa*¹. *Nanoelectronics Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan; 2. Graduate School of Engineering Science, Osaka University, Toyonaka, Japan*

11:45

- CC-08. High bias tunneling magnetoresistance and low frequency noise in fully epitaxial Fe/C/MgO/Fe(001) magnetic tunnel junctions.** *D. Herranz*¹, *R. Guerrero*¹, *R. Villar*¹, *F.G. Aliev*¹, *F. Greullet*², *C. Tiusan*² and *M. Hehn*². *1. Fisica Materia Condensada, CIII, Universidad Autonoma de Madrid, Madrid, Madrid, Spain; 2. Laboratoire de Physique des Matériaux, Nancy Université, Nancy, France*

12:00

CC-09. 1/f magnetic noise dependence on free layer thickness in linear MgO magnetic tunnel junctions.

*P. Wisniowski¹, J.M. Almeida¹ and P.P. Freitas¹.
INESC-MN, Lisbon, Portugal*

12:15

CC-10. Hybrid Magnetic Tunnel Junction-MEMS device for 1/f noise suppression.

*A.A. Guedes^{1,2}, S.B. Patil¹,
P. Wisniowski¹, V. Chu¹, J.P. Conde^{1,2} and
P.P. Freitas^{1,2}. 1. INESC-MN, Lisbon, Portugal; 2.
Instituto Superior Tecnico, Lisbon, Portugal*

**TUESDAY
MORNING
9:30**

PARIS

Session CD**MAGNETIC MICROSCOPY I**

Amanda Petford-Long, Chair

9:30

CD-01. Field driven ferromagnetic phase evolution originating from the domain boundaries in antiferromagnetically coupled perpendicular anisotropy films.

*T. Hauet¹, C.M. Günther²,
O. Hovorka³, A. Berger³, M. Im⁴, P. Fischer⁴ and
O. Hellwig¹. 1. Hitachi Gst, San Jose, CA; 2. BESSY
mbH, Berlin, Germany; 3. CIC NanoGUNE Consolider,
Donostia, Spain; 4. Center for X-Ray Optics, Lawrence
Berkeley National Laboratory, Berkeley, CA*

9:45

CD-02. Magnetization indicator film for Lorentz transmission electron microscopy measurements of perpendicularly magnetized nanostructures.

*J.W. Lau¹. 1. Metallurgy Division, National Institute of
Standards and Technology, Gaithersburg, MD*

10:00

- CD-03. Effect of in-situ FIB trimming on the spin configurations of hexagonal shaped ferromagnetic elements.** *S.Y. Lua*^{1,3}, *S.S. Kushvaha*², *Y. Wu*², *K. Teo*² and *T. Chong*³. *1. NUS Graduate School for Integrative Sciences and Engineering, National University of Singapore, Singapore, Singapore; 2. Department of Electrical and Computer Engineering, National University of Singapore, Singapore, Singapore; 3. Data Storage Institute, Singapore, Singapore*

10:15

- CD-04. Ballistic electron magnetic microscopy on Co/Cu/NiFe spin valves.** *A. Kaidatzis*¹, *S. Rohart*¹, *A. Thiaville*¹ and *J. Miltat*¹. *Laboratoire de Physique des Solides, Orsay, France*

10:30

- CD-05. Mapping Atomic-Scale Spin Structures on Insulators by Magnetic Exchange Force Microscopy. (Invited)** *R.M. Wiesendanger*¹. *Institute of Applied Physics, University of Hamburg, Hamburg, Germany*

11:00

- CD-06. 120° antiferromagnetic Néel structure of Mn monolayer on Ag(111).** *C. Gao*¹, *W. Wulfhekel*^{1,2} and *J. Kirschner*¹. *1. Max Planck Institute of Microstructure Physics, Halle (Saale), Germany; 2. Physikalisches Institut, Universität Karlsruhe (TH), Karlsruhe, Germany*

11:15

- CD-07. The role of the spin-orientation of the tip in spin-polarized scanning tunneling microscopy in external magnetic fields.** *D. Sander*¹, *G. Rodary*¹, *S. Wedekind*¹ and *J. Kirschner*¹. *1. Max Planck Institute, Halle, Germany*

11:30

- CD-08. Theoretical description of the high-frequency magnetic force microscopy (HF-MFM) technique.** *M.R. Koblishka*¹ and *U. Hartmann*¹. *Institute of Experimental Physics, University of the Saarland, Saarbruecken, Germany*

11:45

- CD-09. Imaging a single domain wall position by Extraordinary Hall Effect in nanostructured thin films with perpendicular anisotropy.** *M. Miron*¹, *P. Zermatten*¹, *G. Gaudin*¹ and *S. Alain*¹. *SPINTEC (CNRS/CEA), Grenoble, France*

12:00

- CD-10. Hall imaging of the history dependence of the magneto-caloric effect in Gd₅Si₂O₉Ge_{1.91}.** *M. Kuepferling*¹, *J. Moore*², *V. Basso*¹, *C.P. Sasso*¹, *L. Giudici*¹ and *L. Cohen*². *1. Department for Electromagnetism, National Institute of Metrological Research, Torino, Italy; 2. The Blackett Laboratory, Imperial College of Science, London, United Kingdom*

12:15

- CD-11. Imaging perpendicularly recorded data with servo feedback control.** *C. Tseng*¹, *P. McAvoy*¹, *I.D. Mayergoyz*¹ and *C. Krafft*². *1. Department of Electrical and Computer Engineering, University of Maryland, College Park, MD; 2. Laboratory for Physical Sciences, College Park, MD*

TUESDAY
MORNING
9:30

LONDRES

Session CE
EXCHANGE BIAS I

Josep Nogues, Chair

9:30

- CE-01. Reversible exchange bias in ideal antiferromagnetic alloys.** *D. Lederman*¹ and *M. Cheon*¹. *1. Department of Physics, West Virginia University, Morgantown, WV*

9:45

- CE-02. Role of anisotropies on the asymmetric magnetization reversal behavior in exchange-biased systems.** *E. Jiménez*¹, *J. Camarero*¹, *J. Sort*², *J. Nogués*³, *N. Mikuszeit*^{1,4}, *J. García-Martín*⁵, *A. Hoffmann*⁶, *B. Dieny*⁷ and *R. Miranda*^{1,8}.
Departamento de Física de la Materia Condensada and Instituto de Materiales "Nicolás Cabrera", Universidad Autónoma de Madrid, Madrid, Spain; 2. Departament de Física, Institució Catalana de Recerca i Estudis Avançats (ICREA) and Universitat Autònoma de Barcelona, Bellaterra, Spain; 3. Institució Catalana de Recerca i Estudis Avançats (ICREA) and Institut Català de Nanotecnologia, Bellaterra, Spain; 4. Institut für Angewandte Physik, Universität Hamburg, Hamburg, Germany; 5. Instituto de Microelectrónica de Madrid CNM-CSIC, Tres Cantos, Spain; 6. Materials Science Division and Center for Nanoscale Materials, Argonne National Laboratory, Argonne, IL; 7. SPINTEC, URA2512, CNRS/CEA, Grenoble, France; 8. Instituto Madrileño de Estudios Avanzados en Nanociencia IMDEA-Nanociencia, Madrid, Spain

10:00

- CE-03. Asymmetric magnetization reversal behavior in exchange-biased multilayers in different antiferromagnetic thickness ranges.** *D. Spenato*¹, *V. Castel*¹, *S.P. Pogossian*¹, *C. Le Graët*¹, *D.T. Dekadjevi*¹ and *J. Ben Youssef*¹. *1. Laboratoire de Magnétisme de Bretagne, CNRS/FRE 2997, Université de Bretagne Occidentale, Brest, France*

10:15

- CE-04. Tailoring of dynamic magnetic properties of ferromagnetic thin films by ultra-thin IrMn layers.** *J. McCord*¹, *R. Kaltofen*² and *L. Schultz*¹. *1. Institute for Metallic Materials, IFW Dresden, Dresden, Germany; 2. Institute for Integrative Nanosciences, IFW Dresden, Dresden, Germany*

10:30

- CE-05. Local magnetization studies by Magnetic Force and Kerr microscopy of exchange bias in Co/CoO patterned dots.** *U. Wolff*¹, *S. Suck*², *D. Givord*², *J. McCord*¹, *L. Schultz*¹ and *V. Neu*¹. *1. IFW Dresden, Dresden, Germany; 2. Institut Neel, Grenoble, France*

10:45

- CE-06. Control of crystallographic orientation in IrMn/CoFe exchange bias systems.** *N. Aley*¹, *G. Vallejo-Fernandez*¹, *K. O'Grady*¹, *B. Lafferty*², *J. Agnew*² and *Y. Lu*². *1. Physics, University of York, York, United Kingdom; 2. Seagate Technology Ltd., Derry, United Kingdom*

11:00

- CE-07. Magnetoresistance in positive and negative exchange bias Ni/FeF₂ bilayered 200 nm antidots.** *M. Kovylyna*^{1,2}, *R. Morales*^{3,4}, *J. Villegas*⁴, *M. Erekhinsky*⁴, *I.V. Roshchin*⁴, *A. Labarta*^{1,2}, *I.K. Schuller*⁴ and *X. Batlle*^{1,2}. *1. Fisica Fundamental, Universidad de Barcelona, Barcelona, Barcelona, Spain; 2. Institut de Nanociència i Nanotecnologia (IN2UB), Barcelona, Barcelona, Spain; 3. Departamento de Física, Universidad de Oviedo, Oviedo, Oviedo, Spain; 4. Physics Department, University of California-San Diego, San Diego, CA*

11:15

- CE-08. Exchange coupled IrMn/CoFe networks on mesoporous alumina.** *N.N. Shams*¹, *M. Rahman*¹ and *C. Lai*¹. *1. Materials Science and Engineering, National Tsing-Hua University, Hsinchu, Taiwan*

11:30

- CE-09. Effects of nonmagnetic additives in metallic antiferromagnets on exchange bias.** *M. Fecioru-Morariu¹, S. Ali¹, C. Papusoi², M. Sperlich¹ and G. Güntherodt¹*. *1. Physikalisches Institut (IIA), RWTH Aachen University, Aachen, Germany; 2. SPINTEC, CEA/CNRS, Grenoble, France*

11:45

- CE-10. Negative and positive exchange bias in polycrystalline Ni/FeF₂ thin films.** *R. Morales^{1,2}, J. Alameda¹ and I. Schuller²*. *1. Dpto. de Fisica, Universidad de Oviedo, Oviedo, Spain; 2. Physics Department, University of California San Diego, La Jolla, CA*

12:00

- CE-11. Large exchange bias IrMn/CoFe for magnetic tunnel junctions.** *L.E. Fernandez-Outon¹, K. O'Grady¹, M. Zhou² and M. Pakala²*. *1. Physics, The University of York, York, United Kingdom; 2. Western Digital Fremont Inc., Fremont, CA*

12:15

- CE-12. Observation of Metastable Remanence States in Pinned Antiferromagnetically Coupled Ferromagnetic Layers.** *K. Srinivasan¹, S. Wong¹, S.N. Piramanayagam¹ and R. Sbiaa¹*. *1. Spintronics, Media and Interface Division, Data Storage Institute, A*STAR, Singapore, Singapore*

TUESDAY
MORNING
9:30

BERLIN

Session CF
ELECTRICAL STEELS AND INDUCTOR
CORES

Anthony Moses, Chair

9:30

- CF-01. Effect of hot and cold rolling on grain size and texture in FeSi strips with a Si-content larger than 2 wt%. P.R. Calvillo¹, H. Hermann², J. Verstraete¹, J. Schneider^{1,2} and Y. Houbaert¹.** *1. Metallurgy and Materials Science, Universiteit Gent, Gent-Zwijnaarde, Belgium; 2. Institut für Metallformung, Technische Universität Bergakademie Freiberg, Freiberg, Germany*

9:45

- CF-02. Magnetization processes of Fe(Si,Al)-steels with homogeneous and inhomogeneous distribution of (Si,Al). J. Schneider¹, J. Verstraete¹, K. Verbeken¹ and Y. Houbaert¹.** *1. Metallurgy and Materials Science, Universiteit Gent, Gent-Zwijnaarde, Belgium*

10:00

- CF-03. Effects of Si content on the magnetic properties of Fe-Si alloy powder cores. P. Jang¹, B. Lee¹ and I. Jeong².** *1. Div. of Applied Science, Cheongju University, Cheongju, Chungcheongbuk-do, South Korea; 2. R&D Center, Changsung Corp., Incheon, South Korea*

10:15

- CF-04. An In-depth Study of the Barkhausen Emission Signal Properties of the Plastically Deformed Fe-2%Si Alloy. L. Piotrowski¹, B. Augustyniak¹, M. Chmielewski¹ and F.J. Landgraf².** *1. Dept. of Appl. Phys. and Math., Gdansk University of Technology, Gdansk, Poland; 2. Dept. of Met. Eng., University of Sao Paulo, Sao Paulo, Brazil*

10:30

- CF-05. Correlation between core loss and microstructure for Fe-Si powder cores.** *S. Takemoto¹ and T. Saito¹. R&D Center, Daido Steel, Nagoya, Japan*

10:45

- CF-06. Effect of surface magnetic domain structure on iron loss of thin-gauged 3% si-fe sheets.** *H. Jung¹, J. Kim¹ and S. Kim². 1. Metallurgy and Material Science, Hanyang University, Ansan, South Korea; 2. Machinery and Materials Group, Korea Electric Power Research Institute, Taejeon, South Korea*

11:00

- CF-07. Specific total loss components under axial magnetization in electrical steel sheets with different degree of Goss texture.** *W. Pluta¹. 1. Electrical Engineering Faculty, Czestochowa University of Technology, Czestochowa, Poland*

11:15

- CF-08. Three Dimensional Polycrystal Magnetic Field Analysis of Electrical Steel.** *K. Fujisaki^{1,2}. 1. Technical Development Bureau, Nippon Steel Corporation, Futtsu-city, Chiba-prefecture, Japan; 2. Graduate School of Environmental Studies, Tohoku University, Sendai, Japan*

11:30

- CF-09. Improvement of the Bertotti's formula for energy loss in soft magnetic materials.** *K. Sokalski¹ and J. Szczyglowski¹. 1. TU Czestochowa, Czestochowa, Poland*

11:45

- CF-10. Influence of improving efficiency using Fe-P-B-Nb type ultra low loss glassy metal dust core on inductor for large-current.** *H. Matsumoto¹, Y. Yamada¹ and A. Urata¹. 1. RESEARCH AND DEVELOPMENT UNIT, NEC TOKIN, Sendai, Japan*

12:00

- CF-11. Soft-magnetic Fe-based nanocrystalline thick ribbons.** M. Lee¹, C. Lin¹, S. Wang¹ and T. Chin².
Department of Materials Science and Engineering, National Tsing Hua University, Hsinchu, Taiwan; 2. Department of Materials Science and Engineering, Feng Chia University, Taichung, Taiwan

12:15

- CF-12. Gas flow effects to the magnetic properties of current annealed Vitroperm samples.** V. de Manuel¹ and R. Pérez del Real².
Space Programs and Space Sciences, INTA, Torrejón de Ardoz, Madrid, Spain; 2. Space Programs and Space Sciences, INTA, Torrejón de Ardoz, Madrid, Spain

**TUESDAY
MORNING
9:30**

AMSTERDAM

Session CG

**THIN FILMS: SURFACE AND
ANISOTROPY PROPERTIES**

Fernando Briones, Chair

9:30

- CG-01. Routes to Create Ultrathin Co Films with Perpendicular Magnetic Easy Axis.** S. Gallego¹ and C. Muñoz¹.
Inst. Ciencia Materiales Madrid, Madrid, Spain

9:45

- CG-02. Perpendicular magnetic anisotropy at Co/Oxide interfaces.** Y. Dahmane¹, S. Auffret¹, U. Ebels¹, B. Rodmacq¹ and B. Dieny¹.
CEA Grenoble, Grenoble, France

10:00

CG-03. Giant magnetic anisotropy of Fe₃Pt alloy thin films with various crystallographical orientations.

H. Yamamoto¹ and T. Suzuki¹ *1. Information Storage Materials Laboratory, Toyota Technological Institute, Nagoya, Japan*

10:15

CG-04. Uniaxial anisotropy and temperature driven magnetization reversal of Fe deposited on a MnAs/GaAs(001) magnetic template.

R. Breitwieser², M. Marangolo¹, M. Sacchi^{2,3}, C. Spezzani⁴, L. Coelho⁵, J. Milano⁶, V. Etgens¹, J. Lüning² and N. Jaouen³ *1. INSP, Université Pierre et Marie Curie, Paris, France; 2. Laboratoire de Chimie Physique - Matière et Rayonnement, UPMC - Univ. Paris 6, Paris, France; 3. Synchrotron SOLEIL, Paris, France; 4. Sincrotrone Trieste S.C.p.A, Trieste, Italy; 5. Universidade Federal de Minas Gerais, Minas Gerais, Brazil; 6. Centro Atómico Bariloche and Instituto Balseiro-UNCuyo, CNEA, Bariloche, Argentina*

10:30

CG-05. Magnetic anisotropy control by ion irradiation.

A. Mougin¹, H. Cruguel², C. Beigné³, A. Marty³, J. Ferré¹, Y. Samson³, O. Plantevin², F. Fortuna² and H. Bernas² *1. LPS, Univ. Paris Sud, UMR CNRS 8502, Orsay, France; 2. CSNSM, Univ. Paris-Sud, UMR CNRS 8609, Orsay, France; 3. DRFMC/SP2M, CEA, Grenoble, France*

10:45

CG-06. Study of magnetic structures on the nanoscale: a multiscale approach based on first principles calculations.

L. Szunyogh¹, L. Udvardi¹, A. Antal¹, B. Lazarovits^{2,1} and B. Újfalussy² *1. Department of Theoretical Physics, Budapest University of Technology and Economics, Budapest, Hungary; 2. Research Institute of Solid State Physics and Optics, Hungarian Academy of Sciences, Budapest, Hungary*

11:00

CG-07. Magneto-optic sensing using ultrathin ferromagnetic films.

E. Liskova¹ and S. Visnovsky¹ *1. Institute of Physics, Charles University, Prague, Czech Republic*

11:15

- CG-08. Nonuniform RKKY magnetism in nanosized films, wires and spheres.** *E. Meilikhov*¹ and *R. Farzetdinova*¹. *I. Kurchatov Institute, Moscow, Russian Federation*

11:30

- CG-09. Spin Dynamics of Ge:Mn Thin Films.** *O. Kazakova*¹, *R. Morgunov*², *M. Farle*³ and *L. Ottaviano*⁴. *NPL, Teddington, United Kingdom; 2. IPCP, Chernogolovka, Russian Federation; 3. Universitat Duisburg-Essen, Duisburg, Germany; 4. Università dell'Aquila, Coppito L'Aquila, Italy*

11:45

- CG-10. Magnetoelastic coupling in epitaxial monolayers: The role of lattice strain.** *D. Sander*¹, *Z. Tian*¹ and *J. Kirschner*¹. *Max Planck Institute, Halle, Germany*

12:00

- CG-11. Spin-reorientation transitions induced by coinage-metal capping of Co/Ru(0001) studied by spin-polarized low energy electron microscopy.** *F. El Gabaly*^{1,2}, *A.K. Schmid*², *K.F. McCarty*³ and *J. de la Figuera*^{4,1}. *1. Centro de Microanálisis de Materiales, Universidad Autónoma de Madrid, Madrid, Madrid, Spain; 2. Berkeley National Laboratory, Berkeley, CA; 3. Sandia National Laboratories, Livermore, CA; 4. Instituto de Química-Física Rocasolano, CSIC, Madrid, Madrid, Spain*

12:15

- CG-12. Magnetic Properties of Single-Crystalline FeRh Alloy Thin Films.** *S. Inoue*¹, *Y.Y. Hnin*¹, *N.T. Nguyen*¹ and *T. Suzuki*¹. *Information Storage Materials Laboratory, Toyota Technological Institute, Nagoya, Japan*

TUESDAY
MORNING
9:30

CARACAS

Session CH

MAGNETIC SHAPE MEMORY ALLOYS

Thomas Lograsso, Chair

9:30

- CH-01. Controlling the microstructure in Ni-Mn-Ga alloys.**
*M. Pötschke¹, F. Thoss¹, U. Gaitzsch¹, C. Hürrich¹,
S. Roth¹, B. Rellinghaus¹ and L. Schultz¹* *1. Institute for
Metallic Materials, IFW Dresden, Dresden, Germany*

9:45

- CH-02. Field, stress and temperature control of the phase transitions in Ni₅₅Mn₂₀Ga₂₅ single crystal.**
C.P. Sasso¹, M. Pasquale¹ and L. Giudici^{1,2}
1. Electromagnetics, INRiM, Torino, Italy; 2. Physics, Politecnico di Torino, Turin, Italy

10:00

- CH-03. Effect of annealing conditions on the structure formation in NiMnGa shape memory alloys.**
R. Wroblewski¹ and M. Leonowicz¹ *1. Faculty of Materials Science and Engineering, Warsaw University of Technology, Warsaw, Poland*

10:15

- CH-04. Magnetic-field induced strain in 5M polycrystalline alloy.** *U. Gaitzsch¹, C. Hürrich¹, M. Pötschke¹,
S. Roth¹ and L. Schultz¹* *1. Inst metal mater, IFW Dresden, Dresden, Germany*

10:30

- CH-05. Angular dependence of magnetic shape memory effect – model and experiment.** *O. Heczko^{1,2}*
1. Institute for Metallic Materials, IFW Dresden, Dresden, Germany; 2. Laboratory of Materials Science, Helsinki University of Technology, Helsinki, Finland

10:45

- CH-06. Magnetic properties of rapidly quenched Ni-Mn-Ga wires.** *C. Gomez-Polo*¹, *J. Pérez-Landazábal*¹, *V. Recarte*¹, *V. Sánchez-Alarcos*¹ and *G. Badini*² *1. Dept. Física, Universidad Publica de Navarra, Pamplona, Spain; 2. Instituto de Ciencia de Materiales, CSIC, Madrid, Spain*

11:00

- CH-07. Comparative study of structural and magnetic properties of bulk and powder Ni₅₂Fe₁₇Ga₂₇Co₄ magnetic shape memory alloy.** *J. Liu*¹, *N. Scheerbaum*¹, *D. Hinz*¹ and *O. Gutfleisch*¹ *1. Institute for Metallic Materials, IFW Dresden, Dresden, Germany*

11:15

- CH-08. Magnetocaloric effect and martensitic transition in Ni-Mn-In alloys under hydrostatic pressure.** *J. Lyubina*¹, *O. Gutfleisch*¹, *K. Nenkov*¹, *L. Mañosa*², *X. Moya*², *A. Planes*², *M. Barrio*³, *J. Tamarit*³, *S. Aksoy*⁴, *T. Krenke*⁴ and *M. Acet*⁴ *1. Institute for Metallic Materials, IFW Dresden, P.O. Box 270116, D-01171 Dresden, Germany; 2. Facultat de Física, Dept. d'Estructura i Constituents de la Matèria, Universitat de Barcelona, Diagonal 647, E-08028 Barcelona, Spain; 3. Dept. de Física i Enginyeria Nuclear, Universitat Politècnica de Catalunya, Diagonal 647, 08028-Barcelona, Spain; 4. Experimentalphysik, Universität Duisburg-Essen, D-47048 Duisburg, Germany*

11:30

- CH-09. Magnetic domain reorganization and twin boundary dynamics in magnetic shape memory alloys. (Invited)** *J. McCord*¹ *1. Institute for Metallic Materials, IFW Dresden, Dresden, Germany*

12:00

- CH-10. Exchange bias in Ni-rich ferromagnetic shape memory alloys Ni-Mn-Sn.** *V. Khovaylo*¹, *V. Koledov*¹, *V. Shavrov*¹, *A. Korolyov*², *M. Ohtsuka*³, *H. Miki*⁴ and *T. Takagi*⁴. *1. Institute of Radioengineering and Electronics, Moscow, Russian Federation; 2. Institute of Metal Physics, Ekaterinburg, Russian Federation; 3. Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Sendai, Japan; 4. Institute of Fluid Science, Tohoku University, Sendai, Japan*

12:15

- CH-11. Magnetic and shape memory properties of FeMnSi-based glass-coated microwires.** *H. Chiriac*¹, *N. Lupu*¹, *C.M. Craciunescu*², *S. Corodeanu*¹ and *M. Grigoras*¹. *1. Magnetic Materials and Devices, National Institute of Research and Development for Technical Physics, Iasi, Romania; 2. "Politehnica" University, Timisoara, Romania*

**TUESDAY
MORNING
9:00**

POLIVALENTE

**Session CL
PERMANENT MAGNET MACHINES I
(POSTER SESSION)**

Phil Anderson, Chair

- CL-01. Analytical computation and experimental verification of magnetic core loss of permanent magnet generator considering the wind turbine speed.** *S. Jang*¹, *K. Ko*¹, *J. Choi*¹ and *H. Cho*². *1. Chungnam Nat'l Univ, Daejeon, South Korea; 2. Korea Institute of Machinery & Materials, Daejeon, South Korea*
- CL-02. Stator core loss prediction in large synchronous machines.** *A. Knight*¹, *S. Troitskaia*¹ and *Y. Zhan*¹. *1. Electrical and Computer Eng, University of Alberta, Edmonton, AB, Canada*

- CL-03. Design and analysis of ultra high-speed permanent magnet generator driven by gas turbine for micro scale power generation.** S. Jang¹, K. Ko¹, J. Choi¹ and Y. Lee². *1. Chungnam Nat'l Univ, Daejeon, South Korea; 2. Korea Institute of Science of Technology, Seoul, South Korea*
- CL-04. Electromagnetic Performance Analysis and Vector Control of a Flux-Controllable Stator-PM Brushless Motor with Skewed Rotor.** M. Cheng¹, X. Zhu^{1,2}, W. Hua¹ and H. Jia¹. *1. School of Electrical Engineering, Southeast University, Nanjing, China; 2. School of Electrical Information Engineering, Jiangsu University, Zhenjiang, China*
- CL-05. Permanent magnet optimization for reduction of cogging torque of BLDC motor using response surface methodology.** J. Lee¹, H. Shim¹ and S. Wang¹. *1. Mechatronics, Gwangju Institute of Science and Technology, Gwangju, South Korea*
- CL-06. Design of Direct-Coupled, Small Scaled Permanent Magnet Generators for Wind Turbines.** S. Jang¹, H. Kim¹, J. Choi¹, D. You¹, S. Lee² and B. Kim³. *1. Chungnam National University, Dae-jeon, South Korea; 2. Korea Institute of Industrial Technaology, Kwangju, South Korea; 3. Korea Electric Power Research Institute, Daejeon, South Korea*
- CL-07. Design and experimental evaluation of synchronous machine without iron loss using double-sided halbach magnetized permanent magnet rotor in high power fess.** D. You¹, S. Jang¹, K. Ko¹ and S. Choi². *1. chungnam national univ., daejeon, South Korea; 2. Korea Institute of Machinery and Materials, Daejeon, South Korea*
- CL-08. Experimental method for determining magnetically nonlinear characteristics of electric machines with magnetically nonlinear and anisotropic iron core, damping windings and permanent magnets.** G. Stumberger^{1,2}, T. Marcic², B. Stumberger^{1,2} and D. Dolinar¹. *1. Faculty of electrical engineering and computer science, University of Maribor, Maribor, Slovenia; 2. TECES, Maribor, Slovenia*
- CL-09. Detent force minimization of permanent magnet linear synchronous motor by means of two different methods.** Y. Zhu¹ and Y. Cho¹. *1. Electrical Engineering, Dong-A University, Busan, South Korea*

- CL-10. A STUDY ON THE IRREVERSIBLE MAGNET DEMAGNETIZATION IN SINGLE-PHASE LINE-START PERMANENT MAGNET RELUCTANCE MOTOR.** J. Hong², H. Nam³ and T. Kim¹*1. Electrical Engineering, Gyeongsang National University, Jinju, South Korea; 2. Hanyang University, Seoul, South Korea; 3. LG Electronics, Changwon, South Korea*
- CL-11. Design of IPM type BLDC motor considering demagnetization characteristics.** B. Yang¹, S. Hong¹ and B. Kwon¹*1. Hanyang Univ., Ansan, South Korea*
- CL-12. Characteristic analysis of Permanent Magnet Motor Considering Anisotropic Characteristics of Electrical Steel Sheets.** S. Kwon¹, J. Lee¹, K. Ha² and J. Hong¹*1. Department of Mechanical Engineering, Hanyang University, Seoul, South Korea; 2. POSCO Technical Research Laboratories, Pohang, South Korea*

**TUESDAY
MORNING
9:00**

POLIVALENTE

**Session CM
MAGNETIC MICRO- AND
NANOSTRUCTURES
(POSTER SESSION)**

Tom Thomson, Chair

- CM-01. Nonlinear eigenmodes of monodomain magnetic squares. (Invited)** V.E. Demidov¹, U. Hansen¹, S.O. Demokritov¹ and M. Kostylev²*1. Institute for Applied Physics, University of Muenster, Muenster, Germany; 2. School of Physics, University of Western Australia, Crawley, WA, Australia*
- CM-02. Synthesis and Magnetic Properties of Au Doped CoPt Nanowires.** J. Min¹, J. Wu², J. Lee¹, J. Ju³ and Y. Kim¹*1. Department of Materials Science and Engineering, Korea University, Seoul, South Korea; 2. Institute for Nano Science, Korea University, Seoul, South Korea; 3. Cooperative Center for Research Facilities, Sungkyunkwan University, Suwon, South Korea*

- CM-03. FMR studies of interactions effects in magnetic nanowires arrays.** O.C. Trusca^{1,2}, D. Cimpoesu¹, A. Diaconu⁴, I. Dumitru⁴, J. Lim^{1,3}, X. Zhang^{1,3}, J.B. Wiley^{1,3}, A. Stancu⁴ and L. Spinu^{1,2}. *Advanced Materials Research Institute, University of New Orleans, New Orleans, LA; 2. Department of Physics, University of New Orleans, New Orleans, LA; 3. Department of Chemistry, University of New Orleans, New Orleans, LA; 4. Faculty of Physics, "Alexandru Ioan Cuza" University, Iasi, Romania*
- CM-04. Thermal coercivity mechanism in Fe nanoribbons and stripes.** F. Garcia-Sanchez¹ and O. Chubykalo-Fesenko¹. *POMT, Instituto de Ciencia de Materiales de Madrid, CSIC, Madrid, Spain*
- CM-05. Patterning of magnetic films by focused ion beam irradiation.** S. Tibus¹, D. Makarov², C.T. Rettner³, T. Thomson⁴, B.D. Terris⁴, T. Schrefl⁵ and M. Albrecht¹. *1. Institute of Physics, Chemnitz University of Technology, Chemnitz, Germany; 2. Department of Physics, University of Konstanz, Konstanz, Germany; 3. IBM Almaden Research Center, San Jose, CA; 4. San Jose Research Center, Hitachi Global Storage Technologies, San Jose, CA; 5. Department of Engineering Materials, University of Sheffield, Sheffield, United Kingdom*
- CM-06. A novel bottom-up fabrication process for controllable sub-100nm magnetic multilayer devices.** M. Kao¹, J. Ou¹ and J. Wu¹. *Physics, National Changhua University of Education, Changhua, Taiwan*
- CM-07. Self-organised hexagonal patterns of independent magnetic nanodots.** T. Bobek¹, N. Mikuszeit², J. Camarero², S. Kyrsta³, L. Yang¹, M. Niño², C. Hofer⁴, L. Gridneva⁵, A. Persson⁵, D. Arvanitis⁵, R. Miranda^{2,6}, J.J. de Miguel², C. Teichert⁴ and H. Kurz¹. *1. Institute of Semiconductor Electronics, RWTH-Aachen, Aachen, Germany; 2. Dept. Fisica de la Materia Condensada, C-3, Univ. Autonoma de Madrid, Madrid, Spain; 3. Materials Chemistry, RWTH-Aachen, Aachen, Germany; 4. Institut für Physik, Montanuniversität Leoben, Leoben, Austria; 5. Department of Physics, Uppsala University, Uppsala, Sweden; 6. IMDEA-Nano, Madrid Institute of Advanced Studies in Nanotechnology, Madrid, Spain*

- CM-08. Transverse Rectifier Based on Hybrid Magnetic/Superconducting Nanodevices.** *D. Perez de Lara*¹, *E.M. Gonzalez*¹, *J.V. Anguita*² and *J.L. Vicent*¹. *1. Fisica de Materiales, Universidad Complutense de Madrid, Madrid, Spain; 2. Instituto Microelectronica, Madrid, CSIC, Tres Cantos, Madrid, Spain*
- CM-09. Electrical transport study of patterned lateral Niobium-Permalloy junctions.** *S.R. Bakaul*^{1,2}, *K. Li*³, *G. Han*² and *Y. Wu*¹. *1. Electrical and Computer Engineering, National University of Singapore, Singapore, Singapore; 2. Spintronic, Media and Interface, Data Storage Institute, Singapore, Singapore; 3. Industrial Materials Institute, Boucherville, QC, Canada*
- CM-10. Finite size effects in [Co(1nm)/Bi(2.5nm)]_n line-structures.** *C. Christides*¹ and *T. Speliotis*². *1. Department of Engineering Sciences, University of Patras, Patras, 26504, Greece; 2. Institute of Materials Science, NCSR Demokritos, Athens, 153 10, Greece*

**TUESDAY
MORNING
9:00**

POLIVALENTE

**Session CN
MICROMAGNETICS I
(POSTER SESSION)**

Gino Hrkac, Chair

- CN-01. Dynamic and temperature effects in spin-transfer switching.** *H. Pham*^{1,2}, *D. Cimpoesu*^{1,3}, *A. Stancu*³ and *L. Spinu*^{1,2}. *1. Advanced Materials Research Institute, University of New Orleans, New Orleans, LA; 2. Department of Physics, University of New Orleans, New Orleans, LA; 3. Department of Physics, "Al. I. Cuza" University, Iasi, Romania*
- CN-02. Analysis of spin transfer switching speed in magnetic nano-structures.** *J. Guo*¹, *T. Seng Ghee*², *J. Mansoor Bin Abdul*¹ and *L. Lin*¹. *1. National University of Singapore, Singapore, Singapore; 2. Data Storage Institute, Singapore, Singapore*

- CN-03. Current induced domain wall motion in ferromagnetic wires with out-of-plane magnetization.** *H. Szambolics*^{1,3}, *J. Toussaint*^{1,3}, *A. Marty*⁴, *I. Miron*² and *L. Buda-Prejbeanu*^{2,3}. *1. Department of Nanosciences, Institut Neel, CNRS, Grenoble, France; 2. Laboratoire SPINTEC, CEA-CNRS, Grenoble, France; 3. Institut National Polytechnique de Grenoble, Grenoble, France; 4. Laboratoire SP2M, CEA-CNRS, Grenoble, France*
- CN-04. Fast magnetization switching with short pulses.** *W. Scholz*¹, *T.M. Crawford*², *T.W. Clinton*¹, *T. Ambrose*¹, *S. Kaka*¹ and *S. Batra*¹. *1. Research, Seagate, Pittsburgh, PA; 2. USC NanoCenter, Univ. of South Carolina, Columbia, SC*
- CN-05. Micromagnetic Simulations of Domain Wall Depinning Forced by Oscillating Fields.** *O. Alejos Ducal*¹, *E. Martínez Vecino*², *L. López Díaz*³ and *L. Torres Rincón*³. *1. Electricidad y Electrónica, Universidad de Valladolid, Valladolid, Valladolid, Spain; 2. Ingeniería Electromecánica, Universidad de Burgos, Burgos, Burgos, Spain; 3. Física Aplicada, Universidad de Salamanca, Salamanca, Salamanca, Spain*
- CN-06. Effects of Shape Anisotropy on the Walker Breakdown Field in Field-Driven Domain Wall Motion.** *W. Kim*¹, *S. Jung*², *H. Lee*² and *K. Lee*¹. *1. Korea University, Seoul, South Korea; 2. POSTECH, Pohang, South Korea*
- CN-07. Testing the theory of nucleation in infinite square prism—micromagnetic simulations.** *K.M. Lebecki*¹. *1. Institute of Physics, PAS, Warsaw, Poland*
- CN-08. Finite difference and edge finite element approaches for dynamic micromagnetic modeling.** *A. Manzin*¹, *B. Van de Wiele*², *O. Bottauscio*¹, *M. Chiampi*³, *L. Dupré*² and *F. Olyslager*⁴. *1. Istituto Nazionale di Ricerca Metrologica, Torino, Italy; 2. Department of Electrical Energy, Systems and Automation, Ghent University, Ghent, Belgium; 3. Department of Electrical Engineering, Politecnico di Torino, Torino, Italy; 4. Department of Information Technology, Ghent University, Ghent, Belgium*
- CN-09. Computation of magnetization normal oscillations and resonant frequencies for ferromagnetic nanoparticles.** *M. d'Aquino*¹, *C. Serpico*², *G. Miano*² and *G. Bertotti*³. *1. Dipartimento per le Tecnologie, Università di Napoli "Parthenope", Napoli, Italy; 2. Dipartimento di Ingegneria Elettrica, Università di Napoli "Federico II", Napoli, Italy; 3. Istituto Nazionale di Ricerca Metrologica (INRiM), Torino, Italy*

- CN-10. Micromagnetic modeling of magnetization switching mechanisms in high magnetoresistance tunnel junctions.** *L. Torres*¹, *G. Finocchio*², *M. Carpentieri*², *E. Martinez*³, *E. Jaromirska*¹, *O. Alejos*⁴ and *L. Lopez-Diaz*¹. *1. Dept. Fisica Aplicada, Universidad de Salamanca, Salamanca, Spain; 2. University of Messina, Messina, Messina, Italy; 3. Universidad de Burgos, Burgos, Burgos, Spain; 4. Universidad de Valladolid, Valladolid, Valladolid, Spain*
- CN-11. Effect of Sawtooth Shape on Switching Process of Write Head.** *S. Wang*¹, *D. Wei*¹ and *K. Gao*². *1. Dept. of Materials Science and Engineering, Tsinghua University, Beijing, China; 2. Seagate Technology, Seagate Technology, Bloomington, MN*
- CN-12. Micromagnetic study of read sensitivity: Influence of curved hard bias and granular media.** *L. Wang*¹, *G.C. Han*¹, *S.G. Wu*¹ and *B. Liu*¹. *1. Spintronics, Media and Interface, Data Storage Institute, Singapore, Singapore*

**TUESDAY
MORNING
9:00**

POLIVALENTE

**Session CO
NANOSTRUCTURED HARD MAGNETIC
MATERIALS - I
(POSTER SESSION)**

Thomas Schrefl, Chair

- CO-01. Remanence analysis of nanocrystalline, epitaxial SmCo₅ films in high pulsed fields up to 35 T.** *V. Neu*¹, *J. Freudenberger*¹, *A. Singh*¹ and *L. Schultz*¹. *1. Institute for Metallic Materials, IFW Dresden, Dresden, Germany*
- CO-02. Effect of Ga addition on the magnetic properties of Nd₆₀Fe₃₀Al_{10-x}Ga_x alloy.** *W. Kaszuwara*¹, *B. Michalski*¹, *M. Leonowicz*¹ and *J. Latuch*¹. *1. Faculty of Materials Science and Engineering, Warsaw University of Technology, Warsaw, Poland*
- CO-03. Ab initio calculation of the magnetic structures in Nd₂Fe₁₄B/ α -Fe nanocomposite materials.** *Y. Toga*¹, *H. Tsuchiura*¹ and *A. Sakuma*¹. *1. Applied Physics, Tohoku University, Sendai, Japan*

CO-04. Nanostructure and Magnetic Properties of Nd-Fe-B Thin Film Fabricated by UHV Sputtering.

D. Ogawa¹, T. Akiya², M. Oogane¹, H. Kato^{2,3} and Y. Ando¹ 1. *Department of Applied Physics, Tohoku University, Sendai, Japan;* 2. *New Industry Creation Hatchery Center (NICHe), Tohoku University, Sendai, Japan;* 3. *Department of Applied Mathematics and Physics, Yamagata University, Yonezawa, Japan*

CO-05. Effect of Nd and Nd₂O₃ layers on the magnetic properties for Nd-Fe-B thin films.

N. Oka¹, T. Sato², H. Kato¹ and T. Shima¹ 1. *Faculty of Engineering, Tohoku Gakuin University, Tagajo, Japan;* 2. *Toyota Central R&D Labs., Nagakute, Japan*

CO-06. Refinement of surface morphology of Nd-Fe-B thin film by low temperature deposition.

H. Kato¹, I. Honda¹, T. Sato² and T. Shima¹ 1. *Faculty of Engineering, Tohoku Gakuin University, Tagajo, Japan;* 2. *Toyota Central R&D Labs., Nagakute, Japan*

CO-07. Enhancement of coercivity for Nd-Fe-B thin films with Tb and Dy layer.

T. Sato¹, N. Oka², H. Kato² and T. Shima² 1. *Toyota Central R&D Labs., Inc., Aichi, Japan;* 2. *Faculty of Engineering, Tohoku Gakuin University, Tagajyo, Japan*

CO-08. FePt-based nanocomposite ribbons as exchange coupled magnets.

A. Crisan^{1,2}, O. Crisan¹, N. Randrianantoandro² and I. Skorvanek³ 1. *National Institute for Materials Physics, Bucharest-Magurele, Romania;* 2. *Laboratoire de Physique de l'Etat Condense, Universite du Maine, Le Mans, France;* 3. *Institute of Experimental Physics, Slovak Academy of Sciences, Kosice, Slovakia*

TUESDAY
MORNING
9:00

POLIVALENTE

Session CP
HYSTERESIS MODELLING I
(POSTER SESSION)

A. Petru, Chair

- CP-01. Genetic algorithm for Jiles-Atherton parameters optimization.** *F.A. Cuéllar*¹ and *A. Mendoza*² *1. Physics Department, Universidad Nacional de Colombia, Bogotá, Colombia; 2. Grupo de Materiales Magnéticos y Nanoestructuras, Universidad del Quindío, Armenia, Colombia*
- CP-02. Angle Difference between B vector and H vector in Anisotropic Electrical Steel.** *K. Fujisaki*^{1,2} and *S. Satou*³ *1. Technical Development Bureau, Nippon Steel Corporation, Futtsu-city, Chiba-prefecture, Japan; 2. Graduate School of Environmental Studies, Tohoku University, Sendai-city, Miyagi-prefecture, Japan; 3. N-Teck Ohita Corporation, Ohita-city, Japan*
- CP-03. Data collapse and viscosity in three-dimensional magnetic systems.** *A. Adedoyin*¹ and *A. Petru*¹ *1. Electrical and Computer Engineering, Florida State University, Tallahassee, FL*
- CP-04. A Simplified Iron Loss Model for Laminated Magnetic Cores.** *E. Dlala*¹ *1. Department of Electrical Engineering, Helsinki University of Technology, Espoo, Finland*
- CP-05. Modeling of Vector Hysteresis of Soft Magnetic Composite Material.** *Y. Guo*¹, *H. Lu*², *J. Zhu*¹, *Z. Lin*¹, *J. Zhong*¹ and *S. Wang*³ *1. Faculty of Engineering, University of Technology Sydney, Sydney, NSW, Australia; 2. Faculty of Information Technology, University of Technology Sydney, Sydney, NSW, Australia; 3. Faculty of Electrical Engineering, Xi'an Jiaotong University, Xi'an, Shaanxi, China*
- CP-06. Analysis of the local material degradation near cutting edges of electrical steel sheets.** *G. Crevecoeur*¹, *P. Sergeant*¹, *L. Dupre*¹, *L. Vandenbossche*¹ and *R. Van de Walle*² *1. Departement of Electrical Energy, Systems and Automation, Ghent University, Ghent, Belgium; 2. Department of Electronics and Information systems, Ghent University, Ghent, Belgium*

CP-07. Modelling of magnetostrictive material and linear controlling of nonlinear magnetostrictive drive system based on SVM. J. An¹, Q. Yang¹, Z. Ma¹, H. Chen¹, L. Hou¹, W. Yang¹ and F. Liu¹. *hebei university of technology, Tianjin, China*

CP-08. Modelling hysteresis of a first order magneto-structural phase transformation. V. Basso¹, M. Lo Bue², C.P. Sasso¹ and M. Küpferling¹. *1. INRIM, Torino, Italy; 2. SATIE, ENS Cachan, CNRS, UniverSud, Cachan, France*

CP-09. The Preisach distribution and the symmetry of the local hysterons in strongly interacting nanoparticulate systems. R. Tanasa¹ and A. Stancu¹. *1. Department of Physics, "Alexandru Ioan Cuza" University, Iasi, Romania*

**TUESDAY
MORNING
9:00**

POLIVALENTE

**Session CQ
SOFT MAGNETIC MATERIALS AND
APPLICATIONS I
(POSTER SESSION)**

Andy Knight, Chair

CQ-01. Magnetic and magneto-thermal properties of RFe₄Ge₂(R=Er,Dy) compounds. P. Kumar¹, N.K. Singh¹, K.G. Suresh¹ and A.K. Nigam². *1. Physics, IIT Bombay, Mumbai, Maharashtra, India; 2. Tata Institute of Fundamental Research, Tata Institute of Fundamental Research, Mumbai, Maharashtra, India*

CQ-02. Capacity of magnetic inductive parameters on annealing characterization of cold rolled low carbon steel. K. Gurruchaga^{1,2}, A. Martínez-de-Guerenu¹, M. Soto^{1,2} and F. Arizti^{1,2}. *1. CEIT, San Sebastian, Spain; 2. Tecnun, San Sebastian, Spain*

CQ-03. A fully digital magnetic property measurement system. M. Soto^{1,2}, A. Martínez-de-Guerenu¹, K. Gurruchaga^{1,2} and F. Arizti^{1,2}. *1. CEIT, San Sebastian, Spain; 2. Tecnun (University of Navarra), San Sebastian, Spain*

- CQ-04. Preparation and magnetorheology of solvent-cast magnetite nanoparticle and poly(vinyl butyral) composite.** *B. Park*¹, *J. You*¹, *F. Fang*¹ and *H. Choi*¹. *Department of Polymer Science and Engineering, Inha University, Incheon, South Korea*
- CQ-05. 3D Magnetic Field Analysis by Homogenization Method for Thin Steel Plate of Magnetic Field.** *K. Fujisaki*^{1,2}, *M. Fujikura*¹, *J. Mino*³ and *S. Satou*⁴. *Technical Development Bureau, Nippon Steel Corporation, Futtsu-city, Chiba-prefecture, Japan; 2. Graduate School of Environmental Studies, Tohoku University, Sendai-city, Japan; 3. Nippon Steel Engineering Corporation, Tokyo, Japan; 4. N-Teck Ohita Corporation, Ohita, Japan*
- CQ-06. Field Coil for Magneto-Optic Switching : Capacitance Considerations.** *J. Tioh*¹, *M. Mina*¹ and *R. Weber*¹. *Electrical and Computer Engineering, Iowa State University, Ames, IA*
- CQ-07. Power loss measurement and prediction of soft magnetic powder composites magnetised under non-sinusoidal excitation.** *P. Marketos*¹, *J.P. Hall*¹ and *S.E. Zirka*². *1. School of Engineering, Cardiff University, Cardiff, Wales, UK, United Kingdom; 2. Department of Applied Physics and Technology, Dnepropetrovsk National University, Dnepropetrovsk, Ukraine*
- CQ-08. Electromagnetic Wave Absorption Characteristics of Powder-Type Magnetic Wood Considering the Mixing Ratios of Two Types of Magnetic Powder.** *H. Oka*¹, *Y. Yanagidate*¹, *H. Osada*¹, *K. Kubota*¹, *Y. Namizaki*² and *F.P. Dawson*³. *1. Iwate University, Morioka, Japan; 2. Iwate Industrial Research Institute, Morioka, Japan; 3. University of Toronto, Toronto, ON, Canada*
- CQ-09. Influence of asymmetry in stator geometry and magnetic circuit on cogging torque in PM brushless machines.** *Z. Zhu*¹, *J. Chen*¹, *L. Wu*¹ and *D. Howe*¹. *University of Sheffield, Sheffield, United Kingdom*
- CQ-10. Electromagnetic modeling of a novel linear oscillating actuator.** *Z. Zhu*¹, *X. Chen*¹, *D. Howe*¹ and *S. Iwasaki*². *1. University of Sheffield, Sheffield, United Kingdom; 2. IMRA UK Research Center, Brighton, United Kingdom*
- CQ-11. Non-oriented electrical steel and magnetostriction: a review.** *A.M. Severino*¹. *Departamento de Física - CCNE, Universidade Federal de Santa Maria, Santa Maria, Rio Grande do Sul, Brazil*

CQ-12. Optimization of Design Parameters for Ferrite Inductor for 10 MHz On-chip Power Module.

S. Bae^{1,2}, Y. Hong^{1,2}, J. Lee^{1,2}, J. Jalli^{1,2}, G.S. Abo^{1,2}, A. Lyle^{1,2}, H. Han^{1,2} and G.W. Donohoe³
1. Department of Electrical and Computer Engineering, University of Alabama, Tuscaloosa, AL; 2. MINT Center, University of Alabama, Tuscaloosa, AL; 3. Department of Electrical and Computer Engineering, University of Idaho, Moscow, ID

**TUESDAY
MORNING
9:00**

POLIVALENTE

**Session CR
MAGNETIC NANOCCLUSERS AND
NANOPARTICLES II
(POSTER SESSION)**

Patricia de la Presa, Chair

CR-01. Magnetic properties of cobalt ferrite nanoparticles

obtained by non-aqueous synthesis. C. Vázquez-Vázquez¹, C. Mateo-Mateo¹, M. Buján-Núñez¹, M. López-Quintela¹, D. Serantes², D. Baldomir² and J. Rivas²
1. Facultad de Química. Departamento de Química Física, Universidad de Santiago de Compostela, Santiago de Compostela, A Coruña, Spain; 2. Facultad de Física. Departamento de Física Aplicada, Universidad de Santiago de Compostela, Santiago de Compostela, A Coruña, Spain

CR-02. Magnetic Properties of Nano-composite Particles of

FePt/FeRh. Y. Hnin¹, S. Inoue¹, N.T. Nam¹, T. Suzuki¹ and Y. Hirotsu²
1. Information Storage Materials Laboratory, Toyota Technological Institute, Nagoya, Japan; 2. The Institute of Scientific and Industrial Research, Osaka University, Osaka, Japan

- CR-03. Synergic application of albumin nanoparticles: combination of Photodynamic Therapy with Cellular Hyperthermia.** M.M. Andrade Rodrigues¹, A.R. Simioni¹, F.L. Primo^{2,1}, M.P. Siqueira-Moura², Z.G. Lacava³, P.C. Morais⁴ and A.C. Tedesco¹.
Departamento de Química, Grupo de Fotobiologia e Fotomedicina, Faculdade de Filosofia, Ciências e Letras de Ribeirão Preto, Universidade de São Paulo, 14040-901, Brazil, Ribeirão Preto, SP, Brazil; 2. Faculdade de Ciências Farmacêuticas de Ribeirão Preto, Universidade de São Paulo, Ribeirão Preto-SP, 14040-903, Brazil, Ribeirão Preto, SP, Brazil; 3. Universidade de Brasília, Instituto de Ciências Biológicas, Brasília DF 70910-900, Brazil, Ribeirão Preto, DF, Brazil; 4. Universidade de Brasília, Instituto de Física, Núcleo de Física Aplicada, Brasília DF 70910-900, Brazil, Ribeirão Preto, DF, Brazil
- CR-04. Synthesis of Ni nanoparticles by dc magnetron sputtering.** H. Cui¹, M. Sanz¹, M. Maicas¹ and C. Aroca¹. *ISOM, Universidad Politécnica de Madrid, Madrid, Madrid, Spain*
- CR-05. Influence of the Si substrate on the transport and magnetotransport properties of nanostructured FeAg thin films.** J. Alonso¹, M. Fdez-Gubieda¹, J. Barandiarán¹, J. Chaboy³, L. Fernández Barquín⁴, I. Orue², A. Svalov¹ and N. Kawamura⁵. *Electricidad y Electrónica, Universidad del País Vasco, Bilbao, Spain; 2. SGIKER, Servicios Generales de medidas magnéticas, Universidad del País Vasco, Bilbao, Spain; 3. Instituto de Ciencia de Materiales de Aragón, CSIC-Universidad de Zaragoza, Zaragoza, Spain; 4. CITIMAC, Universidad de Cantabria, Santander, Spain; 5. Japan Synchrotron Radiation Research Institute, Kouto, Japan*
- CR-06. WITHDRAWN**
- CR-07. Characterization of nanocrystalline iron oxide powder modified by electroless nickel plating.** C. Lin¹, C. Tsay¹, T. Yang¹, R. Yang², D. Hung³ and Y. Yao³. *1. Materials Science and Engineering, Feng Chia University, Taichung, Taiwan; 2. Dept. of Aerospace and Systems Engineering, Feng Chia Univ, Taichung, Taiwan; 3. Institute of Physics, Academia Sinica, Taipei, Taiwan*
- CR-08. Functionalized silica coated maghemite nanoparticles prepared by the microemulsion method for biomedical applications.** A. Drmota¹, A. Košak² and A. Znidaršič^{1,2}. *Kolektor Nanotesla Institute, Ljubljana, Slovenia; 2. Kolektor Magma d.o.o., Ljubljana, Slovenia*

- CR-09. Magnetic nanoparticles obtained by ultrahigh vacuum glancing angle deposition technique at high temperature.** X. Bendaña¹, E. Ferreiro¹, G. Armelles¹, A. Cebollada¹ and J. Garcia Martin¹. *Instituto de Microelectrónica de Madrid IMM-CNM-CSIC, Tres Cantos, Madrid, Spain*
- CR-10. Magnetic properties of nanocrystalline Co thin films grown on glass.** B. Presa¹, R. Matarranz¹, M.C. Contreras¹, J.F. Calleja¹, L.E. Fernandez-Outon² and K. O'Grady². *1. Departamento de Física, Universidad de Oviedo, Oviedo, Principado de Asturias, Spain; 2. Department of Physics, The University of York, York, United Kingdom*
- CR-11. Core-shell magnetic behaviour of iron ultrathin films prepared by sputtering at very low temperatures.** F. Jiménez-Villacorta¹, R.M. Morillas¹, E. Salas¹, E. Céspedes¹ and C. Prieto¹. *Instituto de Ciencia de Materiales de Madrid - CSIC, Madrid, Spain*
- CR-12. Preparation and magnetic properties of disordered CdFe₂O₄ thin films.** H. Akamatsu¹, Y. Zong¹, Y. Fujiki¹, K. Kamiya¹, K. Fujita¹, S. Murai¹ and K. Tanaka¹. *1. Material Chemistry, Kyoto University, Kyoto, Japan*
- CR-13. Controlled synthetic conditions of FePt nanoparticles with high magnetization for biomedical applications.** D. Wei^{1,4}, D. Hung², C. Ho³, P. Chen³ and Y. Yao⁴. *1. Institute of Physics, Academia Sinica, Taipei, Taiwan; 2. Department of Information and Telecommunications Engineering, Ming Chuan University, Taipei, Taiwan; 3. Department of Chemical Engineering, Tunghai University, Taichung, Taiwan; 4. Department of Materials Engineering, Tatung University, Taipei, Taiwan*
- CR-14. Properties of Co-HfO₂ nanogranular magnetic thin films.** M. Chadha¹ and V. Ng¹. *ECE, National University of Singapore, Singapore, Singapore*
- CR-15. Fe₃O₄ incorporated AOT-Alginate - composite nanoparticles for drug delivery.** C. Sudakar¹, A. Dixit¹, R. Regmi¹, R. Naik¹, G. Lawes¹, V.M. Naik², P.P. Vaishnava³, U. Toti⁴ and J. Panyam⁴. *1. Department of Physics and Astronomy, Wayne State University, Detroit, MI; 2. Department of Natural Sciences, University of Michigan-Dearborn, Dearborn, MI; 3. Department of Physics, Kettering University, Flint, MI; 4. College of Pharmacy, University of Minnesota, Minneapolis, MN*

- CR-16. Iron Oxide Nanoparticles Embedded in Thermoplastic Polymers for Magneto-optical Devices.** G. Carotenuto², D. Davino¹, A. Longo², V. Pagliarulo¹, G. Pepe³ and C. Visone¹. *1. Engineering Department, University of Sannio, Benevento, Italy; 2. Istituto per i materiali compositi, CNR, Napoli, Italy; 3. Coherentia INFM - Physics Department, Università di Napoli Federico II, Napoli, Italy*
- CR-17. Novel single-step synthesis of Fe_{1-x}Cox and MgO based core-shell structured nanospheres: High magnetization particles for biomedicine, catalysis and spintronics applications.** C. Martinez-Boubeta¹, L. Balcells¹, F. Sandiumenge¹, L. Casas³, A. Calleja¹, V. Laukhin^{1,2}, C. Monty⁴ and B. Martinez¹. *1. ICMAB, Bellaterra, Barcelona, Spain; 2. Institut Català de Recerca i Estudis Avançats (ICREA), Passeig Lluís Companys 23, Barcelona, Spain; 3. Unitat de Cristallografia i Mineralogia, Dept. Geologia-UAB, Bellaterra, Barcelona, Spain; 4. CNRS/Procédés, Matériaux et Energie Solaire (PROMES), Font Romeu, France*

**TUESDAY
MORNING
9:00**

POLIVALENTE

**Session CS
PERPENDICULAR GRANULAR MEDIA
(POSTER SESSION)
Simon Greaves, Chair**

- CS-01. High Perpendicular Anisotropy Layers stacked Exchange Coupled Composite Media.** S. Oikawa¹, T. Maeda¹ and A. Takeo¹. *1. Hard Disk Drive Development Dept., TOSHIBA Corporation, Kawasaki, Japan*
- CS-02. Segregation Mechanisms in Co-based Oxide Recording Media.** E.E. Marinero¹, D.T. Margulies¹, B.R. York¹ and P. Rice². *1. Hitachi San Jose Research Center, San Jose, CA; 2. IBM Almaden Research Center, San Jose, CA*
- CS-03. Pseudo-hcp material and its evaluation for perpendicular recording media.** S. Saito¹ and M. Takahashi^{2,1}. *1. Electronic engineering, Tohoku university, Sendai, Miyagi, Japan; 2. New industry creation hatchery center, Tohoku univ., Sendai, Miyagi, Japan*

- CS-04. Magnetic interaction between recording layer and soft underlayer in granular-type perpendicular magnetic recording media with thin intermediate layer.** *K. Shintaku*¹. *Akita Research Institute of Advanced Technology, Akita Prefectural R&D Center, Akita, Japan*
- CS-05. A new method for controlling an exchange coupling of perpendicular recording media.** *J. Ariake*¹ and *N. Honda*¹. *AIT, Akita Prefectural R&D Center, Akita, Japan*
- CS-06. A study of perpendicular magnetic recording media with an exchange control layer.** *K. Tang*¹, *K. Takano*¹, *G. Choe*¹, *G. Wang*¹, *J. Zhang*¹, *X. Bian*¹ and *M. Mirzamaani*¹. *Hitachi Global Storage Technologies, San Jose, CA*
- CS-07. Al-N; a hexagonal-nitride seed layer underlayered Ru in granular-type perpendicular media.** *S. Ishibashi*¹, *S. Saito*¹, *A. Hashimoto*¹ and *M. Takahashi*^{2,1}. *Dept. of Electronics Engineering, Tohoku University, Sendai, Japan; 2. New Industry Creation Hatchery Center, Tohoku University, Sendai, Japan*
- CS-08. Granular perpendicular soft layer with tunable anisotropy energy in exchange coupled composite media.** *H. Hou*¹, *M. Lin*¹, *R. Liao*¹, *C. Lai*¹, *R. Chen*² and *C. Lee*². *1. Department of Materials Science and Engineering, National Tsing Hua University, Hsinchu, Taiwan; 2. China Steel Corporation, Kaohsiung, Taiwan*
- CS-09. Effect of deposition condition of Ru-oxide/Ru bilayers on magnetic properties and orientation of CoPtCr-SiO₂ perpendicular recording media.** *T. Matsui*¹, *A. Hashimoto*¹, *K. Hirata*¹, *H. Fujiura*¹, *S. Matsunuma*², *T. Inoue*², *T. Doi*² and *S. Nakagawa*¹. *Dept. of Physical Electronics, Tokyo Institute of Technology, Tokyo, Japan; 2. Hitachi Maxell, Ibaraki, Japan*
- CS-10. Remanence measurements of perpendicular recording media.** *T. Deakin*¹, *C. Bunce*¹, *K. O'Grady*¹ and *S.Z. Wu*². *1. Department of Physics, The University of York, York, United Kingdom; 2. Seagate Media Research, Fremont, CA*

- CS-11. Microwave-assisted magnetization reversal in exchange spring media.** *M.A. Bashir¹, J. Dean¹, T. Schrefl¹, A. Goncharov¹, G. Hrkac¹, S. Bance¹, D.A. Allwood¹ and D. Suess²*. *Engineering Materials, University Of Sheffield, Sheffield, United Kingdom; 2. Solid State Physics, Vienna University of Technology, Vienna, Austria*
- CS-12. Micromagnetic Simulations of Cluster-pinned Recording Media.** *C. Loke¹, S. Greaves¹ and H. Muraoka¹*. *RIEC, Tohoku University, Sendai, Miyagi, Japan*
- CS-13. Effects of exchange and dipolar interactions on the determination of intrinsic switching field distributions in perpendicular recording media.** *Y. Liu¹, K.A. Dahmen¹, O. Hovorka² and A. Berger²*. *Department of Physics, University of Illinois at Urbana-Champaign, Urbana, IL; 2. CIC nanoGUNE Consolider, Donostia - San Sebastián, Spain*
- CS-14. Hybrid Soft Underlayer for Perpendicular Recording Media.** *Y. Dong¹ and R. Victora¹*. *Department of Electrical and Computer Engineering, The Center for Micromagnetics and Information Technologies (MINT), University of Minnesota, Minneapolis, MN*
- CS-15. Fast precessional switching in exchange spring media.** *D. Suess¹, J. Fidler¹, J. Dean² and T. Schrefl²*. *Institut of Solid State Physics, Technical University of Vienna, Vienna, Austria; 2. Department of Engineering Materials, The University of Sheffield, Sheffield, UK., Sheffield, United Kingdom*

TUESDAY
MORNING
9:00

POLIVALENTE

Session CT
PERPENDICULAR HIGH KU MEDIA
(POSTER SESSION)

Mohammad Mirzamaani, Chair

- CT-01. Co-rich Co-Pt films with low ordering temperature and high perpendicular hard magnetic properties for high-density magnetic recording media.** S. Chen^{1,2}, P. Kuo³, C. Shen³, Y. Fang³ and S. Hsu³*1. Department of Materials Engineering, MingChi University of Technology, Taipei, Taiwan; 2. Center for Nanostorage Research, National Taiwan University, Taipei, Taiwan; 3. Institute of Materials Science and Engineering, National Taiwan University, Taipei, Taiwan*
- CT-02. Microstructure and magnetic properties of FePt films on anodized aluminum oxide membranes.** C. Yu¹, S. Chen², Y. Yao³ and J. Wu²*1. Department of Applied Physics, National University of Kaohsiung, Kaohsiung, Taiwan; 2. Department of Materials Science and Engineering, National Tsing Hua University, Hsinchu, Taiwan; 3. Department of Materials Engineering, Tatung University, Taipei, Taiwan*
- CT-03. Effect of MgO addition on structural and magnetic properties of (001) textured FePt thin films.** A. Sun^{1,2}, Y. Tsai³, F. Yuan⁴, J. Hsu^{1,2} and P. Kuo³*1. Physics, National Taiwan University, Taipei, Taiwan; 2. Center for Nanostorage Research, National Taiwan University, Taipei, Taiwan; 3. Materials Science and Engineering, National Taiwan University, Taipei, Taiwan; 4. Physics, Academia Sinica, Taipei, Taiwan*
- CT-04. Thickness Dependence on (001) Texture Evolution and Magnetic Properties of Sputter-Deposited FePt:MgO Nanocomposite Films.** H. Kim¹, K. Kim¹, S. Lee¹ and W. Jeung²*1. Materials Science and Engineering, Korea University, Seoul, South Korea; 2. Korea Institute of Science and Technology, P.O.Box 131, Seoul, South Korea*
- CT-05. Dependence of ordering kinetics of FePt thin films on substrates.** C. Zha^{1,2}, S. He¹, B. Ma¹, Z. Zhang¹, F. Gan¹ and Q. Jin¹*1. Department of Optical Science and Engineering, Fudan University, Shanghai, China; 2. Department of Microelectronics and Applied Physics, Royal Institute of Technology, Stockholm, Sweden*

- CT-06. Domain reversal behavior of ultrathin FePt:C films.** H. Ko¹, P. Alagarsamy¹, S. Shin¹, W. Byun² and S. Kim². *1. Physics, KAIST, Daejeon, South Korea; 2. Material Science, KAIST, Daejeon, South Korea*
- CT-07. Fabrication of easy-axis-aligned ultrahigh-density FePt nanoparticles.** Y. Wu¹, L. Wang¹ and C. Lai¹. *Materials Science and Engineering, National Tsing Hua University, Hsinchu, Taiwan*
- CT-08. Structural and magnetic properties of textured Fe/FePt bilayer.** S.H. He¹, B. Ma¹, C.L. Zha¹, Z.Z. Zhang¹ and Q.Y. Jin¹. *Department of Optical Science and Engineering, Fudan University, Shanghai, Shanghai, China*
- CT-09. Control of Curie temperature of FePt(Cu) films prepared from Pt(Cu)/Fe bilayers.** J. Ikemoto¹, Y. Imai¹ and S. Nakagawa¹. *Dept. of Physical Electronics, Tokyo Institute of Technology, Tokyo, Japan*
- CT-10. Exchange Coupling Assisted FePtC Perpendicular Recording Media.** J. Hu¹, J. Chen², Y. Ding¹, B. Lim¹, W. Phyoe¹ and B. Liu¹. *1. Data Storage Institute, Singapore, Singapore; 2. Department of Materials Science and Engineering, National University of Singapore, Singapore, Singapore*
- CT-11. Epitaxial thin SmCo₅ films with perpendicular anisotropy.** M. Seifert¹, V. Neu¹ and L. Schultz¹. *Institute for Metallic Materials, IFW Dresden, Dresden, Germany*
- CT-12. Studies on Sm(Co,Cu)₅ thin films with perpendicular anisotropy for extremely high areal density recording.** X. Liu¹, H. Zhao¹, Y. Kubota² and J. Wang¹. *1. The Center for Micromagnetics and Information Technologies, Department of Electrical and Computer Engineering, University of Minnesota, Minneapolis, MN; 2. Seagate Research, Pittsburgh, PA*
- CT-13. Second order anisotropy in exchange spring systems.** B.F. Valcu¹, A. Dobin¹ and E. Girt¹. *Seagate Technology, Fremont, CA*

TUESDAY
MORNING
9:00

POLIVALENTE

Session CU
BIT PATTERNED MEDIA I
(POSTER SESSION)
Branson Belle, Chair

- CU-01. Magnetic recording in patterned media at 5 - 10 Tbit/in².** *S. Greaves¹, Y. Kanai² and H. Muraoka¹. 1. RIEC, Tohoku University, Sendai, Japan; 2. IEE, Niigata Institute of Technology, Kashiwazaki, Japan*
- CU-02. Characterisation of a 2 Tbit/in² patterned media recording system.** *N. Degawa¹, S.J. Greaves¹, H. Muraoka¹ and Y. Kanai². 1. RIEC, Tohoku University, Sendai, Miyagi, Japan; 2. IEE, Niigata Institute of Technology, Niigata, Niigata, Japan*
- CU-03. Simulation Study of High Density Bit Patterned Media with Inclined Anisotropy.** *N. Honda¹, K. Yamakawa¹ and K. Ouchi¹. 1. Research Institute of Advanced Technology, Akita Prefectural R & D Center, Akita-shi, Japan*
- CU-04. Writability in Discrete Track Media.** *K. Moon¹, C. Che¹, Y. Tang², M.T. Moneck², J. Zhu² and N. Takahashi³. 1. Samsung Information Systems America, San Jose, CA; 2. ECE Department, Carnegie Mellon University, Pittsburgh, PA; 3. Fuji Electric Advanced Technology, Nagano, Japan*
- CU-05. Magnetization switching experiments on sub-micron Co/Pt multilayer dot with pulse field generator with nanoseconds duration.** *N. Kikuchi¹, I. Atsuo¹, S. Okamoto¹ and O. Kitakami¹. 1. IMRAM Tohoku University, Sendai, Japan*
- CU-06. Dot size dependence of magnetic properties in CoPt dot arrays fabricated using diblock copolymer.** *K. Kimura¹, Y. Kamata¹, T. Maeda¹, Y. Isowaki¹ and A. Kikitsu¹. 1. Storage Materials & Devices Laboratory, Corporate Research & Development Center, Toshiba Corporation, Kawasaki, Kanagawa, Japan*

- CU-07. Study on ferro-antiferromagnetic transition in L1₀ FePtRh film for bit patterning.** *T. Hasegawa*¹, *J. Miyahara*¹, *Y. Fu*², *T. Wang*², *H. Saito*¹ and *S. Ishio*¹. *1. Materials Science and Engineering, Akita University, Akita, Japan; 2. Venture Business Laboratory, Akita University, Akita, Japan*
- CU-08. CoCrPt-SiO₂ films on spherical SiO₂ particle arrays.** *C. Brombacher*¹, *F. Springer*², *H. Rohrmann*⁴, *M. Kratzer*⁴, *M. Parlinska*³, *S. Meier*³, *P. Kappenberger*³ and *M. Albrecht*¹. *1. Institute of Physics, Chemnitz University of Technology, D-09107 Chemnitz, Germany; 2. Department of Physics, University of Konstanz, D-78457 Konstanz, Germany; 3. Nanoscale Materials Science, Empa, CH-8600 Dübendorf, Switzerland; 4. Data Storage, OC Oerlikon Balzers AG, FL-9496 Balzers, Liechtenstein*
- CU-09. Fabrication of nanomagnet arrays by exfoliating thin films sputter-deposited onto molds.** *H. Oshima*^{1,2}, *H. Kikuchi*^{1,2}, *H. Nakao*^{1,2}, *K. Itoh*^{1,2}, *T. Morikawa*³, *H. Tamura*⁴, *K. Nishio*^{5,6} and *H. Masuda*^{5,6}. *1. Fujitsu Laboratories Ltd., Atsugi 243-0197, Japan; 2. Yamagata Fujitsu Ltd., Higashine 999-3701, Japan; 3. Fujitsu Laboratories Ltd., Akashi 674-8555, Japan; 4. Fujitsu Ltd., Kawasaki 211-8588, Japan; 5. Kanagawa Academy of Science and Technology, Sagami-hara 229-1131, Japan; 6. Tokyo Metropolitan University, Hachioji 192-0397, Japan*
- CU-10. Design of Ni-Mold for Discrete Track Media.** *K. Ichikawa*¹, *T. Usa*², *K. Nishimaki*² and *K. Usuki*¹. *1. Recording Media Research Laboratories, FUJIFILM Corp., Odawara Kanagawa, Japan; 2. Production Engineering & Development Center, FUJIFILM Corp., Odawara Kanagawa, Japan*

TUESDAY
MORNING
9:00

POLIVALENTE

Session CV
MICROWAVE MATERIALS AND
DEVICES -II
(POSTER SESSION)
Masahiro Yamaguchi, Chair

- CV-01. Integrated on-chip microstrip lines with Co-Ta-Zr magnetic films.** *P. Khalili Amiri*¹, *B. Rejaei*¹, *Y. Zhuang*¹, *M. Vroubel*¹, *D. Lee*², *S. Wang*² and *J. Burghartz*^{3,1}. *1. Delft Institute of Microsystems and Nanoelectronics (DIMES), Delft University of Technology, Delft, Netherlands; 2. Department of Materials Science and Engineering, Stanford University, Stanford, CA; 3. Institute for Microelectronics Stuttgart (IMS CHIPS), Stuttgart, Germany*
- CV-02. Optimal Design of Microwave Absorbers Using Ferrite-epoxy and Iron-epoxy Composites.** *R. Yang*¹, *S. Hsu*¹, *C. Lin*² and *C. Tsay*². *1. Aerospace and Systems Engineering, Feng Chia University, Taichung, Taiwan; 2. Materials Science and Engineering, Feng Chia University, Taichung, Taiwan*
- CV-03. Strong Magnetolectric Coupling at Microwave Frequencies in Metallic Magnetic Film / PZT Composites.** *C.I. Pettiford*¹, *J. Lou*¹, *L. Russell*¹ and *N.X. Sun*¹. *1. Northeastern University, Boston, MA*
- CV-04. Nonlinear electrical tuning of ferromagnetic resonance in YIG film - PZT layered structures.** *Y. Fetisov*¹ and *G. Srinivasan*². *1. Moscow State Institute of Radio Engineering, Electronics and Automation, Moscow, Russian Federation; 2. Physics Department, Oakland University, Rochester, MI*
- CV-05. Generation of chaotic spin waves in magnetic film active feedback rings through four-wave parametric processes.** *A. Kondrashov*¹, *A. Ustinov*¹, *T. Stemler*², *B. Kalinikos*^{1,3}, *M. Wu*³ and *H. Benner*². *1. Physical Electronics and Technology, St.Petersburg Electrotechnical University, St.Petersburg, Russian Federation; 2. Institute for Solid State Physics, Darmstadt University of Technology, Darmstadt, Germany; 3. Department of Physics, Colorado State University, Fort Collins, CO*

- CV-06. Particle Effect of Electromagnetic Penetration in High Frequency in H Field and B Field application.** *K. Fujisaki^{1,2}1. Technical Development Bureau, Nippon Steel Corporation, Futtsu-city, Chiba-prefecture, Japan; 2. Graduate School of Environmental Studies, Tohoku University, Sendai, Japan*
- CV-07. The X-band permittivity of iron-epoxy composites under the magnetic field.** *H. Dung Shing¹, S. Hsu³, W. Liang³, C. Lin², C. Tsay², Y. Yao⁴ and R. Yang³1. Department of Information and Tele. Engineering, Ming Chuan University, Taipei, Taiwan; 2. Department of Material Science and Engineering, Feng Chia University, Taichung, Taiwan; 3. Department of Aerospace and Systems Engineering, Feng Chia University, Taichung, Taiwan; 4. Department of Materials Engineering, Tatung University, Taipei, Taiwan*
- CV-08. High-frequency Magnetic Properties and Attenuation Characteristics for Barium Ferrite Composites.** *Z. Li¹, G. Lin¹, Y. Wu¹ and L. Kong¹1. Temasek Laboratories, National University of Singapore, Singapore, Singapore*
- CV-09. High frequency property of polyol-derived FeCo nanoparticles for EWA application.** *D. Kodama¹, K. Shinoda², R.J. Joseyphus³, Y. Shimada⁴, K. Tohji¹ and B. Jeyadevan¹1. Graduate School of Environmental Studies, Tohoku University, Sendai, Japan; 2. Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Sendai, Japan; 3. Department of Physics, National Institute of Technology, Tiruchirappalli, India; 4. Department of Electrical and Communication Engineering, Tohoku University, Sendai, Japan*
- CV-10. Noise Suppression Effectiveness of Fe-Si-Al Magnetic Composite Thick Film on the Signal Transmission Cable.** *K. Lee¹, D. Kang¹, I. Byun¹, I. Jeong¹ and S. Kim²1. R & D Center, Chang Sung Corporation, Incheon, South Korea; 2. Nano-Materials Research Center, Korea Institute of Science and Technology, KIST, Seoul, South Korea*
- CV-11. Microwave absorption properties in Bi-substitute Yttrium Iron Garnet.** *D. Hung¹, Y. Fu² and Y. Yao³1. Information & Telecommunications Engineering, Ming Chuang University, Taipei, Taiwan; 2. Department of Materials Science and Engineering,, National Dong Hwa University, Hualien, Taiwan; 3. Department of Materials Engineering, Tatung University, Taipei, Taiwan*

- CV-12. Preparation and characterization of nano-fiber nonwoven textile for electromagnetic wave shielding.** *M. Sonehara*^{1,2}, *T. Sato*², *M. Takasaki*¹, *H. Konishi*³, *K. Yamasawa*² and *Y. Miura*². *1. Satellite Venture Business Laboratory, Shinshu University, Ueda, Japan; 2. Spin Device Technology Center, Shinshu University, Nagano, Japan; 3. Faculty of Textile Science and Technology, Shinshu University, Ueda, Japan*

**TUESDAY
MORNING
9:00**

POLIVALENTE

**Session CW
CHARACTERIZATION AND
MEASUREMENT TECHNIQUES II
(POSTER SESSION)**

*Philip Marketos, Chair
Stan Zurek, Chair*

- CW-01. Characterization of iron magnetic nanoparticles by termomagnetogravimetry.** *J.C. Apesteguy*¹, *S.E. Jacobo*¹, *C.E. Rodriguez Torres*², *M.B. Fernández van Raap*² and *F.H. Sanchez*². *1. Chemistry, Universidad de Buenos Aires, Buenos Aires, Argentina; 2. Physics IFLP (CONICET), FCE, Universidad Nacional de La Plata, La Plata, Argentina*
- CW-02. Magnetization reversal study in a permalloy wire with 3 dissimilar trenches by using real-time magnetic force microscopy.** *K. Cheng*^{1,2}, *C. Yu*¹, *S. Lee*¹, *Y. Liou*¹, *Y. Yao*³, *J. Wu*³ and *J. Huang*². *1. Institute of Physics., Academia Sinica., Taipei, Taiwan; 2. Department of Materials Science and Engineering, National Tsing-Hua University, Hsinchu, Taiwan; 3. Department of Materials Engineering, Tatung University, Taipei, Taiwan*
- CW-03. Diffracted magneto-optical Kerr effects of one-dimensional magnetic gratings.** *J. Kim*¹, *G. Lee*¹, *Y. Lee*¹, *J. Rhee*² and *C. Yoon*³. *1. Quantum Photonic Science Research Center and BK21 Program Division of Advanced Research and Education in Physics, Hanyang University, Seoul, South Korea; 2. BK21 Physics Research Division and Department of Physics, Sungkyunkwan University, Suwon, South Korea; 3. Division of Advanced Materials Science, Hanyang University, Seoul, South Korea*

- CW-04. Strain induced ferrimagnetism in Mn₂As and Fe₂As thin films.** *J. Kim*¹, *Y. Hwang*¹, *J. Choi*¹ and *S. Cho*¹.
Univ. of Ulsan, Ulsan, South Korea
- CW-05. Electron paramagnetic resonance studies of diluted magnetic semiconductors Si_{1-x}Mn_xTe_{1.5} crystals.** *Y. Hwang*¹, *Y. Um*¹, *J. Choi*¹, *S. Cho*¹, *S. Na*² and *J. Kim*².
1. Physics, University of Ulsan, Ulsan, South Korea; 2. Physics, Pusan National University, Pusan, South Korea
- CW-06. Metallographic Investigations of Co₂FeAl_{1-x}Si_x Heusler-Compounds.** *C.G. Blum*¹, *G.H. Fecher*¹, *B. Balke*¹ and *C. Felser*¹.
1. Institut für Anorganische und Analytische Chemie, Johannes Gutenberg-University, Mainz, Germany
- CW-07. Magnetic entropy change in La_{0.5}Nd_{0.2}Sr_{0.3}MnO₃ perovskite.** *J. Cho*¹, *S. Ko*¹, *Y. Ahn*¹ and *E. Choi*².
1. Chemistry, Konyang University, Nonsan Chungnam, South Korea; 2. Ophthalmic Optics, Konyang University, Daejeon, South Korea
- CW-08. Magnetic behavior and magnetoimpedance effect in Cobalt-based ribbons.** *A. Rosales-Rivera*¹, *M. Gomez-Hermida*¹, *A. Velasquez*¹, *D. Muraca*² and *H. Sirkin*².
1. Laboratorio de Magnetismo y Materiales Avanzados, Universidad Nacional de Colombia, Manizales, Caldas, Colombia; 2. Física, Universidad de Buenos Aires, Buenos Aires, Argentina
- CW-09. Correlation between surface magnetic field and Barkhausen noise in grain-oriented electrical steel.** *S. Zurek*¹, *P. Marketos*¹, *S. Tumanski*², *H.V. Patel*³ and *A.J. Moses*¹.
1. School of Engineering, Cardiff University, Cardiff, Wales, UK, United Kingdom; 2. Institute of Electrical Theory and Measurements, Warsaw University of Technology, Warsaw, Poland; 3. Industry and Innovation Division, National Physical Laboratory, Middlesex, England, United Kingdom
- CW-10. Comparison of properties of magnetoacoustic emission and mechanical Barkhausen effects for P91 steel after plastic flow and creep.** *B. Augustyniak*¹, *M. Chmielewski*¹, *L. Piotrowski*¹ and *Z. Kowalewski*².
1. Gdansk University of Technology, Gdansk, Poland; 2. Polish Academy of Science, IPPT, Warsaw, Poland

- CW-11. Magnetic and microstructural investigation of pipeline steels.** *G. Roland*¹, *E. Jose*², *A. Jose*³, *K. Franz*⁴, *M. Nasir*¹, *E. Chistian*¹, *P. Karin*¹ and *H. Jose*³. *1. Inst. of Solid State Physics, Techn. Univ. Vienna, Vienna, Austria; 2. ESIME-Zacatenco, Instituto Politécnico Nacional, Mexico City, Mexico; 3. ESIQIE, Instituto Politécnico Nacional, Mexico City, Mexico; 4. Techn Univ Vienna, Inst. f. Sensor u. Atuatorsysteme, Vienna, Austria*
- CW-12. A Pulsed Field Magneto-optic Kerr Effect Magnetometer for Studying Magnetic Thin-Films and Nanostructures.** *D. Atkinson*¹ and *J.A. King*¹. *Physics, Durham University, Durham, United Kingdom*
- CW-13. A novel application of high resolution scanning electron microscopy for perpendicular recording media characterization.** *E.T. Yen*¹, *L. Lee*¹, *B. Lu*¹ and *O. Mryasov*². *1. Seagate Technology, Fremont, CA; 2. Seagate Technology, Pittsburg, PA*
- CW-14. Magnetic image detection of the stainless-steel welding part inside the multi-layered tube structure.** *T. Hayashi*^{1,2}, *H. Yamada*¹, *T. Kiwa*¹, *K. Tsukada*¹ and *M. Tamazumi*³. *1. Graduate School of Natural Science & Technology, Okayama University, Okayama, Japan; 2. Pulstec Industrial Co., Ltd, Hamamatsu, Japan; 3. Uno Kogyo Co.,Ltd, Okayama, Japan*
- CW-15. Transient Eddy Current Measurement for the Characterization of Depth and Conductivity of a Conductive Plate.** *W. Cheng*¹. *1. NDE Center, Japan Power Engineering and Inspection Corporation, Yokohama, Japan*
- CW-16. Multidirectional Remanent Flux Leakage Transducers for Evaluation of Stress and Fatigue Loaded Steel Samples.** *T. Chady*¹ and *G. Psuj*¹. *1. Department of Electrical and Computer Engineering, Szczecin University of Technology, Szczecin, Poland*

TUESDAY
AFTERNOON
2:30

AUDITORIO A

Session DA
BIT PATTERNED MEDIA II

Kaizhong Gao, Chair

2:30

- DA-01. Understanding Adjacent Track Erasure in Discrete Track Media.** *Y. Tang*¹, *X. Che*² and *J. Zhu*¹.
Electrical and Computer Engineering, Carnegie Mellon University, Pittsburgh, PA; 2. Samsung Information Systems America, San Jose, CA

2:45

- DA-02. 10 Tb/in² recording simulations on patterned domain wall assisted media.** *A.Y. Dobin*¹, *H.J. Richter*¹, *J. Xue*¹ and *D. Weller*¹. *Seagate Technology LLC, Fremont, CA*

3:00

- DA-03. Patterned media for 10 Tbit/in² utilizing dual-section “ledge” elements. (Invited)** *V. Lomakin*^{1,2}, *B. Livshitz*^{1,2}, *S. Li*^{1,2}, *A. Inomata*⁴, *R. Choi*¹ and *N. Bertram*^{2,3}. *1. ECE, University of California, San Diego, La Jolla, CA; 2. Center for Magnetic Recording Research, University of California, San Diego, La Jolla, CA; 3. Hitachi San Jose Research Center, San Jose, CA; 4. Storage Systems Laboratories, Fujitsu Laboratories Ltd., Kanagawa, Japan*

3:30

- DA-04. Characterization of timing jitter in synchronous writing of bit patterned media.** *Y. Tang*¹ and *X. Che*¹. *Samsung, San Jose, CA*

3:45

- DA-05. Formation of multilayered Co/Pd nano-dot array with an areal density of 1 Tb/in².** *J. Wi*¹, H. Lee¹, K. Lim¹, T. Kim², K. Shin³ and K. Kim¹. *1. Department of Materials Science and Engineering, Seoul National University, Seoul, South Korea; 2. Department of Advanced Materials Engineering, Sejong University, Seoul, South Korea; 3. Future Technology Research Division, Korea Institute of Science and Technology, Seoul, South Korea*

4:00

- DA-06. SUB 100 nm FePt NANODOT ARRAYS FOR ULTRAHIGH-DENSITY MAGNETIC RECORDING.** *H. Ko*¹, P. Alagarsamy¹, K. Lee¹, S. Shin¹, J. Jung² and H. Jung². *1. Physics, KAIST, Daejeon, South Korea; 2. Chemical and Biomolecular Engineering, KAIST, Daejeon, South Korea*

4:15

- DA-07. Dot size dependence of magnetization reversal process in L1₀ FePt dot arrays.** *D. Wang*¹, T. Seki¹, K. Takahashi¹ and T. Shima². *1. Institute for Materials Research, Tohoku University, Sendai, Miyagi, Japan; 2. Faculty of Engineering, Tohoku-gakuin University, Tagajyo, Miyagi, Japan*

4:30

- DA-08. Separating dipolar broadening from the intrinsic switching field distribution in perpendicular bit patterned media.** *O. Hellwig*¹, A. Moser¹, A. Berger^{1,2}, T. Thomson^{1,3}, E. Dobisz¹, Z.Z. Bandic¹, H. Yang¹, D. Kercher¹ and E.E. Fullerton^{1,4}. *1. San Jose Research Center, Hitachi Global Storage Technologies, San Jose, CA; 2. CIC Nanogune, Donostia, Spain; 3. University of Manchester, Manchester, United Kingdom; 4. Center for Magnetic Recording Research, University of California at San Diego, La Jolla, CA*

4:45

- DA-09. Low Temperature Remanence Loop Measurements of Ion-Milled Patterned Media.** *B.D. Belle*¹, *F. Schedin*¹, *T.V. Ashworth*², *E.W. Hill*¹, *P.W. Nutter*¹, *H.J. Hug*³ and *J.J. Miles*¹. *1. School of Computer Science, The University of Manchester, Manchester, United Kingdom; 2. Institute fuer Physik, Universitaet Basel, Basel, Switzerland; 3. EMPA, Dübendorf, Switzerland*

5:00

- DA-10. Magnetic properties of exchange-coupled composite nanoparticles and nanopatterns.** *D. Goll*¹, *A. Breitling*¹ and *S. Macke*¹. *1. Max-Planck-Institute for Metals Research, Stuttgart, Germany*

5:15

- DA-11. Study of gas cluster ion beam planarization for discrete track magnetic disks.** *K. Nagato*^{1,2}, *H. Tani*³, *Y. Sakane*⁴, *N. Toyoda*⁵, *I. Yamada*⁵, *M. Nakao*¹ and *T. Hamaguchi*¹. *1. The University of Tokyo, Bunkyo-ku, Tokyo, Japan; 2. Japan Society for the Promotion of Science, Chiyoda-ku, Tokyo, Japan; 3. Hitachi Global Storage Technologies Japan Ltd., Odawara-shi, Kanagawa-ken, Japan; 4. Western Digital Media Operations, San Jose, CA; 5. University of Hyogo, Himeji-shi, Hyogo-ken, Japan*

TUESDAY
AFTERNOON
2:30

MADRID

Session DB
SYMPOSIUM ON MAGNETIC
MODELING

Oksana Fesenko Chubykalo, Chair

2:30

- DB-01. Dynamic edge mode modeling and edge property measurements in magnetic nanostructures. (Invited)** R.D. McMichael^{1,3}, B.B. Maranville^{2,3}, D.W. Abraham⁴, C.A. Ross⁵ and V.P. Chuang⁵ 1. Center for Nanoscale Science and Technology, NIST, Gaithersburg, MD; 2. Center for Neutron Research, NIST, Gaithersburg, MD; 3. Metallurgy Division, NIST, Gaithersburg, MD; 4. IBM Thomas J. Watson Research Center, Yorktown Heights, NY; 5. Department of Materials Science and Engineering, Massachusetts Institute of Technology, Cambridge, MA

3:00

- DB-02. Spin injection driven magnetization dynamics: physical insights gained from numerical micromagnetics. (Invited)** D.V. Berkov¹ and J. Miltat² 1. Magnetic and Optical Systems, Innovent Technology Development, Jena, Germany; 2. Laboratoire de Physique des Solides, University Paris-Sud & CNRS, Orsay, France

3:30

- DB-03. Hierarchical multi-scale model: application to FePt. (Invited)** U. Nowak¹ 1. Physics, University of York, York, United Kingdom

4:00

- DB-04. Micromagnetics of Patterned Media Recording. (Invited)** T. Schrefl¹, A. Goncharov¹, J. Dean¹, G. Hrkac¹ and S. Bance¹ 1. University of Sheffield, Sheffield, United Kingdom

4:30

DB-05. MODELING THE MAGNETIC PROPERTIES OF NANOPARTICLES: FINITE-SIZE, SURFACE AND EXCHANGE BIAS EFFECTS. (Invited)

O. Iglesias^{1,2}, *X. Batlle*^{1,2} and *A. Labarta*^{1,2} *1. Dpt. Física Fonamental, Universitat de Barcelona, Barcelona, Spain; 2. Institut de Nanociència i Nanotecnologia de la UB (IN2UB), Barcelona, Spain*

5:00

DB-06. Modeling the temperature dependent free energy barrier for magnetization reversal in nanomagnets. (Invited)

*T.C. Schulthess*¹, *C. Zhou*¹, *O.N. Mryasov*², *D.M. Nicholson*¹, *M. Eisenbach*¹ and *P.R. Kent*¹ *1. Oak Ridge National Laboratory, Oak Ridge, TN; 2. Seagate Research, Pittsburgh, PA*

**TUESDAY
AFTERNOON
2:30**

ROMA

**Session DC
GMR IN NANOCONTACTS AND
CONSTRICTIONS**

Jeff Childress, Chair

2:30

DC-01. Effective resistance mismatch and magnetoresistance of a CPP-GMR system with current-confined-paths.

*J. Sato*¹, *K. Matsushita*¹ and *H. Imamura*¹ *1. Advanced Industrial Science and Technology, Tsukuba, Japan*

2:45

DC-02. Current-perpendicular-to-plane magnetoresistances of CoFeB-based exchange-biased spin valves and CoFeB/Ru multilayers.

*C. Ahn*¹, *K. Shin*¹ and *W. Pratt Jr.*² *1. Center for Spintronics Research, Korea Institute of Science and Technology, Seoul, South Korea; 2. Department of Physics and Astronomy, Michigan State University, East Lansing, MI*

3:00

- DC-03. Magnetoresistance and switching properties of $\text{Co}_x\text{Fe}_{100-x}/\text{Pd}$ -based perpendicular anisotropy single and dual spin valves without exchange bias.** R. Law^{1,2}, R. Sbiaa¹, T. Liew¹ and T. Chong¹ 1. *Data Storage Institute, A*STAR (Agency for Science, Technology and Research), Singapore, Singapore*; 2. *NUS Graduate School for Integrative Sciences & Engineering, National University of Singapore, Singapore, Singapore*

3:15

- DC-04. Magnetic structure of domain walls confined in a nano-oxide layer.** K. Matsushita¹, J. Sato¹ and H. Imamura¹ 1. *Nanotechnology Research Institute, AIST, Tsukuba, Ibaraki, Japan*

3:30

- DC-05. MICROMAGNETIC STUDY ON DOMAIN WALL SIZE FOR NANOCONTACT MAGNETORESISTANCE IN SPIN VALVE STRUCTURE.** M. Takagishi¹, H.N. Fuke¹, S. Hashimoto¹ and H. Iwasaki¹ 1. *Corporate R&D Center, TOSHIBA Corporation, Kawasaki, Japan*

3:45

- DC-06. Effect of surface scattering on magnetoresistance.** X. Chen¹ and R.H. Victora² 1. *Department of Physics, University of Minnesota, Minneapolis, MN*; 2. *Department of Electrical & Computer Engineering, University of Minnesota, Minneapolis, MN*

4:00

- DC-07. CPP-GMR characteristics of full epitaxial spin valves film with alternate monatomic $[\text{Fe}/\text{Co}]_n$ superlattice.** I. Chu¹, T. Mano¹, M. Doi¹ and M. Sahashi¹ 1. *Department of Electronic Engineering, Tohoku University, Sendai, Japan*

4:15

- DC-08. Spin transfer magnetization dynamics in ultra small nanocontacts elaborated by CT-AFM nanolithography.** M. Darques¹, B. Georges¹, A. Ruotolo¹, V. Cros¹, S. Fusil¹, J. Grollier¹, R. Guillemet¹, K. Bouzehouane¹, C. Deranlot¹ and A. Fert¹. *I. Unite Mixte de Physique CNRS/Thales, Palaiseau, France*

4:30

- DC-09. Layered annular magnetic bridges for storage and logic applications.** F.J. Castano¹, B.G. Ng¹, C.H. Nam¹ and C.A. Ross¹. *I. Depart. of Material Science and Engineering, MIT, Cambridge, MA*

4:45

- DC-10. Investigation of strong biquadratic coupling in Co₂MnSi based trilayer structures.** Y. Sakuraba¹, S. Bosu¹, K. Saito¹, H. Wang¹, S. Mitani¹ and K. Takanashi¹. *I. Institute for materials research, Tohoku univ., Sendai, Miyagi, Japan*

5:00

- DC-11. CPP magnetoresistance effect through Graphene sheets.** E.W. Hill¹, T.G. Mohiuddin¹, D. Elias¹, A.K. Geim¹, F. Schedin¹, K. Novoselov¹, P. Blake¹ and A. Zhukov¹. *I. Centre for Mesoscience and Nanotechnology, The University of Manchester, Manchester, United Kingdom*

5:15

- DC-12. Magnetoresistance and energy model of Alq₃-based spintronic devices.** L.E. Hueso^{1,2}, V. Dediu², I. Bergenti², A. Riminucci², P. Graziosi², F. Borgatti², F. Cassoli³, Y. Zhan², C. Taliani² and M.P. de Jong⁴. *I. Department of Physics, University of Leeds, Leeds, United Kingdom; 2. ISMN, CNR, Bologna, Italy; 3. IMEM, CNR, Parma, Italy; 4. Nanoelectronics Group, University of Twente, Enschede, Netherlands*

TUESDAY
AFTERNOON
2:30

PARIS

Session DD
PERMANENT MAGNET MACHINES II

Antero Arkkio, Chair

2:30

DD-01. A novel 'pseudo' direct-drive brushless permanent magnet machine. *K. Atallah¹, J. Rens¹, S. Mezani¹ and D. Howe¹*. *Electronic & Electrical Engineering, The University of Sheffield, Sheffield, United Kingdom*

2:45

DD-02. Design optimization of a single-phase permanent magnet synchronous generator. *J. El Hayek¹, J. Brünisholz² and P. Pittet³*. *1. Industrial Technologies, University of Applied Sciences Western Switzerland, Fribourg, Switzerland; 2. ATPS, ABB, Turgi, Switzerland; 3. Power Service, ALSTOM Ltd, Baden, Switzerland*

3:00

DD-03. An Ultra-High Speed PM Motor for Small Milling Machine Applications. *J. Asama¹, K. Maruyama¹, Y. Yanagihara¹ and A. Chiba¹*. *1. Electrical Engineering, Tokyo University of Science, Noda, Chiba, Japan*

3:15

DD-04. Design and analysis of a novel hybrid excitation synchronous machine with asymmetrically stagger permanent magnet. *Y. Chengfeng¹, L. Heyun¹, G. Jian¹ and Z. Ziqiang²*. *1. School of Electrical Engineering, Southeast University, Nanjing, China; 2. Department of Electronic and Electrical Engineering, University of Sheffield, Sheffield, United Kingdom*

3:30

- DD-05. Novel axial flux permanent magnet synchronous machines with segmented and laminated stator configuration.** *W. Fei¹ and P. Luk¹. Department of Aerospace Power and Sensors, DCMT Cranfield University, Shrivenham, Wiltshire SN6 8LA, United Kingdom*

3:45

- DD-06. Modeling of a linear and rotative permanent magnet actuator.** *G. Krebs¹, A. Tounzi¹, B. Pauwels², D. Willemot² and F. Piriou¹. 1. L2EP-USTL, Villeneuve d'Ascq, France; 2. Psicontrol Mechatronics, Ieper, Belgium*

4:00

- DD-07. Analysis and experimental verification of a single phase, quasi-Halbach magnetised tubular permanent magnet motor with non-ferromagnetic supporting tube.** *J. Wang¹, T. Ibrahim¹ and D. Howe¹. 1. Electronic and Electrical Engineering, University of Sheffield, Sheffield, United Kingdom*

4:15

- DD-08. Optimization of a sea wave energy harvesting electromagnetic device.** *M. Trapanese¹. 1. Dipartimento di Ingegneria Elettrica, Elettronica e delle Telecomunicazioni, University of Palermo, Palermo, Italy*

4:30

- DD-09. Design and characteristic analysis on the short-stator linear synchronous motor for high-speed Maglev propulsion.** *H. Cho¹, H. Sung¹, S. Sung¹, D. You² and S. Jang². 1. Maglev Research Team, Korea Institute of Machinery and Materials, Daejeon, South Korea; 2. Electrical Engineering, Chungnam National University, Daejeon, South Korea*

4:45

- DD-10. Eddy-current stator solid steel back-iron losses in small rotary brushless permanent magnet machines.**
*J.J. Paulides¹, K.J. Meessen¹ and E.A. Lomonova¹.
 Technical university Eindhoven, Eindhoven, Netherlands*

5:00

- DD-11. Experimental Method and Verification to Characterize the Unbalanced Magnetic Force in Electric Motors.** *C. Lee¹ and G. Jang¹. Dept. of Mechanical Engineering, PREM Lab., Hanyang University, Seoul, South Korea*

5:15

- DD-12. Study of an electromagnetic gearbox involving two PM synchronous machines using 3D-FEM.**
M. Aubertin¹, A. Tounzi¹ and Y. Le Ménach¹. L2EP - USTL, Villeneuve d'Ascq, France

**TUESDAY
 AFTERNOON
 2:30**

LONDRES

**Session DE
 SOFT MAGNETIC WIRES**

Kleber Pirota, Chair

2:30

- DE-01. Domain wall propagation in thin magnetic wires.**
(Invited) R. Varga¹, K. Richter¹, A. Zhukov² and V. Larin³. 1. Institute of Physics, Faculty of Sciences, UPJS, Kosice, Slovakia; 2. Dept. Fisica de Materiales, Fac. Quimica, UPV/EHU, San Sebastian, Spain; 3. MFTI, Kishinev, Moldova

3:00

- DE-02. Domain wall propagation in nearly zero magnetostrictive amorphous microwires.** *H. Chiriac¹, T. Óvári¹ and M. Tibu¹. National Institute of Research and Development for Technical Physics, Iasi, Romania*

3:15

- DE-03. Electromagnetic wave absorbing material based on magnetic microwires.** *P. Marín^{1,2}, D. Cortina³ and A. Hernando^{1,2}*. *1. Instituto de Magnetismo Aplicado, Universidad Complutense de Madrid, Las Rozas, Madrid, Spain; 2. Física de Materiales, Universidad Complutense de Madrid, Madrid, Spain; 3. Micromag 2000, S.L., Las Rozas, Spain*

3:30

- DE-04. Experimental determination of relation between helical anisotropy and torsion stress in amorphous magnetic microwires.** *A. Chizhik¹, A. Zhukov¹, J. Blanco², J. Gonzalez¹, P. Gawronski³ and K. Kulakowski³*. *1. Dpto. Física de Materiales, Universidad del País Vasco, San Sebastian, Guipuzcoa, Spain; 2. Departamento Física Aplicada I, EUPDS, Universidad del País Vasco, San Sebastian, Guipuzcoa, Spain; 3. Faculty of Physics & Applied Computer Science, AGH University of Science & Technology, Cracow, Poland*

3:45

- DE-05. Circular magnetoelastic anisotropy induced in the nucleus of FeSiB/CoNi soft-hard biphase microwire.** *J. Torrejón¹, M. García-Hernández¹, G. Infante¹, K.J. Merazzo¹ and G. Badini¹*. *1. Magnetism, ICMM (CSIC), Madrid, Madrid, Spain*

4:00

- DE-06. Temperature behaviour of magnetic anisotropy of nanocrystallized Finemet-based glass-coated microwires.** *V. Dubuget^{1,2}, A. Adenot-Engelvin¹ and F. Bertin¹*. *1. CEA, Monts, France; 2. LEMA, UMR CNRS 6157, TOURS, France*

4:15

- DE-07. Temperature Dependence of the Magnetization Reversal Process and Domain Structure in Fe_{77.5}-xNi_xSi_{7.5}B₁₅ Magnetic Microwires.** J. Olivera^{1,2}, M. Sánchez¹, V.M. Prida¹, R. Varga², V. Zhukova³, A.P. Zhukov³ and B. Hernando¹. *1. Fisica, Universidad de Oviedo, Oviedo, Asturias, Spain; 2. Inst. Physics, Fac. Sci., UPJS, Park Angelinum, Kosice, Slovakia; 3. Dpto. de Física de Materiales, Fac. Químicas, Universidad del País Vasco, San Sebastián, Guipúzcoa, Spain*

4:30

- DE-08. Synthesis and Characterization of Fe/FeOx Core/Shell Nanowires.** J. Lee¹, J. Lee¹, K. Jeon², J. Wu¹, H. Kim¹, J. Lee¹, Y. Suh² and Y. Kim¹. *1. Department of Materials Science and Engineering, Korea University, Seoul, Seoul, South Korea; 2. Fusion Biotechnology Research Center, Korea Research Institute of Chemical Technology, Daejeon, South Korea*

4:45

- DE-09. Structure and Magnetic properties of electrodeposited cobalt nanowires in polycarbonate membrane.** S.r. Vishnubhotla¹, C. Kim¹ and S. Yoon². *1. Chungnam National University, Daejeon, South Korea; 2. Andong National University, Daejeon, South Korea*

5:00

- DE-10. Structural and thermal behaviour of nanocrystalline nanowires.** M.J. Vieyra¹, T. Meydan¹ and F. Borza¹. *1. Cardiff School of Engineering, Wolfson Centre for Magnetism, Cardiff, South Glamorgan, United Kingdom*

5:15

DE-11. Silicon steel wire with low magnetic losses.

T. Yonamine¹, M. Fukuhara¹, N.A. Castro², F.G. Landgraf³ and F.P. Missell^{1,4}. 1. Divisão de Metrologia de Materiais, Instituto Nacional de Metrologia, Normalização e Qualidade Industrial-INMETRO, Duque de Caxias, Rio de Janeiro, Brazil; 2. Instituto de Pesquisas Tecnológicas-IPT, São Paulo, São Paulo, Brazil; 3. Departamento de Metalurgia e Materiais, Escola Politécnica da Universidade de São Paulo - EPUSP, São Paulo, São Paulo, Brazil; 4. Centro de Ciências Exatas e Tecnológicas, Universidade de Caxias do Sul, Caxias do Sul, Rio Grande do Sul, Brazil

**TUESDAY
AFTERNOON
2:30**

BERLIN**Session DF****RECORDING SYSTEMS AND SERVO I**

Aleksandar Kavcic, Chair

2:30

DF-01. A proposed “747” test to establish the areal-density capability of a magnetic recording system based only on data-block failure rate. *Z. Jin¹, M. Salo¹ and R. Wood¹. 1. HDD AdTech, Hitachi GST, San Jose, CA*

2:45

DF-02. Probabilistic Analysis of Off-track Capability for Higher Track Density Disk Drives. *K. Aruga¹, H. Ueno¹, T. Iwase¹ and Y. Ogawa¹. 1. HDD division (E3-333), Fujitsu Limited, Kawasaki, 211-8588, Japan*

3:00

DF-03. Analysis of cross track response using a three dimensional model for Perpendicular Read Heads. *Z. Liu¹, B. Chen¹ and S. Zhang¹. 1. Data Storage Institute, Singapore, Singapore*

3:15

- DF-04. The reliability evaluation of piezoelectric micro actuators with application in hard disk drives.** *Z. He¹, H. Loh² and E. Ong¹*. 1. *A*Star, Data Storage Institute, Singapore, Singapore*; 2. *Mechanical Engineering Department, National University of Singapore, Singapore, Singapore*

3:30

- DF-05. A slider with an integrated microactuator (SLIM) for second stage actuation in hard disc drives.** *H.H. Gatzel¹, P.J. Freitas², E. Obermeier³ and J. Robertson⁴*. 1. *Institute for Microtechnology, Leibniz Universitaet Hannover, Garbsen, Germany*; 2. *INESC-MN, Lisboa, Portugal*; 3. *Microsensor & Actuator Technology, Berlin University of Technology, Berlin, Germany*; 4. *Department of Engineering, University of Cambridge, Cambridge, United Kingdom*

3:45

- DF-06. Integrated electromagnetic second stage micro actuator for a hard disk recording head.** *D. Dinulovic¹, H. Saalfeld¹ and H.H. Gatzel¹*. 1. *Institute for Microtechnology, Leibniz Universitaet Hannover, Garbsen, Germany*

4:00

- DF-07. Characterization of timing based servo signals.** *G. Cherubini¹, R.D. Cideciyan¹, E. Eleftheriou¹ and P.V. Koeppel²*. 1. *IBM Research, Zurich Research Laboratory, Rueschlikon, Switzerland*; 2. *IBM Systems and Technology Group, San Jose, CA*

4:15

- DF-08. Evaluation of printed servo patterns.** *B. Baker¹*. *Redwood Technology, Redwood City, CA*

4:30

- DF-09. Overwrite performance change due to air-flow induced vibration of head stack assembly.** *E. Jang¹ and J. Chang¹*. 1. *HDD R&D, Samsung Information Systems America, San Jose, CA*

4:45

DF-10. Reduced Order Models for Efficient Simulation of Hard Disk Drive Operational Shock Responses.

W. Lin¹, E. Ong¹, J. Mou¹, E. Ong¹ and S. Hu² 1. *Data Storage Institute, Singapore, Singapore;* 2. *Nitto Denko Corporation, Kameyama, Japan*

5:00

DF-11. A Case for Redundant Arrays of Hybrid Disks

(RAHD). *F. Wang¹, N. Helian¹, D. Deng¹, S. Wu¹, C. Liao¹, M. Rashidi¹ and A. Parker²* 1. *Centre for Grid Computing, Cambridge-Cranfield HPCF, Cranfield, United Kingdom;* 2. *Cavendish Laboratory, Cambridge University, Cambridge, United Kingdom*

5:15

DF-12. What is the future of hard disk drive, death or

rebirth? *Y. Deng¹, F. Wang¹ and N. Helian²* 1. *School of Engineering, Cranfield University, Bedfordshire, United Kingdom;* 2. *London Metropolitan University, London, United Kingdom*

TUESDAY
AFTERNOON
2:30

AMSTERDAM**Session DG****LIFE SCIENCES: TECHNIQUES AND INSTRUMENTATION I**

Quentin Pankhurst, Chair

2:30

DG-01. Signal and Power Transmission in Real-time Internal Irradiation Dose Measurement System.

K. Shinohe¹, T. Takura¹, F. Sato¹, H. Matsuki¹, S. Yamada² and T. Sato³ 1. *Graduate School of Engineering, Tohoku University, Sendai, Miyagi, Japan;* 2. *Graduate School of Medicine, Tohoku University, Sendai, Miyagi, Japan;* 3. *NEC Torkin Corp., Sendai, Miyagi, Japan*

2:45

DG-02. Imaging of electric permittivity and conductivity using MRI. *M. Sekino*¹, *S. Tataro*¹ and *H. Ohsaki*¹.
Department of Advanced Energy, Graduate School of Frontier Sciences, The University of Tokyo, Kashiwa, Chiba, Japan

3:00

DG-03. Optimization of coil structure in resonant circuit implant for hyperthermia using MRI. *J. Kunisaki*¹, *M. Shimizu*¹, *K. Kamio*¹, *S. Hiroe*¹, *T. Yamada*¹ and *Y. Takemura*¹.
1. Division of Electrical and Computer Engineering, Yokohama National University, Yokohama, Japan

3:15

DG-04. Calculation of minimum parameters required for low-field low-size nano nuclear magnetic resonance (nanoNMR). *P. Gomez*^{1,2}, *S. Khizroev*² and *D. Litvinov*³.
1. Electrical Engineering, Florida International University, Miami, FL; 2. Electrical Engineering, University of California Riverside, Riverside, CA; 3. Electrical Engineering, University of Texas, Houston, TX

3:30

DG-05. Microwave radiometry for early breast cancer detection. *M.P. Costin*^{1,2} and *O. Baltag*².
1. Computer Science Institute, Romanian Academy, Iasi, Romania; 2. Faculty of Biomedical Engineering, University of Medicine and Pharmacy, IASI, IASI, Romania

3:45

DG-06. Microwave resonator devices for ferromagnetic resonance detection of magnetic beads. *S. Ghionea*¹, *P. Dhagat*¹ and *A. Jander*¹.
1. Department of Electrical Engineering and Computer Science, Oregon State University, Corvallis, OR

4:00

- DG-07. Magnetic Immunoassays – New Methods of Biochemical Diagnostics Based on Detection of Magnetic Nanoparticles by Non-Linear Magnetization.** P. Nikitin¹, P. Vetoshko², M. Nikitin³ and T. Ksenivich¹. *1. Natural Science Center, General Physics Institute, Russian Academy of Sciences, Moscow, Russian Federation; 2. Institute of Radioengineering and Electronics, Russian Academy of Sciences, Moscow, Russian Federation; 3. Department of Molecular & Biological Physics, Moscow Institute of Physics & Technology, Dolgoprudny, Moscow Region, Russian Federation*

4:15

- DG-08. Giant magnetoresistance sensors for lateral flow tests.** C. Marquina¹, J.M. De Teresa¹, J. Sesé², V. Grazú², B. Velasco³, P. Freitas⁴ and R. Ibarra^{1,2}. *1. Instituto de Ciencia de Materiales de Aragon, CSIC-Universidad de Zaragoza, Zaragoza, Spain; 2. Instituto de Nanociencia de Aragon, Universidad de Zaragoza, Zaragoza, Spain; 3. CerTest Biotec, Zaragoza, Spain; 4. INESC, MN, Inst Engrn Sistemas Computadores Microsyst & Nanot, Lisbon, Portugal*

4:30

- DG-09. Magnetic-Entasis Biorecognition Platform: Self Assembly of Magnetic Nanoparticles for Detection of Magnetically Labeled Biomolecules.** Y. Yamamoto¹, T. Yamanaka¹, Y. Morimoto¹, S. Sakamoto³, Y. Mochiduki³, M. Abe⁴, H. Handa³ and A. Sandhu^{1,2}. *1. Quantum Nanoelectronics Research Center, Tokyo Institute of Technology, Tokyo, Japan; 2. Department of Electrical and Electronic Engineering, Tokyo Institute of Technology, Tokyo, Japan; 3. Graduate School of Bioscience and Biotechnology, Tokyo Institute of Technology, Tokyo, Japan; 4. Department of Physical Electronics, Tokyo Institute of Technology, Tokyo, Japan*

4:45

DG-10. Magnetic bar array with linker technology for detection and investigation of non-magnetic molecules. *D. Lee*¹, *L.A. Roberts*², *E. Peroziello*³, *R. Fontana*⁴, *S. Maat*⁴, *M. Nemat-Gorgani*², *S. Hoon*² and *R.L. White*¹. *1. Dept. of Materials Science and Engineering, Stanford University, Stanford, CA; 2. Stanford Genome Technology Center, Stanford University, Stanford, CA; 3. Center for Integrated Systems, Stanford University, Stanford, CA; 4. Hitachi Global Storage Technologies, San Jose, CA*

**TUESDAY
AFTERNOON
2:30**

POLIVALENTE

**Session DL
ULTRATHIN FILMS AND SURFACE
EFFECTS I
(POSTER SESSION)**

Alexandra Mougín, Chair

DL-01. Voltage control of magnetic anisotropy in an ultrathin Fe film. *T. Maruyama*¹, *K. Ohta*¹, *N. Toda*¹, *T. Nozaki*¹, *T. Shinjo*¹, *M. Shiraishi*¹ and *Y. Suzuki*¹. *Engineering science, Osaka university, Toyonaka, Japan*

DL-02. Angular dependence of two magnon scattering in ultrathin ferromagnets. *P. Landeros*¹, *R.E. Arias*² and *D.L. Mills*³. *1. Departamento de Física, Universidad Técnica Federico Santa María, Valparaíso, Valparaíso, Chile; 2. Departamento de Física, Universidad de Chile, Santiago, Chile; 3. Department of Physics and Astronomy, University of California, Irvine, CA*

DL-03. CEMS study of epitaxial $\text{Co}_2\text{Cr}_{0.6}\text{Fe}_{0.4}\text{Al}$ thin films. *V. Ksenofontov*¹, *C. Herbort*², *M. Jourdan*² and *C. Felser*¹. *1. Institute of Inorganic and Analytical Chemistry, Johannes Gutenberg-University Mainz, 55099 Mainz, Germany; 2. Institute of Physics, Johannes Gutenberg - University, 55099 Mainz, Germany*

- DL-04. Morphology-induced oscillations of the electron-spin motion in Fe films on Ag(001).** *L. Tati Bismaths*¹, *L. Joly*², *F. Scheurer*¹ and *W. Weber*¹. *Institut de Physique et Chimie des Matériaux de Strasbourg, Strasbourg, France; 2. Swiss Light Source, Villigen, Switzerland*
- DL-05. Ferromagnetic Resonance of Disordered FePt Thin Films.** *J. Gómez*¹, *M. Vásquez Mansilla*¹ and *A. Butera*¹. *Centro Atómico Bariloche and Instituto Balseiro, Bariloche, Rio Negro, Argentina*
- DL-06. Magnetization processes in ultrathin Co film grown on stepped Si(111) substrate.** *A. Stupakiewicz*^{1,2}, *A. Fleurence*², *A. Maziewski*¹, *T. Maroutian*², *P. Gogol*², *B. Bartenlian*², *R. Mégy*² and *P. Beauvillain*². *University of Bialystok, Bialystok, Poland; 2. Institut d'Electronique Fondamentale, Université Paris XI, CNRS, UMR 8622, Orsay, France*
- DL-07. Effects of Co/Sm composition on the ordered phase formation in Sm-Co thin films grown on Cu(111) single-crystal underlayers.** *Y. Nukaga*¹, *M. Ohtake*¹, *F. Kirino*² and *M. Futamoto*¹. *Faculty of Science and Engineering, Chuo University, Tokyo, Japan; 2. Graduate School of Fine Arts, Tokyo National University of Fine Arts and Music, Tokyo, Japan*
- DL-08. Analysis of the multiferroic properties in BiMnO₃ epitaxial thin films.** *M. Grizalez*^{1,2}, *J.C. Caicedo*² and *P. Prieto*³. *Universidad de la Amazonia, Florencia, Caquetá, Colombia; 2. Universidad del Valle, Cali, Valle del Cauca, Colombia; 3. Centro de Excelencia en Nuevos Materiales, Cali, Valle del Cauca, Colombia*
- DL-09. Electric and magnetic properties of multiferroic BiFeO₃ and YMnO₃ thin films.** *J.A. Zapata*¹, *J. Narvaez*¹, *W. Lopera*¹, *M.H. Gómez*¹ and *P. Prieto*². *Physics, Universidad del Valle, Cali, Valle del Cauca, Colombia; 2. Centro de Exelencia en Nuevos Materiales, Cali, Valle del Cauca, Colombia*
- DL-10. Graphene/Ni(111) system: Spin- and angle-resolved photoemission studies.** *Y.S. Dedkov*¹, *M. Fonin*², *U. Rüdiger*² and *C. Laubschat*¹. *TU Dresden, Dresden, Germany; 2. University of Konstanz, Konstanz, Germany*
- DL-11. Epitaxial growth of SrM(00l) film on Au(111).** *A. Kaewrawang*¹, *G. Ishida*¹, *X. Liu*¹ and *A. Morisako*¹. *Information Engineering, Shinshu University, Nagano, Japan*

- DL-12. Surface characteristics of atomic-level Co-Cu thin film system : Molecular dynamics simulation.** B. Kim¹, K. Chae¹ and Y. Chung¹. *Department of Materials Science and Engineering, Hanyang University, Seoul, South Korea*
- DL-13. Measurement of interface pinning at a metallic ferromagnetic thin film interface using inductive magnetometry.** K.J. Kennewell¹, M. Ali², M. Kostylev¹, D. Greig², B.J. Hickey² and R.L. Stamps¹. *1. School of Physics, University of Western Australia, Crawley, WA, Australia; 2. Department of Physics & Astronomy, University of Leeds, Leeds, United Kingdom*
- DL-14. Study of the magnetic properties of MnAs thin films as a function of the film thickness.** J. Milano^{1,2}, L.B. Steren^{1,2}, A. Repetto Llamazares², V. Garcia³, M. Marangolo³, M. Eddrief³ and V.H. Etgens³. *1. CNEA-CONICET, San Carlos de Bariloche, Río Negro, Argentina; 2. Instituto Balseiro, UNCuyo, San Carlos de Bariloche, Río Negro, Argentina; 3. Institut des NanoSciences de Paris, INSP, Université Pierre et Marie Curie-Paris 6, Université Denis Diderot-Paris 7, CNRS UMR 7588, Paris, France*
- DL-15. Fe-doping Effect on Morphologic and Magnetotransport Properties of La_{2/3}Ca_{1/3}Fe_{1-y}MnyO₃ thin films.** O.L. Arnache Olmos¹, A. Hoffmann², D.A. Giratá¹ and M.E. Gomez³. *1. Instituto de Física, Universidad de Antioquia, Medellín, Antioquia, Colombia; 2. Materials Science Division, Argonne National Laboratory, Argonne, IL; 3. Department of Physics, Universidad del Valle, Cali, Valle, Colombia*

TUESDAY
AFTERNOON
2:30

POLIVALENTE

Session DM
ULTRATHIN FILMS AND SURFACE
EFFECTS II
(POSTER SESSION)

Juergen Fassbender, Chair

- DM-01. A study on surface magneto-optical Kerr effect of ultra thin Fe films on various GaAs substrates.** *W. Guan¹, T. Shen¹ and G. Jones¹*. *Joule Physics Laboratory, University of Salford, Salford, United Kingdom*
- DM-02. Composite oxide buffer layers for (002) Fe/MgO/Fe magnetic tunneling junctions.** *H. Huang¹, P. Huang¹ and C. Lai¹*. *Department of Materials Science and Engineering, National Tsing Hua University, Hsinchu, Taiwan*
- DM-03. Stripe magnetic domains in sputtered permalloy films.** *D. Hrabovský¹, M. Rubio-Roy², J. Caicedo-Roque¹, E. Bertan² and J. Fontcuberta¹*. *ICMAB - CSIC, Bellaterra, Spain; 2. FAO, University of Barcelona, Barcelona, Spain*
- DM-04. Influence of capping layers on magnetic anisotropy in Fe/MgO/GaAs(100) ultrathin films.** *P. Wong¹, W. Zhang¹, Y. Xu¹, Y. Fu², Z. Huang², Y. Zhai², Y. Xu³, H. Zhai³ and S.M. Thompson⁴*. *Spintronics and Nanodevice Laboratory, Department of Electronics, University of York, York, United Kingdom; 2. Department of Physics, Southeast University, Nanjing, China; 3. Center for Materials Analysis, Nanjing University, Nanjing, China; 4. Department of Physics, University of York, York, United Kingdom*
- DM-05. Calculation of resonant standing spin wave mode response induced by a coplanar stripline.** *K.J. Kennewell¹, M. Kostylev¹ and R.L. Stamps¹*. *School of Physics, University of Western Australia, Crawley, WA, Australia*

- DM-06. Ga⁺ ion irradiation-induced out-of-plane magnetization in Pt/Co(3nm)/Pt films.**
J. Jaworowicz^{1,2}, *M. Kisielewski*^{1,2}, *A. Maziewski*^{1,2},
*I. Sveklo*¹, *J. Jamet*¹, *J. Ferré*¹, *. Mougín*¹, *N. Vernier*¹
 and *J. Fassbender*³. *1. Laboratoire de Physique des Solides, Orsay, France; 2. Laboratory of Magnetism, University of Bialystok, Bialystok, Poland; 3. Institute of Ion Beam Physics and Materials Research, Forschungszentrum Dresden-Rossendorf, Dresden, Germany*
- DM-07. Intermixing and spin-pumping effects on Gilbert damping of CoFeB.** *S. Huang*¹, *C. Wang*¹, *J. Song*¹,
*C. Lai*¹, *W. Chen*², *S. Yang*², *K. Shen*² and *H. Bor*³.
1. Department of Materials Science and Engineering, National Tsing Hua University, Hsinchu, Taiwan; 2. Electronics Research and Service Organization, Industrial Technology Research Institute, Hsinchu, Taiwan; 3. Materials and Electro-Optics Research Division, Chuang-Shan institute of Science and Technology, Taoyoun, Taiwan
- DM-08. FMR Studies of Ga_{1-x}Mn_xAs thin layers with x>0.1.**
*K. Khazen*¹, *M. Cubukcu*¹, *H. von Bardeleben*¹,
*J. Cantin*¹, *S. Ohya*^{2,3}, *K. Ohno*² and *M. Tanaka*².
1. Institut des NanoSciences de Paris(INSP)Université-Paris 6, UMR 7588 au CNRS, Paris, Ile de France, France; 2. Electronic Engineering, The University of Tokyo, Tokyo, Japan; 3. Japan Science and Technology Agency, Kawaguchi-shi, Saitama, Japan
- DM-09. Large scale surface magnetic domains in magnetite thin films studied by spin-polarized scanning electron microscopy.** *E. Kaji*¹, *A. Subagyo*¹ and
*K. Sueoka*¹. *1. Graduate School of Information Science and Technology, Hokkaido University, Sapporo, Japan*
- DM-10. Determination of the Gilbert damping factor in Ga_{0.93}Mn_{0.07}As/GaAs Thin Layers.** *K. Khazen*¹,
*M. Cubukcu*¹, *H. von Bardeleben*¹, *J. Cantin*¹,
*V. Novak*², *K. Olejnik*² and *M. Cukr*². *1. Institut des NanoSciences de Paris(INSP)Université- Paris 6, UMR 7588 au CNRS, Paris, Ile de France, France; 2. Institute of Physics AS CR, Praha, Czech Republic*
- DM-11. Experimental evidence for bulk and interfacial contributions to static and dynamic properties of Py/AlS₂/S₂S₃.** *C. Le Graet*¹, *D.T. Dekadjevi*¹,
*S. Pogossian*¹, *D. Spenato*¹ and *J. Ben Youssef*¹.
1. Physics, LMB/UBO/CNRS, Brest, Bretagne, France

- DM-12. Asymmetry of polycrystalline Fe thin films showing bcc (110) growth orientation on glass substrates using second-harmonic generation.** *F. Lee*¹, *J. Jeong*¹, *H. Lee*¹, *K. Lee*¹, *J. Kim*¹ and *S. Shin*¹. *1. department of Physics, Korea Advanced Institute of Science, Daejeon, South Korea*
- DM-13. Transition to antiferromagnetic interlayer coupling at the Cu spacer thickness of 2 nm in bottom spin valve films with Co_{1-x}Fe_x/Cr-NOL.** *K. Sawada*¹, *K. Futatsukawa*¹, *M. Doi*¹, *N. Hasegawa*² and *M. Sahashi*¹. *1. Tohoku university, Sendai, Japan; 2. ALPS electric corporation, Niigata, Japan*
- DM-14. The Effect of CoFe Surface Pre-Oxidation on Magnetic Tunnel Junctions.** *P. Pong*¹ and *W.F. Egelhoff*¹. *1. Magnetic Materials Group, National Institute of Standards and Technology, Gaithersburg, MD*

**TUESDAY
AFTERNOON
2:30**

POLIVALENTE

**Session DN
MAGNETIC MICROSCOPY II
(POSTER SESSION)**

Manfred Rührig, Chair

- DN-01. Time-resolved magnetization dynamics in magnetic microstructures.** *D. Bayer*¹, *J. Miguel*², *J. Sanchez-Barriga*³, *J. Kurde*², *M. Piantek*², *F. Kronast*³, *M. Cinchetti*¹, *B. Heitkamp*³, *H. Dürr*³, *W. Kuch*² and *M. Aeschlimann*¹. *1. University of Kaiserslautern, Kaiserslautern, Germany; 2. Freie Universität Berlin, Berlin, Germany; 3. BESSY GmbH, Berlin, Germany*
- DN-02. Anisotropic x-ray magnetic linear dichroism at Fe, Co and Ni L edges: Interfacial coupling revisited.** *G. van der Laan*¹ and *E. Arenholz*². *1. Diamond Light Source, Didcot, Oxfordshire, United Kingdom; 2. ALS, Berkeley, CA*
- DN-03. Topological hysteresis in superconductors and ferromagnets.** *R. Prozorov*^{2,1} and *P.C. Canfield*^{2,1}. *1. Physics and Astronomy, Iowa State University, Ames, IA; 2. Ames Laboratory, Ames, IA*

- DN-04. Avalanches through windows: multiscale visualization in magnetic thin films.** *G. Durin*¹, *A. Magni*¹, *S. Zapperi*^{2,3} and *J.P. Sethna*⁴*1. Istituto Nazionale di Ricerca Metrologica, Torino, Italy; 2. Dep.of Physics, University of Modena and Reggio Emilia, CNR-INFN National Center on nanoStructures and bioSystems at Surfaces (S3), Modena, Italy; 3. ISI foundation, Torino, Italy; 4. Physics Department, LASSP, Cornell University, Ithaca, NY*
- DN-05. Direct observation on a systematic change of the magnetic domain structure with temperature in 50 nm-MnAs/GaAs(001).** *J. Kim*¹, *Y. Lee*¹, *K. Ryu*², *S. Shin*² and *H. Akinaga*³*1. Quantum Photonic Science Research Center and BK21 Program Division of Advanced Research and Education in Physics, Hanyang University, Seoul, South Korea; 2. Department of Physics and Center for Nanospinics of Spintronic Materials, Korea Advanced Institute of Science and Technology, Daejeon, South Korea; 3. Nanotechnology Research Institute, National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan*
- DN-06. Magnetic domain structure coupled with temperature and applied voltage in multiferroic Bi_{0.7}Dy_{0.3}FeO₃ thin films.** *V.R. Palkar*¹, *P. Kovur*¹, *S.P. Dattagupta*¹ and *S. Bhattacharya*²*1. Electrical Engineering, Indian Institute of Technology Bombay, Mumbai, Maharashtra, India; 2. Condensed Matter Physics, Tata Institute of Fundamental Research, Mumbai, Maharashtra, India*
- DN-07. A detailed magnetization reversal in a single Ni-Fe elliptical dot with several dot sizes.** *Y. Endo*¹, *H. Fujimoto*², *R. Nakatani*^{2,3} and *M. Yamamoto*²*1. Dept. of Electrical and Communication Engineering, Tohoku University, Sendai, Japan; 2. Dept. of Materials Science and Engineering, Osaka University, Suita, Japan; 3. Center for Atomic and Molecular Technologies, Osaka University, Suita, Japan*
- DN-08. High-resolution MFM imaging of in-plane magnetic field using transient oscillation.** *H. Saito*¹, *G. Egawa*¹, *S. Ishio*¹ and *G. Li*²*1. Faculty of Engineering and Resource Science, Akita University, Akita, Japan; 2. School of Physics Science & Technology, Southwest University, Chongqing, China*
- DN-09. Characterization of coercivity of magnetic force microscopy probes.** *M. Jaafar*¹, *A. Jacas*¹, *W. Rosa*¹ and *A. Asenjo*¹*1. Instituto de Ciencia de Materiales de Madrid, ICMM-CSIC, Madrid, Spain*

- DN-10. Calibration of MFM probe tips for measurements in external in-plane magnetic fields.** *A. Ehresmann¹, T. Weis¹, D. Engel¹, V. Höink², J. Schmalhorst² and G. Reiss²*. *Institute of Physics and Centre for Interdisciplinary Nanostructure Science and Technology (CINSA-T), University of Kassel, Kassel, Germany; 2. Thin Films and Nanostructures, Department of Physics, University of Bielefeld, Bielefeld, Germany*
- DN-11. An experimental investigation of the magnetically active volume in a magnetic force microscopy tip.** *N.E. Mateen¹, M. Gibbs¹ and M. Rainforth¹*. *Department of Engineering Materials, University of Sheffield, Sheffield, United Kingdom*
- DN-12. Plateau probes to enhance the capabilities of magnetic force microscopy.** *N. Amos¹, R. Ikkawi¹, R. Fernandez¹, A. Lavrenov¹, A. Krichevsky¹, D. Litvinov² and S. Khizroev¹*. *Electrical Engineering, University of California, Riverside, Riverside, CA; 2. Center for Nanomagnetic Systems, University of Houston, Houston, TX*
- DN-13. Fabrication of Magnetic Force Microscopy Tips via Electrodeposition and Focused Ion Beam Milling.** *O. Cespedes¹, A. Luu¹, F.F. Rhen¹ and J.D. Coey¹*. *Physics Department, Trinity College Dublin, Dublin, Ireland*
- DN-14. Contact Mode Scanning Hall Probe Microscopy.** *T. Ohashi¹, H. Osawa¹ and A. Sandhu^{1,2}*. *Quantum Nanoelectronics Research Center, Tokyo Institute of Technology, Tokyo, Japan; 2. Electrical and Electronic Engineering, Tokyo Institute of Technology, Tokyo, Japan*
- DN-15. Variable Temperature-Scanning Hall Probe Microscopy (VT-SHPM) with GaN/AlGaN Two-Dimensional Electron Gas (2DEG) Micro Hall Sensors in 4-400K range, Using Novel Quartz Tuning Fork AFM Feedback.** *R. Akram¹, M. Dede¹ and A. Oral¹*. *Department of Physics, Bilkent University, 06800, Ankara, Turkey*

TUESDAY
AFTERNOON
2:30

POLIVALENTE

Session DO
MAGNETO-OPTIC MATERIALS AND
DEVICES
(POSTER SESSION)

Jaroslav Hamrle, Chair

- DO-01. Optical reading from videotapes using magnetic garnet film.** *M. Kishida*¹, *N. Hayashi*¹, *K. Iwasaki*², *H. Umezawa*² and *T. Nomura*³ *1. Science and Technical Research Laboratories, NHK (Japan Broadcasting corporation), Tokyo, Japan; 2. Research & Development Division, FDK Corporation, Sizuoka, Japan; 3. Department of Electrical, Electronics and Information Engineering, Shizuoka Institute of Science and Technology, Sizuoka, Japan*
- DO-02. The influence of the implantation on the magneto-optical properties of (YBiCaSmLu)₃(FeGeSi)₅O₁₂ surface.** *L. Kalandadze*¹ *1. Batumi State University, Batumi, Georgia*
- DO-03. On System Optimization for Magneto-Optic Switching: Material Considerations.** *S. Kemmet*¹, *M. Mina*¹ and *R.J. Weber*¹ *1. Electrical and Computer Engineering, Iowa State University, Ames, IA*
- DO-04. Practical magneto-optic spatial light modulator with single magnetic domain pixels.** *K. Iwasaki*¹, *H. Mochizuki*¹, *H. Umezawa*¹ and *M. Inoue*² *1. Research and Development Division, FDK CORPORATION, 2281 Washizu, Kosai-Shi, Shizuoka, Japan; 2. Toyohashi University of Technology, 1-1 Hibarigaoka, Tennpakucho, Toyohashi-shi, Aichi, Japan*
- DO-05. Enhanced magneto-optics in magnetic nanostructures, magnetophotonic crystals and semiconductors.** *A. Granovsky*¹, *E. Ganshina*¹, *N. Perov*¹, *A. Vinogradov*², *A. Orlov*³, *Y. Kalinin*⁴, *A. Khanikaev*⁵ and *M. Inoue*⁵ *1. Faculty of Physics, Moscow State University, Moscow, Russian Federation; 2. Institute for Theoretical and Applied Electromagnetics, Moscow, Russian Federation; 3. State Research Institute for the Rare-Metal Industry, Moscow, Russian Federation; 4. Department of Solid State Physics, Voronezh State Technical University, Voronezh, Russian Federation; 5. Department of Electrical and Electronic Engineering, Toyohashi University of Technology, Toyohashi, Japan*

- DO-06. Temperature properties of magneto-optic film and the non-destructive testing of a paramagnetic specimen.** J. Lee¹ and R. Wang². *1. Department of Information and Communication Engineering, Chosun University, Gwangju, South Korea; 2. Department of Information and Communication Engineering, Graduate School of Chosun University, Gwangju, South Korea*
- DO-07. Enhanced magneto-optical diffraction by gyrotropic gratings.** Y. Lu¹, M. Cho¹, J. Kim¹, G. Lee¹, Y. Lee¹ and J. Rhee². *1. Quantum Photonic Science Research Center and BK21 Program Division of Advanced Research and Education in Physics, Hanyang University, Seoul, South Korea; 2. BK21 Physics Research Division and Department of Physics, Sungkyunkwan University, Suwon, South Korea*
- DO-08. Surface plasmon resonance effects in the magneto-optical activity of Ag/Co/Ag trilayers.** E. Ferreiro¹, X. Bendaña¹, J. González-Díaz¹, A. García-Martín¹, J. García-Martín¹, G. Armelles¹, A. Cebollada¹, D. Meneses² and E. Muñoz-Sandoval². *1. Instituto de Microelectrónica de Madrid, IMM (CNM-CSIC), Tres Cantos, Spain; 2. Advanced Materials Department, IPICYT, San Luis Potosí, Mexico*
- DO-09. Magneto-optical properties of wider gap magnetic semiconductor ZnMnTe and ZnMnSe films.** M. Imamura¹, A. Okada² and H. Higuchi¹. *1. Fukuoka Inst. of Tech., Fukuoka, Japan; 2. Mitsubishi Electric Corp., Amagasaki, Japan*
- DO-10. Magnonic crystals-theory, experiment, parametric processes.** S.A. Nikitov¹, S. Bankov¹, Y. Filimonov¹, A. Kozhevnikov¹ and S. Vysotsky¹. *1. IRE, RAS, Moscow, Russian Federation*
- DO-11. Enhanced magneto-optical activity in au/co/au nanodisks with localized surface plasmon resonances.** J.B. Gonzalez-Diaz¹, G. Armelles¹, A. García-Martín¹, A. Cebollada¹, J.M. García-Martín¹, B. Sepúlveda^{2,1}, M. Käll² and L. Balcells³. *1. Instituto de Microelectrónica de Madrid, IMM (CNM-CSIC), Tres Cantos, Spain; 2. Chalmers University of Technology, Göteborg, Sweden; 3. Institut de Ciència de Materials de Barcelona, Bellaterra, Spain*
- DO-12. Magnetic inverse opals.** D. Hrabovsky¹, E. Taboada¹, M. Lopez², J. Fontcuberta¹, C. Lopez² and A. Roig¹. *1. Institut de Ciència de Materials de Barcelona (CMAB-CSIC), Bellaterra, Spain; 2. Instituto de Ciencia de Materiales de Madrid (ICMM-CSIC), Madrid, Spain*

- DO-13. Controllability of growth-induced anisotropy of thin garnet films grown on (210)-oriented substrates.** S. Tkachuk¹, D. Bowen¹, C. Krafft² and I.D. Mayergoyz^{1,3}. *1. Electrical and Computer Engineering, University of Maryland, College Park, MD; 2. Laboratory for Physical Sciences, College Park, MD; 3. UMIACS, University of Maryland, College Park, MD*
- DO-14. Adjustable Faraday rotation by using one dimensional magnetophotonic crystals.** M. Hamidi¹, A. Bananej³, M. Tehranchi^{1,2} and M. Ghanaat Shoar¹. *1. laser and plasma resurch institute, Shahid Beheshti University, Tehran, Iran; 2. physics department, Shahid Beheshti University, Tehran, Iran; 3. Laser and Optics Research School, Tehran, Iran*
- DO-15. Optical Tamm states in 1D magnetophotonic crystals.** T. Goto¹, A. Baryshev^{1,4}, M. Inoue¹, A. Merzlikin², A. Vinogradov² and A. Granovsky³. *1. Toyohashi University of Technology, Toyohashi, Japan; 2. Institute for Theoretical and Applied Electromagnetics, Moscow, Russian Federation; 3. Moscow State University, Moscow, Russian Federation; 4. Ioffe Physico-Technical Institute, St. Petersburg, Russian Federation*
- DO-16. Magneto-plasmonic nanostructures: a way to control surface plasmon excitation for Biosensor application.** D. Regatos¹, A. Calle², A. Cebollada², L. Lechuga¹ and A. Armelles². *1. Nanobiosensor and Molecular nanobiophysics Group, Research Center on Nanoscience and Nanotechnology (CIN2: CSIC-ICN), Bellaterra, Barcelona, Spain; 2. Microelectronics Institute of Madrid (IMM-CNM), Tres Cantos, Madrid, Spain*
- DO-17. Layered bismuth iron garnet films for magneto-optical applications.** M. Kucera¹ and R. Gerber². *1. Faculty Math. & Physics, Charles University, Prague, Czech Republic; 2. School of Sciences, Salford University, Salford, United Kingdom*

TUESDAY
AFTERNOON
2:30

POLIVALENTE

Session DP
SPIN TORQUE OSCILLATORS - II
(POSTER SESSION)
Jean-Eric Wegrowe, Chair

- DP-01. Thermal properties of Spin Torque Oscillators: Singularity in Effective Energy.** *P.B. Visscher¹ and S. Wang¹*. *Department of Physics and MINT Center, University of Alabama, Tuscaloosa, AL*
- DP-02. Spin torque induced RF-oscillations of the magnetic end domains in CoFeB/MgO/CoFeB nanopillars under subthreshold currents.** *S. Cornelissen^{1,3}, M. van Kampen¹, G. Hrkac², T. Schreffl² and L. Lagae¹*. *NEXTNS, IMEC, Heverlee (Leuven), Belgium; 2. Department of Engineering Materials, University of Sheffield, Sheffield, United Kingdom; 3. EHSAT, K.U.Leuven, Leuven, Belgium*
- DP-03. Experimental Study of Current-Driven Spin-Wave Excitations in GMR Nanopillars.** *Q. Mistral¹, J. Kim¹, T. Devolder¹, P. Crozat¹, C. Chappert¹, J. Katine², M. Carey² and K. Ito³*. *1. Institut d'Electronique Fondamentale, CNRS / Univ. Paris Sud, Orsay, France; 2. Hitachi Global Storage Technologies, San Jose, CA; 3. Advanced Research Laboratory, Hitachi, Tokyo, Japan*
- DP-04. Influence Of The Spin Current Polarization And Direction On The Current-Excited Spin Waves In A Nanopillar Spin Valve: A Micromagnetic Study.** *A.V. Khvalkovskiy^{1,2}, B. Georges¹, J. Grollier¹, Y.V. Gorbunov³, K.A. Zvezdin², V. Cros¹, H. Jaffres¹ and A. Fert¹*. *1. Unité Mixte de Physique CNRS/Thales, Palaiseau, France; 2. A.M. Prokhorov General Physics Institute of RAS, Moscow, Russian Federation; 3. Institute of Microtechnology – Spin MT Ltd., Moscow, Russian Federation*
- DP-05. Angular dependence of generation linewidth of in-plane-magnetized anisotropic spin-torque oscillator.** *V. Tyberkevych¹ and A. Slavin¹*. *Department of Physics, Oakland University, Rochester, MI*

- DP-06. Mutual phase-locking of two spin-torque oscillators: Influence of time delay of a coupling signal.** O. Prokopenko¹, V. Tyberkevych² and A. Slavin²¹. *Faculty of Radiophysics, Kiev National Taras Shevchenko University, Kiev, Ukraine; 2. Department of Physics, Oakland University, Rochester, MI*
- DP-07. Influence of the Demagnetizing Field in Spin Dynamics with A Perpendicular-to-Plane Polarizer.** C. Jui-Hang¹ and C. Ching-Ray¹¹. *Department of Physics, National Taiwan University, Taipei, Taiwan*
- DP-08. Investigation of spin-wave radiation and current controlled three-magnon-scattering in spin-torque nanocontact devices.** H. Schultheiss¹, X. Janssens², M. van Kampen², S. Cornelissen², F. Ciubotaru¹, A. Laraoui¹, B. Leven¹, A.N. Slavin³, L. Lagae² and B. Hillebrands¹¹. *Fachbereich Physik and Forschungsschwerpunkt MINAS, TU Kaiserslautern, Kaiserslautern, Germany; 2. IMEC, Leuven, Belgium; 3. Oakland University, Rochester, MI*
- DP-09. Mutual phase-locking in high frequency microwave nanooscillators as function of field angle.** G. Hrkac¹, T. Schrefl¹, S. Bance¹, A. Goncharov¹, J. Dean¹, D. Allwood¹, D. Suess² and J. Fidler²¹. *University of Sheffield, Sheffield, United Kingdom; 2. Vienna University of Technology, Vienna, Austria*
- DP-10. Non-stationary analysis of large magnetization dynamics in nanoscale spin-valves.** G. Finocchio¹, L. Torres², M. Carpentieri¹, G. Consolo¹ and B. Azzerboni¹¹. *University of Messina, Messina, Italy; 2. Universidad de Salamanca, Salamanca, Spain*
- DP-11. Magnetic Vortex Oscillators driven by Spin-Polarized Current and Perpendicular Anisotropy at Zero-Field.** V. Puliafito¹, B. Azzerboni¹, G. Consolo¹, G. Finocchio¹, L. Torres² and L. Lopez-Diaz²¹. *Dipartimento di Fisica della Materia e Tecnologie Fische Avanzate, University of Messina, Messina, Italy; 2. Departamento de Fisica Aplicada, University of Salamanca, Salamanca, Spain*
- DP-12. Linear and Nonlinear Frequency Modulation of Nanocontact Spin-Transfer Oscillators: A Micromagnetic Study.** G. Consolo¹, V. Puliafito¹, L. Lopez-Diaz² and B. Azzerboni¹¹. *Dipartimento di Fisica della Materia e Tecnologie Fische Avanzate, University of Messina, Messina, Italy; 2. Departamento de Fisica Aplicada, University of Salamanca, Salamanca, Spain*

- DP-13. Intrinsic Capacitance Effect on Microwave Power Spectra of Spin-Torque Oscillator with Thermal Noise.** *B. Guan*¹, *Y. Zhou*², *F. Shin*¹ and *J. Åkerman*²*1. Applied Physics, The Hong Kong Polytechnic University, Hong Kong, China; 2. Institute of Microelectronics and Information Technology, Royal Institute of Technology, Stockholm-Kista, Sweden*
- DP-14. Spin torque oscillator phase locking to a noisy alternating current.** *E. Iacocca*¹, *Y. Zhou*¹, *J. Persson*¹ and *. Johan*¹*1. Institute of Microelectronics and Information Technology, Royal Institute of Technology, Stockholm-Kista, Sweden*
- DP-15. Point contact Spin Torque Oscillators at high magnetic fields: Non-monotonic field dependence of oscillation threshold current.** *S. Bonetti*¹, *J. Garcia*¹, *J. Persson*¹, *F.B. Mancoff*² and *J. Åkerman*¹*1. Microelectronics and Applied Physics, Royal Institute of Technology (KTH), Kista-Stockholm, Sweden; 2. Technology Solutions Organization, Freescale Semiconductor Inc., Chandler, AZ*
- DP-16. Time-dependent locking between a spin torque oscillator and an ac current.** *Y. Zhou*¹, *J. Persson*¹ and *J. Åkerman*¹*1. Institute of Microelectronics and Information Technology, Royal Institute of Technology, Stockholm, Sweden*

**TUESDAY
AFTERNOON
2:30**

POLIVALENTE

**Session DQ
LIFE SCIENCE AND APPLICATIONS-I
(POSTER SESSION)**

Weilie Zhou, Chair

- DQ-01. Estimation method on multiple sources of MEG based on columnar structure of the cerebral cortex.** *(Invited) H. Fukuda*¹, *M. Odagaki*¹, *O. Hiwaki*¹, *A. Kodabashi*² and *T. Fujimoto*²*1. Graduate School of Information Sciences, Hiroshima City University, Hiroshima, Japan; 2. Fujimoto Hayasuzu Hospital, Miyakonojo, Japan*

- DQ-02. Stochastic resonance in phase synchronization of auditory steady state responses in MEG.** *K. Tanaka*¹, *M. Kawakatsu*² and *I. Nemoto*^{1,2}. *1. Research Center for Advanced Technologies, Tokyo Denki University, Inzai, Chiba, Japan; 2. School of Information Environment, Tokyo Denki University, Inzai, Chiba, Japan*
- DQ-03. Preparation, Characterization and Testing of Magnetic Carriers for Arsenic Removal from Water.** *A.M. Estevez*¹, *J.M. Rodriguez*¹, *A. Alvaro*¹ and *P.A. Augusto*^{2,1}. *1. Department of Chemical Engineering, University of Salamanca, Salamanca, Castilla y Leon, Spain; 2. DEQ, Faculdade de Engenharia da Universidade do Porto, Porto, Portugal*
- DQ-04. Synthesis of superparamagnetic nanoparticles by non conventional routes and their feasible application as contrast agents.** *R. Costo*¹, *A.G. Roca*¹, *M. Morales*¹ and *S. Veintemillas-Verdaguer*¹. *Materiales Particulados, Instituto de Ciencia de Materiales de Madrid, Madrid, Madrid, Spain*
- DQ-05. Magnetic properties of iron oxyhydroxynitrate nanoparticles.** *N.J. Silva*¹, *V.S. Amaral*², *L.D. Carlos*², *A. Millán*¹, *F. Palacio*¹, *B. Rodríguez-González*³, *L.M. Liz-Marzán*³, *T. Berquó*⁴, *F. Fauth*⁵ and *V. de Zea Bermudez*⁶. *1. Física de la Materia Condensada, Instituto de Ciencia de Materiales de Aragón, CSIC/Universidad de Zaragoza, Zaragoza, Spain; 2. Departamento de Física and CICECO, Universidade de Aveiro, Aveiro, Portugal; 3. Departamento de Química Física, Universidad de Vigo, Vigo, Spain; 4. Institute for Rock Magnetism, University of Minnesota, Minneapolis, MN; 5. LLS, BM16-ESRF, Grenoble, France; 6. Departamento de Química, Universidade de Trás-os-Montes e Alto Douro and CQ-VR, Vila Real, Portugal*
- DQ-06. Biosorption of Cu(II) ions by magnetically labeled yeast.** *S.V. Gorobets*¹, *V.V. Lizunov*¹ and *I.V. Dem'yanenko*¹. *National Technical University of Ukraine "Kyiv Polytechnic Institute", Kyiv, Ukraine*
- DQ-07. COATING of cobalt ferrite nanoparticles with silica for an in-vitro gmr biosensor agent.** *S. Tang*¹, *S. Bae*¹ and *W. Lee*². *1. Electrical and Computer Engineering, Biomagnetics Laboratory (BML), National University of Singapore, Singapore 117576, Singapore, Singapore; 2. Dept of Physics, Sookmyung Women's University, Seoul 140-742, Seoul, Seoul, South Korea*

- DQ-08. Effect of Metallic-coating Thickness of Thermosensitive Magnetic Powder for Cancer Therapy.** *T. Takura*¹, *F. Sato*¹, *H. Matsuki*¹ and *T. Sato*²*1. Dept. of Electrical and Communication Engineering, Graduate School of Engineering, Tohoku University, Sendai, Miyagi, Japan; 2. NEC Tokin Corp., Sendai, Japan*
- DQ-09. Fe Oxide Nanoparticles produced by laser pyrolysis for biomedical applications.** *V. Bouzas*¹, *R. Costo*², *M. García*¹, *M. Morales*² and *S. Veintemillas-Verdaguer*²*1. Dpt. Material Science, Universidad Complutense de Madrid, Madrid, Madrid, Spain; 2. Institute of Materials Science, CSIC, Madrid, Madrid, Spain*
- DQ-10. Magnetic properties and potential biomedical applications of CM-CL-SPIONs.** *M. Lin*¹, *J. Gu*¹, *T. Veres*³, *J. Dobson*¹, *H. Lee*², *M. Muhammed*⁴ and *D. Kim*¹*1. Institute of Science and Technology in Medicine, Keele University, Stoke-on-Trent, United Kingdom; 2. Department of Materials Science and Engineering, Myongji University, Kyunggi-do, South Korea; 3. Industrial Materials Institute, National Research Council Canada, Boucherville, QC, Canada; 4. Materials Chemistry Division, Royal Institute of Technology, Stockholm, Sweden*

TUESDAY
AFTERNOON
2:30

POLIVALENTE

Session DR
MAGNETIC ELEMENTS AND ANTIDOT
ARRAYS
(POSTER SESSION)

Feng Luo, Chair

- DR-01. Controlling vortex chirality in magnetic submicron dots by modulating the magnetic properties in lateral direction.** *Z. Zhong*¹, *H. Zhang*¹, *X. Tang*¹, *Y. Jing*¹, *L. Jia*¹ and *L. Zhang*¹*1. State Key Laboratory of Electronic Thin Films and Integrated Devices, University of Electronic Science and Technology of China, Chengdu, Sichuan, China*

- DR-02. Helical states in multilayer nanomagnets.** *V. Mironov*¹, *A. Fraerman*¹, *B. Gribkov*¹, *S. Gusev*¹, *S. Vdovichev*¹, *B. Hjorvarsson*² and *H. Zabel*³ *1. Institute for physics of microstructures RAS, Nizhny Novgorod, Russian Federation; 2. Uppsala University, Uppsala, Sweden; 3. Ruhr-University, Bochum, Germany*
- DR-03. Double vortex interaction of micron-sized elliptical Py element studied by real-time Kerr microscopy.** *B. Hong*¹, *J. Bland*¹ and *J. Jeong*^{1,2} *1. Cavendish Laboratory, Cambridge University, Cambridge, United Kingdom; 2. Department of Materials Science and Engineering, Chungnam National University, Daejeon, South Korea*
- DR-04. Evolution of mixed states composed of vortex cores and anti-vortex cores in different helicities under external field.** *Z. Wei*¹, *M. Lai*¹, *C. Lee*¹, *Z. San*¹, *Y. Hsieh*¹ and *T. Ho*¹ *1. National Tsing Hua University, Hsinchu, Taiwan*
- DR-05. Effect on the dipole-dipole interaction between adjacent dots in Ni-Fe elliptical dot arrays.** *Y. Endo*¹, *H. Fujimoto*², *Y. Kawamura*², *R. Nakatani*^{2,3} and *M. Yamamoto*² *1. Dept. of Electrical and Communication Engineering, Tohoku University, Sendai, Japan; 2. Dept. of Materials Science and Engineering, Osaka University, Suita, Japan; 3. Center for Atomic and Molecular Technologies, Osaka University, Suita, Japan*
- DR-06. The effect of dipolar interaction on the magnetization reversal of nano-patterned permalloy dots array.** *Y. Tsai*¹, *C. Chang*¹, *J. Wang*¹, *J. Wu*¹ and *L. Horng*¹ *1. Taiwan SPIN Research Center, National Changhua University of Education, Changhua, Taiwan*
- DR-07. Interaction in soft magnetic bilayers nanoscale arrays.** *J.E. Davies*², *L.H. Bennett*^{1,2}, *E. Della Torre*^{1,2}, *B.C. Choi*³, *S.N. Piramanayagam*⁴ and *E. Girgis*⁵ *1. George Washington University, Washington, DC; 2. National Institute of Standards and Technology, Gaithersburg, MD; 3. University of Victoria, Victoria, BC, Canada; 4. Data Storage Institute, Singapore, 117 608, Singapore; 5. National Research Center, Dokki, Giza, Egypt*

- DR-08. Magnetic imaging and angle-resolved magnetoresistance behaviour of micropatterned films containing Co antidots.** *E. Celasco*^{1,2}, P. Martino¹, A. Chiolerio¹, F. Celegato³ and P. Allia¹. *1. Physics, Polytechnic of Turin, Turin, Italy; 2. Physics, Materials and Microsystems Laboratory (χ -lab)-LATEMAR Unit, Chivasso (TO), Italy; 3. INRIM, Torino, Italy*
- DR-09. Analysis of the nucleation-propagation sequence in the magnetization reversal of antidot arrays.** *F. García-Sánchez*¹, E. Paz¹, O. Fesenko-Chubykalo¹, F. Palomares¹, J. González¹, F. Cebollada², J. Haba², R. Yanes¹ and U. Atxitia¹. *1. Instituto de Ciencia de Materiales de Madrid, CSIC, 28049 Cantoblanco, Madrid, Spain; 2. Física Aplicada a las Tec.de la Inf., Univ. Politécnica de Madrid, 28031 Madrid, Spain*
- DR-10. Magnetic behaviour of Ni antidot arrays on alumina nanoporous membranes.** *P. Prieto*¹, A.J. Chaves-Neto³, K.R. Pirola², M. Knobel³ and J.M. Sanz¹. *1. Física Aplicada, Universidad Autónoma de Madrid, Madrid, Spain; 2. Instituto de Ciencia de Materiales de Madrid, CSIC, Madrid, Spain; 3. Instituto de Física "Gleb Wataghin", Universidad Estadual de Campinas, Campinas, Brazil*
- DR-11. TAILORING magnetization reversal mode and switching field of magnetic nanostructure with perpendicular anisotropy.** *M. Rahman*¹, N.N. Shams¹, Y. Wu¹ and C. Lai¹. *1. Materials Science and Engineering, National Tsing Hua University, Hsinchu, Taiwan*
- DR-12. Property variation in coupled permalloy nanostructures.** *A.O. Adeyeye*¹, S. Jain¹ and N. Singh². *1. Electrical and Computer Engineering, National University of Singapore, Singapore, Singapore; 2. Institute of Microelectronics, Singapore, Singapore*

TUESDAY
AFTERNOON
2:30

POLIVALENTE

Session DS
MICROWAVE SYSTEMS
(POSTER SESSION)
Vasil Tyberkevych, Chair

- DS-01. Double Ferromagnetic Resonance Absorption Of Non-Saturated States In Arrays of Bi-Stable Magnetic Nanowires.** *J. De La Torre Medina*¹, *J. Olais-Govea*², *A. Encinas*² and *L. Piraux*¹. *1. Université Catholique de Louvain, Louvain-la-Neuve, Belgium; 2. Instituto de Física, San Luis Potosí, Mexico*
- DS-02. Soft magnetic properties and high frequency characteristics in FeCoSi/native-oxide multilayer films.** *H. Zuo*¹, *S. Ge*¹, *Z. Wang*¹, *Y. Xiao*¹ and *D. Yao*¹. *1. Key Laboratory for Magnetism and Magnetic Materials of Ministry of Education, Lanzhou University, Lanzhou, China*
- DS-03. Excellent low loss performance of microwave permeability in high resistive CoFeHfO films by thermal annealing.** *K. Dong Young*¹, *Y. Seok Soo*¹, *R. B. Parvatheeswara*², *K. CheolGi*² and *T. Migaku*³. *1. Department of Physics, Andong National University, Andong, South Korea; 2. School of Nano-Science and Engineering, Chungnam National University, Daejeon, South Korea; 3. Electronic Engineering, Tohoku University, Sendai, Japan*
- DS-04. MAGNETOIMPEDANCE EFFECT IN SANDWICHED AND MULTILAYERED AMORPHOUS FILMS: SIMULATION AND EXPERIMENTS.** *M.A. Corrêa*¹, *F. Bohn*², *A. Viegas*³, *A. de Andrade*⁵ and *R. Sommer*⁴. *1. Centro de Ciências Exatas e Tecnológicas, Universidade Federal do Pampa, Caçapava do Sul, Rio Grande do Sul, Brazil; 2. Departamento de Física, Universidade Federal de Santa Maria, Santa Maria, Rio Grande do Sul, Brazil; 3. Departamento de Física, Universidade Federal de Santa Catarina, Santa Maria, Santa Catarina, Brazil; 4. Centro Brasileiro de Pesquisas Físicas, Rio de Janeiro, Rio de Janeiro, Brazil; 5. Universidade Federal de Santa Maria, Frederico Westphalen, Rio Grande do Sul, Brazil*

- DS-05. Complex impedance and capacitance spectra characterizations of MgO-based MTJs with/without Mg doping.** J. Huang^{1,2}, C. Hsu^{1,2}, W. Chen¹, S. Chen³ and C. Liu³. *1. Physics, National Cheng-Kung University, Tainan, Taiwan; 2. Institute of Innovations and Advanced Studies, National Cheng-Kung University, Tainan, Taiwan; 3. Materials Science and Engineering, National Cheng-Kung University, Tainan, Taiwan*
- DS-06. A modulated microwave absorption study of FeNbO₄** G. Alvarez¹, R. Font², J. Portelles², R. Zamorano³ and R. Valenzuela¹. *1. Instituto de Investigaciones en Materiales, Universidad Nacional Autonoma de Mexico, Mexico City, D.F., Mexico; 2. Fisica Aplicada, Universidad de la Habana, Havana, Havana, Cuba; 3. Ciencia de los Materiales, Instituto Politecnico Nacional, Mexico City, D.F., Mexico*
- DS-07. IrMn/CoFe-SiO₂/IrMn exchange coupled nanostructure for high frequency applications.** N.N. Shams¹, M. Rahman¹, Y. Wu¹ and C. Lai¹. *Materials Science and Engineering, National Tsing-Hua University, Hsinchu, Taiwan*
- DS-08. Permeability of ferromagnetic microwires composites/metamaterials and potential applications.** L. Liu¹, L. Kong¹, G. Lin¹ and S. Matitsine¹. *1. Temasek Lab, National University of Singapore, Singapore, Singapore*
- DS-09. Microwave permeability of amorphous FeCoSiB thin films on flexible substrates.** M. Han¹, Y. Ou¹, L. Deng¹, J. Xie¹ and H. Lu¹. *1. State Key Laboratory of Electronic Thin Films and Integrated Devices, University of Electronic Science and Technology of China, Chengdu, Sichuan, China*
- DS-10. Magnetic damping in exchange-coupled IrMn/ CoFe multilayers for microwave applications.** R. Jiang¹, C. Lai¹ and J. Lin². *1. Department of Materials Science and Engineering, National Tsing Hua University, Hsinchu, Taiwan; 2. Centre for Condensed Matter Sciences, National Taiwan University, Taipei, Taiwan*

TUESDAY
AFTERNOON
2:30

POLIVALENTE

Session DT
RE-TM BORIDES AND MAGNET
PROCESSING
(POSTER SESSION)

Javier Palomares, Chair

- DT-01. Synthesis of nano-crystalline barium hexaferrite using a reactive co-precipitated precursor.**
M. Montazeri-Pour¹ and A. Ataie¹. School of Metallurgy and Materials Engineering, University of Tehran, Tehran, Tehran, Iran
- DT-02. Development of anisotropic NdFeB bonded magnet MAGFINE with high heat resistance for automobile use.**
K. Noguchi¹, C. Mishima¹, H. Matsuoka¹ and Y. Honkura¹. Aichi Steel Corporation, Tokai-shi, Aichi-ken, Japan
- DT-03. Effects of conventional HDDR process and the additions of Co and Zr on anisotropy of HDDR PrFeB-type magnetic materials.**
J. Han¹, C. Wang¹, H. Du¹, H. Chen¹ and Y. Yang¹. School of Physics, Peking University, Beijing, China
- DT-04. Magnetic properties and structure for bonded magnet using Dy-F coated NdFeB powder.**
M. Komuro¹ and S. Yuichi¹. Energy and Environment Laboratory, Advanced Research Laboratory, Hitachi, Ibaraki, Japan
- DT-05. Effect of grain size and hot-deformation temperature on texture in die-upset Nd-Fe-B magnet.**
H. Kwon¹ and J. Lee¹. Materials Science and Engineering, Pukyong National University, Busan, South Korea
- DT-06. Boron enriched stoichiometric melt spun RE₂(Fe,Co)₁₄B-based alloys with enhanced coercivity.**
I. Betancourt^{1,2}, T. Schrefl¹ and H. Davies¹. Department of Engineering Materials, University of Sheffield, Sheffield, South Yorkshire, United Kingdom; 2. Departamento de Materiales Metalicos y Ceramicos, Instituto de Investigaciones en Materiales, Universidad Nacional Autonoma de Mexico, Mexico, D.F. 04510, Mexico

- DT-07. The copper, titanium and carbon influence on properties of permanent magnets based on FeNdB alloy.** G.P. Brekharya¹, V. Vystavkina² and K. Elena¹. *1. Solid State Physics, Dneprodzerzhinsk Technical State University, Dneprodzerzhinsk, Ukraine; 2. Materials Science, Zaporozhye State University, Zaporozhye, Ukraine*
- DT-08. Effect of heat treatment on the magnetic property and microstructure of sintered Nd-Fe-B magnets.** W. Li¹, T. Ohkubo^{1,2} and K. Hono^{1,2}. *1. National Institute for Materials Science, Tsukuba, Japan; 2. CREST, JST, Japan*
- DT-09. Field-induced coercivity enhancement phenomena in sintered Nd-Fe-B magnets.** H. Kato^{1,2}, T. Akiya² and K. Koyama³. *1. Department of Applied Mathematics and Physics, Yamagata University, Yonezawa, Japan; 2. New Industry Creation Hatchery Center, Tohoku University, Sendai, Japan; 3. Institute for Materials Research, Tohoku University, Sendai, Japan*
- DT-10. Small angle neutron scattering study of interface nanostructure in sintered Nd-Fe-B magnets.** T. Akiya¹, H. Kato^{1,2}, M. Takeda³, J. Suzuki³, D. Yamaguchi⁴, S. Koizumi⁴, M. Sagawa⁵ and K. Koyama⁶. *1. New Industry Creation Hatchery Center, Tohoku Univ., Sendai, Miyagi, Japan; 2. Department of Applied Mathematics and Physics, Yamagata Univ., Yonezawa, Yamagata, Japan; 3. Quantum Beam Science Directorate, Japan Atomic Energy Agency (JAEA), Tokai-mura, Naka-gun, Ibaraki, Japan; 4. Advances Science Research Center, Japan Atomic Energy Agency (JAEA), Tokai-mura, Naka-gun, Ibaraki, Japan; 5. Intermetallics Co., Ltd., Kyoto, Japan; 6. Institute for Materials Research, Tohoku University, Sendai, Miyagi, Japan*
- DT-11. Reduction of sensitivity to sintering temperature for Nd-Fe-B magnets through co-doping Zr and Nb.** M. Yan¹, X. Cui¹, L. Yu¹ and T. Ma¹. *1. Department of Materials Science and Engineering, Zhejiang University, Hangzhou, China*
- DT-12. Structure and magnetic properties of low neodymium magnets containing minor addition of molybdenum.** M. Spyra¹ and M. Leonowicz¹. *1. Faculty of Materials Science and Engineering, Warsaw University of Technology, Warsaw, Poland*

TUESDAY
AFTERNOON
2:30

POLIVALENTE

Session DU
PERMANENT MAGNET MATERIALS -
APPLICATIONS II
(POSTER SESSION)
Tom Woodcock, Chair

- DU-01. Multi-tooth Flux Switching PM Brushless ac Machines for High Torque Direct-Drive Applications.** Z. Zhu¹, J. Chen¹, D. Howe¹, S. Iwasaki² and R. Deodhar². *1. University of Sheffield, Sheffield, United Kingdom; 2. IMRA UK Research Center, University of Sussex, Brighton, United Kingdom*
- DU-02. Optimum Design of Transverse Flux Linear Motor for Weight Reduction and Improvement Thrust Force Using Response Surface Methodology.** D. Hong¹, B. Woo¹ and D. Kang¹. *1. Korea Electrotechnology Research Institute, Changwon, South Korea*
- DU-03. 2D analytical calculation of the no-load induced EMF in an axial flux slotted permanent magnet machine.** J. Pérez¹ and F. Frechoso^{1,2}. *1. Electrical Engineering, Universidad de Valladolid, Valladolid, Spain; 2. Member, IEEE, Valladolid, Spain*
- DU-04. Modeling permanent magnet axial flux machine with Lie's symmetries.** L.T. Loureiro¹, J.R. Zabada², A.F. Flores¹ and R.P. Homrich¹. *1. Electrical Engineering, Universidade Federal do Rio Grande do Sul, Porto Alegre, Rio Grande do Sul, Brazil; 2. Nuclear Engineering, Universidade Federal do Rio Grande do Sul, Porto Alegre, Rio Grande do Sul, Brazil*
- DU-05. Optimal Design of an SPM Motor Using Taguchi Method and Genetic Algorithms.** C. Hwang¹, L. Lyu¹, P. Li¹ and C. Liu². *1. EE, Feng Chia University, Seatwen, Taichung, Taiwan; 2. EE, National Sun Yat-sen University, Kaohsiung, Taiwan*
- DU-06. On the Material and Temperature Impacts of Interior Permanent Magnet Machine for Electric Vehicle Applications.** A. Wang¹, H. Li¹ and C. Liu². *1. Electrical Engineering, North China Electric power university, Baoding, Hebei, China; 2. Electrical Engineering, National Sun Yat-Sen University, Kaohsiung, Taiwan*

- DU-07. Fabrication and properties of FePt thick films for micro-machine application.** *P. Jang*¹, *B. Lee*¹, *K. Rhie*² and *S. Choi*². *1. Div. of Applied Science, Cheongju University, Cheongju, Chungcheongbuk-do, South Korea; 2. Department of display, semiconductor and physics, Korea University, Chochiwon, Chungcheongnam-do, South Korea*
- DU-08. Optimum Design of 60 W Longitudinal Flux Linear Motor for Weight Reduction and Improvement Performance Using DOE.** *D. Hong*¹, *B. Woo*¹ and *D. Kang*¹. *1. Korea Electrotechnology Research Institute, Changwon, South Korea*
- DU-09. Optimal Design of a Small PM Wind Synchronous Generator for Wide Range of Winds Speed.** *B. Ebrahimi*¹, *J. Faiz*¹, *M. Rajabi Sebdani*¹ and *M.A. Khan*². *1. Department of Electrical and Computer Engineering, University of Tehran, University of Tehran, Tehran, Iran; 2. Department of Electrical Engineering, University of Cape Town, Cape Town, South Africa*
- DU-10. Analytical analysis of magnetic field and back electromotive force calculation of an axial-flux permanent magnet synchronous generator with coreless stator.** *P. Vrtič*¹, *P. Pišek*¹, *T. Marčič*¹, *M. Hadziselimovič*^{1,2} and *B. Štumberger*^{1,2}. *1. TECES, Development centre for electrical machines, Maribor, Slovenia; 2. Faculty of Electrical Engineering and Computer Science, University of Maribor, Maribor, Slovenia*

**TUESDAY
AFTERNOON
2:30**

POLIVALENTE

**Session DV
MANGANITES
(POSTER SESSION)
Gervasi Herranz, Chair**

- DV-01. Theoretical and experimental studies of structural characteristics, magnetic response and electronic properties of Sr₂FeMnO₆ double cubic Perovskite.** *J.A. Rodriguez*¹, *D.A. Landinez-Tellez*¹, *R. Cardona*¹, *F.E. Fajardo*¹ and *J. Roa-Rojas*¹. *1. Physics Dept., Universidad Nacional de Colombia, Bogotá, D. C., Colombia*

DV-02. Local probe studies on $\text{Pr}_{1-x}\text{Ca}_x\text{MnO}_3$ system.

A.M. Lopes^{1,2}, *T.M. Mendonça*^{1,2}, *J.S. Amaral*³,
*A.M. Pereira*¹, *P.B. Tavares*⁴, *Y. Tomioka*⁵, *Y. Tokura*⁶,
J.G. Correia^{7,2}, *V.S. Amaral*³ and *J.P. Araújo*¹.

Department of Physics and IFIMUP, Univ. of Porto, Porto, Portugal; 2. EP, CERN, Geneva, Switzerland; 3. Department of Physics and CICECO, Univ. of Aveiro, Aveiro, Portugal; 4. Department of chemistry and CQ-VR, Univ. of Trás-os-Montes e Alto Douro, Vila Real, Portugal; 5. CERC, National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan; 6. Department of Applied Physics, Univ. of Tokyo, Tokyo, Japan; 7. Instituto Tecnológico Nuclear, Sacavém, Portugal

DV-03. Complex magnetic behaviour in anion deficient manganite superstructures R. Cortés-Gill^{1,2}, J. M. Alonso^{2,3}, A. Hernando^{2,4}, M. L. Ruiz-González¹, M. García-Hernández³, M. Vallet-Regí^{2,5}, J. M. González-Calbet^{1,2,*}

1Departamento de Química Inorgánica, Facultad de Químicas, Universidad Complutense, 28040-Madrid, Spain **2**Instituto de Magnetismo Aplicado, UCM-CSIC-RENFE, Las Rozas, P.O. Box 155, 28230-Madrid, Spain **3**Instituto de Ciencia de Materiales, CSIC, Sor Juana Inés de la Cruz s/n, 28049-Madrid, Spain **4**Departamento de Física de Materiales, Facultad de Físicas, Universidad Complutense, 28040-Madrid, Spain **5**Departamento de Química Inorgánica y Bioinorgánica, Facultad de Farmacia, Universidad Complutense, 28040- Madrid, Spain. *J.M. González-Calbet*¹. *Química Inorgánica, UCM, Madrid, Spain*

DV-04. Anisotropic magnetoresistance in ferromagnetic manganites. M. Granada¹, J. Rojas Sánchez¹, L.B. Steren¹, J.D. Fuhr¹ and B. Alascio¹

I. Centro Atómico Bariloche (Comisión Nacional de Energía Atómica) and CONICET, San Carlos de Bariloche, Río Negro, Argentina

DV-05. Comparative study of magnetic ordering in bulk and nanometer-sized $\text{La}_{0.4}\text{Ca}_{0.6}\text{MnO}_3$ manganite.

*E. Rozenberg*¹, *M. Auslender*¹, *A.I. Shames*¹, *I. Felner*²,
*E. Sominski*³, *A. Gedanken*³, *A. Pestun*⁴ and
*Y. Mukovskii*⁴. *1. Physics, BGU of the Negev, Beer-Sheva, Israel; 2. Physics, The Hebrew University, Jerusalem, Israel; 3. Chemistry, Bar-Ilan University, Ramat-Gan, Israel; 4. Moscow Steel and Alloys Institute, Moscow, Russian Federation*

- DV-06. EMR probing of magnetic ordering in Pr_{1-x}Sr_xMnO₃ (x = 0.22, 0.24, 0.26) manganite single crystals.** A.I. Shames¹, E. Rozenberg¹, Y.M. Mukovskii² and G. Gorodetsky¹. *1. Physics, Ben Gurion University of the Negev, Be'er-Sheva, Israel; 2. Moscow Steel and Alloys Institute, Moscow, Russian Federation*
- DV-07. Magnetic and magnetoresistive properties of Pr_{1-x}Ca_xCoO₃ (x = 0.3, 0.5) cobaltites.** I.G. Deac¹, R. Tetean¹, D. Andreica^{1,2} and E. Burzo¹. *1. Physics, Universitatea Babeş-Bolyai, Cluj-Napoca, Romania; 2. Laboratory for Muon-Spin Spectroscopy, Paul Scherrer Institut, Villigen, Switzerland*
- DV-08. Magnetism of LCMO/YBCO thinfilm epitaxial heterostructures.** N.M. Nemes^{1,3}, M. García-Hernández¹, Z. Szatmári², T. Fehér², F. Simon², J. García-Barriocanal³, F.Y. Bruno³, C. Leon³, C. Miller³, Z. Sefrioui³, C. Visani³ and J. Santamaría³. *1. Instituto de Ciencia de Materiales de Madrid, Consejo Superior de Investigaciones Científicas, Madrid, Spain; 2. Institute of Physics, Budapest University of Technology and Economics, Budapest, Hungary; 3. GFMC, Dpto. Física Aplicada III, Universidad Complutense de Madrid, Madrid, Spain*
- DV-09. In-situ strain effect on extrinsic electrical transport and magnetotransport in La_{0.7}Sr_{0.3}MnO₃ films.** R. Gangineni¹, L. Schultz¹, I. Mönch¹ and K. Dörr¹. *1. Institute for Metallic Materials, Leibniz Institute for Solid State and Materials Research Dresden, Dresden, Saxony, Germany*
- DV-10. Effect of Cr Doping on the Magnetic Properties of La_{0.3}Ca_{0.7}MnO₃** L.E. Wenger¹, G.M. Tsoi¹, R. Suryanarayanan² and T. Sudyoadsuk³. *1. Department of Physics, University of Alabama at Birmingham, Birmingham, AL; 2. Laboratoire de Physico-Chimie de l'Etat Solide, CNRS, Université Paris-Sud, Orsay, France; 3. Department of Chemistry, Ubon Ratchathani University, Ubon Ratchathani, Thailand*
- DV-11. 1/f noise study of electron transport in La_{0.82}Ca_{0.18}MnO₃ single crystals.** X. Wu^{1,2}, G. Jung², B. Dolgin², V. Markovich², Y. Yuzhelevski², M. Belogolovskii^{3,4}, Y.M. Mukovskii⁵, K. Suzuki¹ and G. Gorodetsky². *1. Materials Engineering, Monash University, Clayton, VIC, Australia; 2. Physics, Ben Gurion University, Beer Sheva, Israel; 3. Donetsk Physical and Technical Institute, National Academy of Sciences of Ukraine, Donetsk, Ukraine; 4. Scientific and Industrial Concern 'Nauka', Kyiv, Ukraine; 5. Moscow State Steel and Alloys Institute, Moscow, Russian Federation*

- DV-12. Effect of substrate orientation on magnetic anisotropy and 1/f noise in La_{0.7}Sr_{0.3}MnO₃ thin films.** *L. Mechin*¹, *P. Perna*^{1,2}, *M. Saib*¹, *S. Flament*¹, *C. Barone*^{1,3}, *D. Fadil*¹ and *J. Routoure*¹. *1. GREYC-ENSICAEN, CNRS, Caen, France; 2. DiMSAT, University of Cassino, Cassino, Italy; 3. Dipartimento di Fisica "E.R. Caianiello", University of Salerno, Salerno, Italy*
- DV-13. Room temperature giant magnetoimpedance in La_{0.67}Sr_{0.33}MnO₃.** *M. Ramanathan*¹. *1. Department of Physics, National Univeristy of Singapore, Singapore, Singapore*
- DV-14. Electroresistance in mixed valence manganites.** *N. Biskup*¹, *A. de Andrés*¹ and *M. Garcia Hernandez*¹. *1. ICMM, Madrid, Spain*
- DV-15. Impedance spectroscopy of magnetoresistive manganite films exhibiting electric-pulse-induced resistance switching.** *T. Nakamura*¹, *K. Homma*¹, *T. Yakushiji*¹ and *K. Tachibana*¹. *1. Department of Electronic Science and Engineering, Kyoto University, Kyoto, Japan*
- DV-16. Strain effect on MnO₆ octahedrons in the colossal magnetoresistance (CMR) films.** *C. Wu*¹, *H. Chou*¹ and *F. Yuan*¹. *1. National Sun Yat-sen University, Kaohsiung, Taiwan*
- DV-17. Pulsed current induced multi level resistivity switching in two magnetodielectrics: antiferromagnetic Nd_{0.5}Ca_{0.5}MnO₃ and ferromagnetic La₂NiMnO₆.** *M. Ramanathan*¹. *1. Physics, National university of Singapore, Singapore, Singapore*

TUESDAY
AFTERNOON
2:30

POLIVALENTE

Session DW
TRANSFORMERS AND INDUCTORS II
(POSTER SESSION)
Oriano Bottauscio, Chair

- DW-01. Design optimization of a non-contact rapid charging inductive power supply system for electric-driven vehicles based on finite-element electromagnetic field analyses.** *Y. Kamiya*¹, *Y. Daisho*¹, *R. Yokoyama*¹ and *S. Takahashi*² *1. Graduate School of Environment and Energy Engineering, Waseda Univ., Tokyo, Japan; 2. Showa Aircraft, Tokyo, Japan*
- DW-02. An Analytical Model of the Electromagnetic Efficiency of Litz-Wire Windings for Domestic Induction Heating Systems.** *J. Acero*¹, *R. Alonso*², *J.M. Burdio*¹, *L.A. Barragan*¹ and *J.I. Artigas*¹ *1. Electronic Engineering and Communications, University of Zaragoza, Zaragoza, Zaragoza, Spain; 2. Applied Physics, University of Zaragoza, Zaragoza, Zaragoza, Spain*
- DW-03. High Frequency Coaxial Transformer for DC/DC Converter Used in Solar PV Systems.** *J. Lu*¹, *X. Yang*² and *F. Dawson*³ *1. School of Eng., Griffith University, Brisbane, QLD, Australia; 2. Province-Ministry Joint Key Laboratory of Electromagnetic Field and Electrical Apparatus Reliability, Hebei University of Technology, Tianjin,, Hebei, China; 3. Department of Electrical and Computer Engineering, University of Toronto, Toronto, ON, Canada*
- DW-04. Novel EU core variable inductor.** *M. Xianmin*¹, *L. Fengchun*¹, *W. Jianze*² and *J. Yanchao*² *1. Department of Electrical and Electronics Engineering, DaLian University of Technology, DaLian, LiaoNing, China; 2. School of Electrical Engineering and Automation, Harbin Instituted of Technology, Harbin, HeiLongJiang, China*
- DW-05. Stability analysis of contact-less electrical energy detachable transformer.** *H. Chen*¹, *Q. Yang*¹, *J. Li*¹, *S. Yang*¹ and *S. Hou*¹ *1. Hebei University of Technology, Tianjin, China*

- DW-06. A Forced Vibration Analysis of Cable-type Power Transformer Winding by the Pseudospectral Method.** J. Ha¹, H. Chung¹, S. Woo¹, P. Shin¹ and J. Lee¹. *Hongik University, Jochiwon, Chungnam 339-701, South Korea*
- DW-07. Coupled three phase inductors for interleaved inverter switching.** A. Knight¹, J. Ewanchuk¹ and J.C. Salmon¹. *Electrical and Computer Eng, University of Alberta, Edmonton, AB, Canada*
- DW-08. A novel approach to extending the linearity range of displacement inductive sensor.** M.S. Damnjanovic¹, L. Zivanov¹, L. Nagy¹, S. Djuric¹ and B. Biberdzic¹. *Department of Electronics, Faculty of Technical Sciences, Novi Sad, Serbia*
- DW-09. A New Technique for Measuring Ferrite Core Loss under DC Bias Conditions.** C. Baguley¹, U.K. Madawala¹ and B. Carsten². *1. ECE, University of Auckland, Auckland, New Zealand; 2. Power Conversion Consulting and Research, Corvallis, OR*

TUESDAY
AFTERNOON
6:30

AUDITORIO A

Session XA
IEEE MAGNETICS SOCIETY ANNUAL
GENERAL MEETING

WEDNESDAY
MORNING
9:30

AUDITORIO A

Session EA
SYMPOSIUM ON SPIN TRANSFER AND
DYNAMICS

Thibaud Devolder, Chair

9:30

- EA-01. Spin-torque oscillator in the presence of thermal noise. (Invited)** *A.N. Slavin*¹, *J. Kim*² and *V. Tiberkevich*¹ *1. Department of Physics, Oakland University, Rochester, MI; 2. Institut d'Electronique Fondamentale, Universite Paris-Sud, Orsay, France*

10:00

- EA-02. Frequency Pulling and Locking in RF Assisted Spin-Torque Switching. (Invited)** *S.H. Florez*¹, *J.A. Katine*¹, *M. Carey*¹, *O. Ozatay*¹ and *L. Folks*¹ *1. Hitachi Global Storage Technologies, San Jose, CA*

10:30

- EA-03. Time-Domain Studies of Nonlinear Magnetization Dynamics Excited by Spin Transfer Torque. (Invited)** *I. Krivorotov*¹, *N. Emley*², *J. Sankey*², *G. Finocchio*³, *L. Torres*⁴, *B. Azzarboni*³, *R. Buhrman*² and *D. Ralph*² *1. Department of Physics and Astronomy, University of California, Irvine, Irvine, CA; 2. Cornell University, Ithaca, NY; 3. Dipartimento di Fisica della Materia e Tecnologie Fische Avanzate, University of Messina, Messina, Italy; 4. Departamento de Fisica Aplicada, Universidad de Salamanca, Salamanca, Spain*

11:00

EA-04. Current-driven vortex oscillations in metallic nanocontacts. (Invited) Q. Mistral¹, M. van Kampen², G. Hrkac³, J. Kim¹, T. Devolder¹, P. Crozat¹, C. Chappert¹ and L. Lagae^{2,1}. *Institut d'Electronique Fondamentale, CNRS / Univ. Paris Sud, Orsay, France; 2. IMEC, Leuven, Belgium; 3. Department of Engineering Materials, University of Sheffield, Sheffield, United Kingdom*

11:30

EA-05. Self-Torque Induced by Local Spin-Transfer Effect and Lateral Spin Diffusion in Magnetic Layers with Inhomogeneous Magnetization. (Invited) K. Lee^{1,1}. *Korea University, Seoul, South Korea*

12:00

EA-06. Spin Torque Influence on the High Frequency Magnetization Fluctuations in Magnetic Tunnel Junctions. (Invited) S. Petit¹, N. de Mestier¹, C. Thirion¹, U. Ebels¹, Y. Liu², M. Li², P. Wang² and C. Baraduc^{1,1}. *SPINTEC, CEA/CNRS, Grenoble, France; 2. Headway Technologies, Milpitas, CA*

**WEDNESDAY
MORNING
9:30**

MADRID

**Session EB
MOTOR AND ACTUATORS II**

Johannes Paulides, Chair

9:30

EB-01. Design considerations of tubular flux-switching permanent magnet machines. (Invited) J. Wang¹, W. Wang¹, K. Atallah¹ and D. Howe^{1,1}. *Electronic and Electrical Engineering, University of Sheffield, Sheffield, United Kingdom*

10:00

- EB-02. Linear induction motors with modular winding primaries and wound rotor secondaries.** *J. Eastham*¹, *T. Cox*^{1,2} and *J. Proverbs*²*1. The University of Bath, Bath, United Kingdom; 2. Force Engineering, Shephed, United Kingdom*

10:15

- EB-03. Magnetic Actuator Design using Level Set based Topology Optimization.** *S. Park*¹, *S. Min*¹, *S. Yamasaki*², *S. Nishiwaki*² and *J. Yoo*³*1. Mechanical Engineering, Hanyang University, Seoul, South Korea; 2. Aeronautics and Astronautics, Kyoto University, Kyoto, Japan; 3. Mechanical Engineering, Yonsei University, Seoul, South Korea*

10:30

- EB-04. Comparison of numerical and analytical simulation of saturated zig-zag flux in induction machines.** *A. Binder*¹, *T. Knopik*¹ and *R. Hagen*¹*1. Institute for Electrical Energy Conversion, Technische Universität Darmstadt, Darmstadt, Germany*

10:45

- EB-05. Newly structured double excited 2-DOF motor for security camera.** *J. Lee*¹, *D. Kim*², *S. Baek*¹ and *B. Kwon*¹*1. Hanyang University, Ansan, South Korea; 2. Korea Electronics Technology Institute, Gwang-ju, South Korea*

11:00

- EB-06. 3-D Finite Element Analysis of Magnetic Forces Exerted on Stator End-windings of an Induction Motor.** *R. Lin*¹ and *A. Arkkio*¹*1. Helsinki University of Technology, Espoo, Finland*

11:15

- EB-07. Magnetoelastic Characteristics of the Multilayered Magnetostrictive Thin Film with Polyimide Substrate for Micro Actuator.** *H. Lee*¹ and *C. Cho*¹*1. Mechanical Engineering, Inha University, Incheon, South Korea*

11:30

- EB-08. Analysis of the force produced by speed-induced eddy currents in an xy-actuator.** *A.F. Flores Filho¹, N.F. Baggio Filho¹ and M.A. da Silveira²*. *Post-graduate Programme in Electrical Engineering, Federal University of Rio Grande do Sul, Porto Alegre, RS, Brazil; 2. Post-graduate Programme in Engineering – Environment, Energy and Materials, Lutheran University of Brazil, Canoas, RS, Brazil*

11:45

- EB-09. An Extension to Multiple Coupled Circuits Modeling of Induction Machines to Include Variable Degrees of Saturation Effects.** *M. Ojaghi¹ and J. Faiz¹*. *Department of Electrical and Computer Engineering, University of Tehran, Tehran, Iran*

12:00

- EB-10. Switched Reluctance Motor with External Rotor for Fan in Air-condition.** *H. Chen¹*. *College of Information and Electrical Engineering, China University of Mining & Technology, Xuzhou, Jiangsu, China*

12:15

- EB-11. End turn leakage reactance of concentrated modular winding stators.** *T. Cox^{1,2}, J. Eastham¹ and J. Proverbs²*. *1. The University of Bath, Bath, United Kingdom; 2. Force Engineering, Shepshed, United Kingdom*

WEDNESDAY
MORNING
9:30

ROMA

Session EC
MAGNETIC NANOSTRUCTURES I

Olav Hellwig, Chair

9:30

EC-01. X-ray and valence band photoemission microscopy of ultra-thin magnetic cobalt films on ruthenium.

*A. Mascaraque*¹, *L. Perez*¹, *L. Aballe*², *T. Onur Mentés*², *J.F. Marco*³, *F. El Gabaly*^{4,5}, *C. Klein*⁵, *A.K. Schmid*⁵, *K.F. McCarty*⁶, *A. Locatelli*² and *J. de la Figuera*^{3,4}. *1. Dpto. de Física de Materiales, Universidad Complutense de Madrid, Madrid, Madrid, Spain; 2. Elettra - Sincrotrone Trieste, Trieste, Italy; 3. Instituto de Química-Física Rocasolano, CSIC, Madrid, Madrid, Spain; 4. Centro de Microanálisis de Materiales, Universidad Autónoma de Madrid, Madrid, Madrid, Spain; 5. Berkeley National Laboratory, Berkeley, CA; 6. Livermore National Laboratories, Livermore, CA*

9:45

EC-02. Magnetostatic interactions in an artificial two-phase magnet.

*S. Sievers*¹, *S. Schnittger*², *K. Braun*¹, *U. Siegner*¹ and *C. Jooss*². *1. Physikalisch-Technische Bundesanstalt, Braunschweig, Germany; 2. Institut für Materialphysik, Universität Göttingen, Göttingen, Germany*

10:00

EC-03. 360° domain wall generation in the soft layer of magnetic tunnel junctions.

*F. Montaigne*¹, *M. Hehn*¹, *D. Lacour*¹, *J. Briones*¹, *R. Belkhou*^{2,3}, *S. El Moussaoui*^{2,3}, *F. Maccherozzi*^{2,3} and *N. Rougemaille*⁴. *1. Laboratoire de Physique des Matériaux, Nancy-University, CNRS, Vandoeuvre lès Nancy, France; 2. Synchrotron SOLEIL, Gif-sur-Yvette, France; 3. Synchrotron ELETTRA, Basovizza, Italy; 4. Institut Néel, CNRS & Université Joseph Fourier, Grenoble, France*

10:15

- EC-04. Magnetic reversal in patterned nanostructures with circular exchange-bias.** *M. Tanase*¹, A.K. Petford-Long¹, O.G. Heinonen², K.S. Buchanan³, J. Sort⁴ and J. Nogues⁴. *1. Materials Science Division, Argonne National Laboratory, Lemont, IL; 2. Seagate Technology, Bloomington, MN; 3. Center for Nanoscale Materials, Argonne National Laboratory, Lemont, IL; 4. Universitat Autònoma de Barcelona, Bellaterra, Spain*

10:30

- EC-05. Static and dynamic properties of exchange bias modulated thin films.** *C. Hamann*¹, J. McCord¹, R. Kaltofen², I. Mönch², R. Schäfer¹ and L. Schultz¹. *1. Institute for Metallic Materials, IFW Dresden, Dresden, Germany; 2. Institute for Integrative Nanosciences, IFW Dresden, Dresden, Germany*

10:45

- EC-06. Dynamic splitting of azimuthal spin wave modes in circular magnetic dot in vortex ground state.** *K.Y. Guslienko*¹, A.N. Slavin², V. Tyberkevych² and S.K. Kim¹. *1. Research Center for Spin Dynamics and Spin-Wave Devices and Nanospintronics Laboratory, Seoul National University, Seoul, South Korea; 2. Department of Physics, Oakland University, Rochester, MI*

11:00

- EC-07. Enhancement of superconductive vortex pinning through formation of magnetic vortices.** *A. Hoffmann*^{1,2}, L. Fumagalli³, N. Jahedi³, J.C. Sautner³, J.E. Pearson¹, G. Mihajlović¹ and V. Metlushko³. *1. Materials Science Division, Argonne National Laboratory, Argonne, IL; 2. Center for Nanoscale Materials, Argonne National Laboratory, Argonne, IL; 3. Electrical and Computer Engineering, University of Illinois at Chicago, Chicago, IL*

11:15

- EC-08. Beams of spin waves guided by permalloy micro-strips.** *VE. Demidov*¹, S.O. Demokritov¹, K. Rott², P. Krzysteczko² and G. Reiss². *1. Institute for Applied Physics, University of Muenster, Muenster, Germany; 2. Department of Physics, Bielefeld University, Bielefeld, Germany*

11:30

- EC-09. Direct magnetic patterning on paramagnetic FeAl sheets by ion irradiation through poly(methyl methacrylate) and porous alumina shadow masks.** *E. Menéndez*¹, J. Sort², E. Jiménez³, J. Camarero³, O. Liedke⁴, J. Fassbender⁴, D. Baró¹, S. Suriñach¹, S. Deevi⁵, K. Rao⁶, A. Weber⁷, L. Heyderman⁷, J. Sommerlatte⁸, K. Nielsch⁸ and J. Nogues⁹. *1. Departament de Física, Universitat Autònoma de Barcelona, 08193 Bellaterra, Barcelona, Spain; 2. ICREA and Departament de Física, Universitat Autònoma de Barcelona, 08193 Bellaterra, Spain; 3. Surface Science Lab (LASUAM, Lab. de Física de Superfícies), Dpto. Física de la Materia Condensada, Universidad Autónoma de Madrid, 28049 Madrid, Barcelona, Spain; 4. Institute of Ion Beam Physics and Materials Research, Forschungszentrum Dresden, 01314 Rossendorf, Germany; 5. Research Center, Chrysalis Technologies Incorporated, 23234 Richmond, WA; 6. Department of Materials Science and Engineering, Royal Institute of Technology, 10044 Stockholm, Sweden; 7. Paul Scherrer Institut, 5232 Villigen, Switzerland; 8. Max Planck Institute of Microstructure Physics, 06120 Halle, Germany; 9. ICREA and Institut Català de Nanotecnologia, Campus UAB, 08193 Bellaterra, Spain*

11:45

- EC-10. Transverse magnetization in Nickel nanowire arrays patterned from Cu/Ni/Cu epitaxial films.** *M. Ciria*¹, J.L. Diez-Ferrer², J.I. Arnaudas^{2,1}, B.G. Ng³, F.J. Castaño³, R.C. O'Handley³, E.S. Friend³ and C.A. Ross³. *1. ICMA, CSIC-Universidad de Zaragoza, Zaragoza, Spain; 2. Instituto de Nanociencia de Aragón, Universidad de Zaragoza, Zaragoza, Spain; 3. Department of Materials Science and Engineering, Massachusetts Institute of Technology, Cambridge, MA*

12:00

EC-11. Magnetostatic dipolar domain wall pinning in chains of Permalloy triangular rings micromagnets.

P. Vavassori^{1,2}, *D. Bisero*², *V. Bonanni*², *A. Busato*², *M. Grimsditch*³, *K. Lebecki*⁴, *V. Metlushko*⁵ and *B. Ilic*⁶. *1. CIC nanoGUNE, San Sebastian, Spain; 2. CNISM, CNR-INFM S3, and Dipartimento di Fisica, Universita` di Ferrara, Ferrara, Italy; 3. Materials Science Division, Argonne National Laboratory, Argonne, IL; 4. Institute of Physics, Polish Academy of Sciences, Warsaw, Poland; 5. Department of Electrical and Computer Engineering, University of Illinois at Chicago, Chicago, IL; 6. Cornell Nanofabrication Facility, Cornell University, Ithaca, NY*

12:15

EC-12. Partial frequency band gap in 1D magnonic crystals.

*M. Kostylev*¹, *G. Gubbiotti*², *P. Schrader*¹, *G. Carlotti*², *A.O. Adeyeye*³, *S. Goolaup*³, *N. Singh*³ and *R.L. Stamps*¹. *1. School of Physics, University of Western Australia, Crawley, WA, Australia; 2. CNISM, Dipartimento di Fisica, Universita di Perugia, Perugia, Italy; 3. Department of Electrical and Computer Engineering, National University of Singapore, Singapore, Singapore*

WEDNESDAY
MORNING
9:30

PARIS

Session ED
PERPENDICULAR MEDIA

S. Piramanayagam, Chair

9:30

ED-01. Head-to-SUL spacing reduction with a magnetic seed and the effect on perpendicular recording characteristics.

*G. Choe*¹, *M. Minardi*¹, *K. Zhang*¹ and *M. Mirzamaani*¹. *1. Hitachi GST, 5600 Cottle Road, San Jose, CA*

9:45

- ED-02. Reduction of transition layer thickness showing incoherent switching behavior in single CoCrPt-SiO₂ perpendicular media.** *H. Jung*¹, *M. Kuo*¹, *S. Malhotra*¹ and *G. Bertero*¹. *Western Digital Media Inc., San Jose, CA*

10:00

- ED-03. Compositional structure and magnetic properties of CoCrPt-SiO_x Perpendicular Recording Medium.** *M. Futamoto*¹, *T. Handa*¹ and *Y. Takahashi*². *1. Faculty of Science and Engineering, Chuo University, Tokyo, Japan; 2. Central Research Laboratory, Hitachi, Ltd., Tokyo, Japan*

10:15

- ED-04. Exactly Lattice Matched Novel Under Layers (LML) in Perpendicular Media.** *A. Ajan*¹, *T. Sugimoto*¹ and *T. Uzumaki*¹. *Magnetic Media Laboratory, Fujitsu Laboratories Ltd., 10-1 Morinosato-Wakamiya, Atsugi, Japan*

10:30

- ED-05. Magnetic and Recording Characteristics of CoCrPt-Oxide Media with a Mixture of SiO₂ and TiO₂.** *I. Tamai*¹, *R. Araki*¹ and *K. Tanahashi*¹. *Central Research Laboratory, Hitachi, Ltd., Odawara-shi, Kanagawa-ken, Japan*

10:45

- ED-06. Investigation of high and low Mobility sputter conditions to enhance decoupling in oxide composite media.** *H. Lee*¹, *S. Kong*², *H. Lee*², *H. Oh*², *V.W. Guo*¹, *J. Zhu*¹ and *D.E. Laughlin*¹. *1. Electrical and Computer Engineering, Carnegie Mellon University, Pittsburgh, PA; 2. Samsung Advanced Institute of Technology, Yongin-Si, Gyeonggi-Do, South Korea*

11:00

- ED-07. High-Resolution TEM Analysis Of Perpendicular CoCrPt-SiO₂ Media.** R. Araki¹, Y. Takahashi¹, I. Takekuma² and S. Narishige². 1. Central Research Laboratory, Hitachi Ltd., 1-280 Higashi-koigakubo Kokubunji-shi, Tokyo, Japan; 2. Central Research Laboratory, Hitachi Ltd., 2880 Kozu, Odawara, Kanagawa, Japan

11:15

- ED-08. Epitaxially grown FCC/BCC/HCP multi-underlayers for high performance perpendicular recording media.** G. Choe¹, X. Xu¹, K. Tang¹ and X. Bian¹. Hitachi GST, San Jose, CA

11:30

- ED-09. A General Method to Fabricate Exchange Coupled Composite Media with Graded Structure for Energy Assisted Magnetic Recording.** H. Zhao¹, H. Wang¹ and J. Wang¹. 1. ECE, University of Minnesota, Minneapolis, MN

11:45

- ED-10. Tuning pinning-site size of percolated perpendicular media (PPM) fabricated on pre-patterned substrates.** M. Rahman¹, C. Lai¹ and D. Suess². 1. Materials Science and Engineering, National Tsing Hua University, Hsinchu, Taiwan; 2. Solid state physics, Vienna University of Technology, Vienna, Austria

12:00

- ED-11. Effect of carbon cosputtering in the growth of ultra-thin FePt particulate films on oxidized Si substrates.** P. Alagarsamy¹, S. Tomoko², T. Yukiko K¹ and K. Hono^{1,2}. 1. Magnetic Materials Center, National Institute for Materials Science, Tsukuba, Ibaraki, Japan; 2. Graduate School of Pure and Applied Sciences, University of Tsukuba, Tsukuba, Ibaraki, Japan

12:15

- ED-12. Effect of carbon mixing on the perpendicular anisotropy of FePt thin film.** *S. Lee*¹, *M. Kim*¹ and *J. Park*¹. *Materials Science and Engineering, Korea Advanced Institute of Science and Technology, Daejeon, South Korea*

**WEDNESDAY
MORNING
9:30**

LONDRES

**Session EE
MAGNETIC NANOPARTICLES I**

Gangping Ju, Chair

9:30

- EE-01. Radio-frequency transverse susceptibility studies of effective magnetic anisotropy in nanoparticle assemblies.** *H. Srikanth*¹, *P. Poddar*^{2,1}, *M. Morales*¹ and *N. Frey*¹. *1. Department of Physics, University of South Florida, Tampa, FL; 2. National Chemical Laboratory, Pune, India*

9:45

- EE-02. Magnetic properties characterization of single IBICVD fabricated magnetic particles.** *T. Suzuki*¹, *Y. Pogoryelov*¹ and *A. Htoo*¹. *Information Storage Materials Laboratory, Toyota Technological Institute, Nagoya, Aichi, Japan*

10:00

- EE-03. Ground states in ferromagnetic nanotubes.** *P. Landeros*¹, *O. Suarez*¹, *A. Cuchillo*¹ and *P. Vargas*¹. *Departamento de Física, Universidad Técnica Federico Santa María, Valparaiso, Valparaiso, Chile*

10:15

- EE-04. A study of the magnetic behavior of Ni/Cu multilayer nanowire arrays, using FORC diagrams.** *F. Beron*¹, *L. Carignan*¹, *D. Menard*¹ and *A. Yelon*¹. *Génie physique, École Polytechnique de Montréal, Montréal, QC, Canada*

10:30

- EE-05. Magnetic properties of metal/silicon nanocomposites tailored by specific metal precipitation.** *P. Granitzer*¹, *K. Rumpf*¹ and *H. Krenn*¹. *Institute of Physics, Karl Franzens University Graz, Graz, Austria*

10:45

- EE-06. Polymer nanocomposites with embedded Cobalt nanoparticles.** *S.N. Kale*¹, *S.H. Hatamie*¹ and *S.D. Kulkarni*². *1. Department of Electronics-Science, Fergusson College, Pune, Maharashtra, India; 2. Centre for Materials Characterization, National Chemical Laboratory, Pune, Maharashtra, India*

11:00

- EE-07. Temperature Dependence of Magnetic Correlations within a Magnetite Nanoparticle Assembly.** *K. Krycka*¹, *C. Hogg*², *Y. Ijiri*³, *R. Booth*², *J. Borchers*¹, *W. Chen*¹, *M. Laver*¹, *T. Gentile*¹, *B. Maranville*¹, *B. Breslauer*³ and *S. Majetich*². *1. NIST Center for Neutron Research, Gaithersburg, MD; 2. Carnegie Mellon University, Pittsburgh, PA; 3. Oberlin College, Oberlin, OH*

11:15

- EE-08. First-order Magnetic Phase Transition in Manganese Phosphide Nanorods.** *R. Booth*¹ and *S. Majetich*¹. *Physics Department, Carnegie Mellon University, Pittsburgh, PA*

11:30

- EE-09. Self-assembly Nanoscale Triangular Shaped Fe₆₄Ni₃₆ Dot Arrays.** *D. Niu*¹, *X. Zou*², *J. Wu*² and *Y. Xu*¹ *1. Spintronics and Nanodevice Laboratory, Department of Electronics, The University of York, York, United Kingdom; 2. Department of Physics, University of York, York, United Kingdom*

11:45

- EE-10. Monodisperse doped iron core-shell nanoclusters: synthesis, transport and magnetic properties.** *Y. Qiang*¹, *A. Sharma*¹ and *D. Meyer*¹ *1. Physics, University of Idaho, Moscow, ID*

12:00

- EE-11. Porous Silicon/Metal Hybrid System with Ferro and Paramagnetic Behaviour.** *K. Rumpf*¹, *P. Granitzer*¹ and *H. Krenn*¹ *1. Institute of Physics, Karl Franzens University Graz, Graz, Austria*

12:15

- EE-12. Electrical Resistance and Magnetoresistance of Glass Ceramics Containing Magnetite Nanoparticles.** *P. Allia*¹, *F. Celegato*², *M. Coisson*², *P. Tiberto*², *F. Vinai*² and *O. Bretcanu*³ *1. Politecnico di Torino, Torino, Italy; 2. INRIM, Torino, Italy; 3. Imperial College, London, United Kingdom*

WEDNESDAY
MORNING
9:30

BERLIN

Session EF
RECORDING PHYSICS, MODELS AND
THEORY - I

Masukazu Igarashi, Chair

9:30

EF-01. Switching field distribution reduction and effective write gradient enhancement in domain wall assisted media. *A.Y. Dobin¹ 1. Seagate Technology LLC, Fremont, CA*

9:45

EF-02. A Simple Model for Optimal Read Width due to Finite Write Width and Off-track Interference. *Z. Jin¹ and H.N. Bertram^{1,2} 1. Hitachi GST, San Jose, CA; 2. CMRR, UCSD, La Jolla, CA*

10:00

EF-03. Micromagnetic Study of Short and Long Yoke PMR Head Trailing Shield. *A.F. Torabi¹, D. Bai², T. Pan², S. Li², S. Song², L. Zhong², L. Wang², K. Stoev² and S. Mao² 1. Western Digital Corporation, San Jose, CA; 2. Western Digital Corporation, Fremont, CA*

10:15

EF-04. Reduction in Switching Field for a Granular Perpendicular Medium Using Microwave Assisted Magnetic Recording. *S. Batra¹ and W. Scholz¹ 1. Seagate technology, Pittsburgh, PA*

10:30

EF-05. A Trailing Shield Perpendicular Writer Design with Tapered Write Gap for High Density Recording. *L. Guan¹, J. Smyth¹, M. Dovek¹, S. Chan² and T. Shimizu² 1. Headway Technologies, Milpitas, CA; 2. SAE Magnetics (H.K.) Ltd, Hong Kong, China*

10:45

- EF-06. Time-dependent fields and anisotropy dominated magnetic media.** *K. Rivkin*¹, *N. Tabat*¹ and *S. Foss-Schroeder*¹. *1. Seagate Technology, Edina, MN*

11:00

- EF-07. Effect Of Interlayer on Read Write Process in Perpendicular Recording.** *K. Gao*¹, *V. Sapozhnikov*¹, *A. Zheng*² and *O. Heinonen*¹. *1. Seagate Technology, Bloomington, MN; 2. Seagate Technology, Fremont, CA*

11:15

- EF-08. Infulence of negative field on media noise in combination of capped medium and shielded pole head.** *T. Ichihara*¹, *H. Kashiwase*¹, *H. Nakagawa*¹, *H. Nemoto*¹ and *M. Mochizuki*². *1. Central Research Laboratory, Hitachi Ltd., Odawara, Kanagawa, Japan; 2. Hitachi Grobal Storage Technologies, Fujisawa, Kanagawa, Japan*

11:30

- EF-09. Investigation on magnetic fields from field generating layer in MAMR.** *K. Yoshida*¹, *E. Uda*¹, *N. Udagawa*¹ and *Y. Kanai*². *1. Information and Communications Engineering, Kogakuin University, Tokyo, Japan; 2. Niigata Institute of Technology, Kashiwazaki, Niigata, Japan*

11:45

- EF-10. Effect of media reversal mode on head footprint.** *B.F. Valcu*¹, *B. Allimi*², *A. Dobin*¹, *R. Lynch*¹ and *R. Brockie*¹. *1. Seagate Technology, Fremont, CA; 2. Department of Materials Science and Engineering, University of Connecticut, Storrs, CT*

12:00

- EF-11. Magnetic recording readback responses in three-dimensions for multi-layered recording media configurations. (Invited)** *R. Wood*¹ and *D.T. Wilton*². *1. HDD AdTech, Hitachi GST, San Jose, CA; 2. School of Mathematics and Statistics, University of Plymouth, Plymouth, United Kingdom*

WEDNESDAY
MORNING
9:30

AMSTERDAM

Session EG
SOFT MAGNETIC MATERIALS AND
APPLICATIONS II

Francis Johnson, Chair
Jorge Guerra, Chair

9:30

EG-01. Direct observation of magnetocaloric effect with pulsed-field magnet. *T.T. Nguyen*¹, *E. Brück*¹, *C. D. T*¹, *O. Tegus*², *J. Klaasse*¹ and *J. Buschow*¹ *1. Faculty of Science, Universiteit van Amsterdam, Van der Waals-Zeeman Institute for Experimental Physics, Amsterdam, Netherlands; 2. Inner Mongolia Normal University, Key Laboratory for Physics and Chemistry of Functional Materials, Hohhot, China*

9:45

EG-02. The dc & ac properties of soft magnetic materials for the operational conditions found in novel electrical devices. *H.V. Patel*¹, *M.J. Hall*¹, *O. Thomas*¹ and *S.C. Harmon*¹ *1. Industry & Innovation Division, National Physical Laboratory, Hampton Road, Teddington, Middlesex, TW11 0LW, United Kingdom*

10:00

EG-03. Eddy current effects and pinning effects in Fe and Ni single crystals with low defect densities. *S. Takahashi*¹ and *S. Kobayashi*¹ *1. Faculty of Engineering, Iwate University, Morioka, Japan*

10:15

EG-04. Experimental Prediction of Iron Losses in Electromagnetic Devices. *G. Almandoz*¹, *E. Ritchie*², *J. Poza*¹ and *A. Gonzalez*³ *1. University of Mondragon. Faculty of Engineering, Arrasate, Spain; 2. Aalborg University. Institute of Energy Technology, Aalborg, Denmark; 3. ORONA Elevator Innovation Center, Hernani, Spain*

10:30

- EG-05. Miniature iron-gallium actuator with displacement magnifying mechanism.** *M. Ghodsi*¹, *T. Ueno*¹, *C. Sze Keat*², *T. Yano*² and *T. Higuchi*¹. *Precision Eng. Department, The University of Tokyo, Tokyo, Japan*; 2. *Mechano Transformer Corporation, Kawasaki, Japan*

10:45

- EG-06. Application of magnetoelastic sensors for monitoring of the combustion process in diesel engines for locomotives.** *A. Bienkowski*¹, *R. Szewczyk*^{1,2} and *J. Salach*¹. *1. Institute of Metrology and Measuring Systems, Warsaw University of Technology, Warsaw, Poland*; 2. *Industrial Research Institute for Automation and Measurements PIAP, Warsaw, Poland*

11:00

- EG-07. Longitudinal and transverse magnetoimpedance in FeNi/Cu/FeNi multilayers with longitudinal and transverse anisotropy.** *D. de Cos*¹, *J.M. Barandiaran*¹, *A. Garcia-Arribas*¹, *V.O. Vas'kovskiy*² and *G.V. Kurlyandskaya*^{1,2}. *1. Electricity and Electronics, Basque Country University UPV-EHU, Leioa, Bizkaia, Spain*; 2. *Physics of Magnetic Phenomenon, Ural State University named under A.M. Gorky, Ekaterinburg, Russian Federation*

11:15

- EG-08. Magnetorheological characteristics of carbonyl iron embedded suspension polymerized poly(methyl methacrylate) microbead.** *J. You*¹, *B. Park*¹ and *H. Choi*¹. *1. Department of Polymer Science and Engineering, Inha University, Incheon, South Korea*

11:30

- EG-09. Effect of Slit Patterning Perpendicular to Magnetic Easy Axis In Thin Film Inductors.** *T. Masai*^{1,2} and *Y. Kitamoto*². *1. TDK, Minami-alps city, Yamanashi pref., Japan*; 2. *Innovative and Engineered Materials, Tokyo Institute of Technology, 4259 Nagatsuta, Midori-ku, Yokohama, Japan*

11:45

EG-10. Miniaturization of antenna using Y-type hexagonal ferrite. *K. Kawano*¹ and *Y. Okamoto*¹. *Product Development HQ, TAIYO YUDEN CO.,LTD., Takasaki-shi, Japan*

12:00

EG-11. Development of Axial Flux Permanent Syncrnous Motor by using High-Density Magnetic Composites. *H. Nakai*¹, *T. Arakawa*¹, *K. Hiramoto*¹, *S. Tajima*¹ and *Y. Inaguma*². *1. Toyota Central R&D labs., INC., Aichi, Japan; 2. Daido Institute of Technology, Nagoya, Japan*

12:15

EG-12. Validation of Voltage and Current Waveforms of Nonlinear Inductors Computed with a Novel Finite Element Methodology. *R. Salas*¹ and *J. Pleite*¹. *Tecnologia Electronica, Universidad Carlos III de Madrid, Leganés, Spain*

**WEDNESDAY
MORNING
9:30**

CARACAS

**Session EH
MAGNETO-DIELECTRIC MATERIALS**

J. Mira, Chair

9:30

EH-01. Spin control by doping non-magnetic ions in magnetic ordering type of multiferroic materials. *K. Choi*¹, *S. Kim*¹, *B. Lee*² and *C. Kim*¹. *Physics, Kookmin Univ., Seoul, South Korea; 2. Hankuk University of Foreign Studies, Yongin, South Korea*

9:45

EH-02. Dielectric and magnetic properties of low-temperature sintered

Ni_{0.24}Cu_{0.21}Zn_{0.55}Fe_{1.96}O_{4+x}Pb_{0.95}Sr_{0.05}(Zr_{0.52}Ti_{0.48})O₃ composites. L. Jia¹, H. Zhang¹, S. Bao¹ and Z. Zhong¹ *1. university of electronic science and technology of China, chengdu, Sichuan, China*

10:00

EH-03. Processing related magneto-dielectric properties of

Ni-Zn-Co ferrite ceramics. L. Kong¹, Z. Li¹ and G. Lin¹ *1. Temasek Laboratories, National University of Singapore, Singapore, Singapore*

10:15

EH-04. Dielectric properties of the charge-ordered oxyborate

Fe₂OBO₃ M. Sanchez-Andujar², J. Mira¹, B. Rivas-Murias², S. Yanez-Vilar², N. Biskup³, J. Rivas¹ and M. Senaris-Rodriguez² *1. Fisica Aplicada, Universidade de Santiago de Compostela, Santiago de Compostela, Spain; 2. Quimica Fundamental, Universidade da Coruna, A Coruna, Spain; 3. ICMN, Consejo Superior de Investigaciones Cientificas, Madrid, Spain*

10:30

EH-05. Magneto-electric Effects in Single Crystal

Hexaferrite-Piezoelectric Bilayers. V. Mathe¹ and G. Srinivasan¹ *1. Physics, Oakland University, Rochester, MI*

10:45

EH-06. Anisotropic Susceptibility and Weak Magnetic Moment of YbMnO₃ Single Crystal.

*J. Fontcuberta*¹, M. Gospodinov² and V. Skumryev³ *1. Institut de Ciència de Materials de Barcelona, CSIC, Campus UAB, 08193 Bellaterra, Spain; 2. Institute of Solid State Physics, Bulgarian Academy of Sciences, 1784 Sofia, Bulgaria; 3. Institut Català de Recerca i Estudis Avançats (ICREA), and Departament de Física, Universitat Autònoma de Barcelona, 08193 Bellaterra, Spain*

11:00

- EH-07. Pressure effect on the magnetic ordering in BiMnO₃**
 C. Chou^{1,2}, C. Lin^{1,2}, S. Taran^{1,2}, C. Huang^{1,2},
 J. Her^{1,2}, C. Sun^{1,2}, C. Chan^{1,2}, H. Sakurai³,
 E. Takayama-Muromachi³ and H. Yang^{1,2}. *1. Department
 of Physics, National Sun Yat-Sen University, Kaohsiung,
 Taiwan; 2. Center for Nanoscience and Nanotechnology,
 National Sun Yat-Sen University, Kaohsiung, Taiwan; 3.
 National Institute for Materials Science, Tsukuba, Japan*

11:15

- EH-08. Magnetic properties of Ga substituted NiCr_{1.9-}
_xGa_xFe_{0.1}O₄** G. Ahn¹, S. Park¹, S. Park² and
 C. Kim². *1. HANARO Utilization Technology
 Development Center, Korea Atomic Energy Research
 Institute(KAERI), Daejeon, South Korea; 2. Dept. of
 Physics, Kookmin University, Seoul, South Korea*

11:30

- EH-09. Synthesis and magneocaloric effect of functional
 perovskites by sol-gel reaction.** K. Jeongju¹,
 A. Yangkyu¹ and C. Eun Jung². *1. Chemistry, Konyang
 University, Nonsan, Chungnam, South Korea; 2.
 Ophthalmic Optic, Konyang University, Nonsan,
 Chungnam, South Korea*

11:45

- EH-10. Ferrimagnetic Ba_{0.5}Sr_{1.5}Zn₂Fe₁₂O₂₂ (Zn-Y) single
 crystal barium ferrites.** J. Jalli^{1,2}, Y. Hong^{1,2},
 S. Gee^{1,3}, J. Lee^{1,2}, S. Bae^{1,2}, G.S. Abo^{1,2}, A. Lyle^{1,2},
 H. Han^{1,2}, J. Kim⁴, H. Lee⁴ and S. Lee⁴. *1. Electrical
 and Computer Engineering, University of Alabama,
 Tuscaloosa, AL; 2. MINT Center, University of Alabama,
 Tuscaloosa, AL; 3. Seagate Technology, Bloomington,
 MN; 4. Pohang Superconductivity Center, Pohang
 University of Science and Technology, Pohang, South
 Korea*

12:00

- EH-11. Increment of saturation magnetization and reduction
 of electric coercive field in multiferroic Bi ferrite
 films by adding cobalt.** H. Naganuma¹, J. Miura¹ and
 S. Okamura¹. *1. Department of Applied Physics, Tokyo
 University of Science, Tokyo, Japan*

12:15

- EH-12. Influence of oxygen and nitrogen on magnetic properties of soft magnetic CoFeZr nanoparticles embedded in alumina dielectric matrix.** *A. Fedotov¹, J. Fedotova¹, Y. Kalinin², A. Sitnikov², V. Fedotova³ and Y. Ilyashuk¹*. *1. Belarusian State University, Minsk, Belarus; 2. Voronezh State Technical University, Voronezh, Russian Federation; 3. Joint Institute of Solids and Semiconductors Physics, Minsk, Belarus*

**WEDNESDAY
MORNING
9:00**

POLIVALENTE

Session EL

**PERMANENT MAGNET MACHINES III
(POSTER SESSION)**

Jiabin Wang, Chair

- EL-01. Determining parameters of a line-start interior permanent magnet synchronous motor model by the differential evolution.** *T. Mar čič¹, G. Štumberger^{2,1}, B. Štumberger^{2,1}, M. Hadziselimovi č^{2,1} and P. Vrtič¹*. *1. TECES, Research and Development Centre for Electrical Machines, Maribor, Slovenia; 2. University of Maribor, Faculty of Electrical Engineering and Computer Science, Maribor, Slovenia*
- EL-02. Design and performance measurement of high speed permanent magnet synchronous motor with full-ring magnet for axial-flow turbo fan.** *S. Jang¹, J. Park¹, K. Ko¹ and J. Hwang²*. *1. Electrical Engineering, Chungnam National University, Daejeon, South Korea; 2. MAGPLUS, Daejeon, South Korea*
- EL-03. Finite element analysis of stator winding faults in permanent magnet brushless AC motors.** *J.A. Farooq¹, T. Raminosa¹, A. Djerdir¹ and A. Miraoui¹*. *1. Electrical Engineering and Control Systems, University of Technology Belfort Montbeliard, Belfort, France*
- EL-04. Analysis method for considering the effect of magnetic cross saturation of IPMSM.** *Y. Kim¹, I. Jung¹, J. Hur¹ and J. Hong²*. *1. KETI, Bucheon, South Korea; 2. Hanyang University, Seoul, South Korea*

- EL-05. Design and finite-element analysis of interior permanent magnet synchronous motor with flux barriers.** *B. Stumberger*¹, *G. Stumberger*¹, *M. Hadziselimovic*¹, *T. Marcic*², *P. Vrtic*², *V. Gorican*¹ and *M. Trlep*¹. *1. University of Maribor, Faculty of EE&CS, Maribor, Slovenia; 2. TECES, Development centre for Electrical Machines, Maribor, Slovenia*
- EL-06. Performance of IPMSM for Electro-Hydraulic Power Steering with Electric Driven Pump Unit.** *Y. Kim*¹, *S. Rhyu*¹, *J. Hur*¹ and *J. Hong*². *1. KETI, Bucheon, South Korea; 2. Hanyang University, Seoul, South Korea*
- EL-07. Influence of driving methods on dynamic torque characteristic of high-speed permanent magnet synchronous motor with hall sensor.** *S. Jang*¹, *U. Lee*¹, *D. You*¹, *J. Park*¹ and *T. Sung*². *1. Chungnam National University, Daejeon, South Korea; 2. Korea Electric Power Research Institute, Daejeon, South Korea*
- EL-08. Thrust Ripple Minimization of Permanent Magnet Linear Synchronous Motor by the Notch and the Auxiliary-teeth.** *D. Lee*¹, *K. Jang*¹ and *G. Kim*¹. *Electrical Engineering, Changwon National University, Changwon, Gyeongsangnam-do, South Korea*
- EL-09. A Study on the Vibration Characteristic According to PM Arrangement in PMLSM.** *D. Lee*¹, *S. Lee*¹, *K. Jang*¹ and *G. Kim*¹. *1. Electrical Engineering, Changwon National University, Changwon, Gyeongsangnam-do, South Korea*
- EL-10. Flux Barrier Design to Improve Torque Characteristics of Double-layer Interior Permanent Magnet Synchronous Motor.** *S. Kim*¹, *J. Jung*¹, *J. Hong*¹ and *S. Lee*². *1. Department of Mechanical Engineering, Hanyang University, Seoul, South Korea; 2. Research Center, Korea Institute of Industrial Technology, Gwangju, South Korea*
- EL-11. Study on High Efficiency Performance in Interior Permanent Magnet Synchronous Motor with Double-layer PM Design.** *L. Fang*¹, *J. Jung*¹, *B. Lee*¹ and *J. Hong*¹. *1. Department of Mechanical Engineering, Hanyang University, Seoul, South Korea*
- EL-12. A new PMLSM having 9 pole 10 slot structure and its shape optimal design for detent force reduction.** *C. Koh*¹, *I. Hwang*¹ and *H. Yoon*¹. *1. School of Electrical & Computer Engineering, Chungbuk National University, Cheongju, Chungbuk, South Korea*

WEDNESDAY
MORNING
9:00

POLIVALENTE

Session EM
EXCHANGE BIAS II
(POSTER SESSION)

Jordi Sort, Chair

- EM-01. The role of uncompensated spins in exchange biasing. (Invited)** *H.J. Hug^{1,2}, I. Schmid¹ and P. Kappenberger¹*. *Nanoscale Materials Science, Empa, Duebendorf, Switzerland; 2. Institute of Physics, University of Basel, Basel, Switzerland*
- EM-02. Measuring exchange anisotropy in Fe/MnPd using inductive magnetometry.** *K.J. Kennewell¹, X. Ji², J. Hu¹, K.M. Krishnan² and R.L. Stamps¹*. *School of Physics, University of Western Australia, Crawley, WA, Australia; 2. Materials Science and Engineering, University of Washington, Seattle, WA*
- EM-03. Dependence of the training effect on the antiferromagnet structure in the domain state model for exchange bias.** *A.G. Biternas¹, U. Nowak¹ and R.W. Chantrell¹*. *Department of Physics, University of York, York, United Kingdom*
- EM-04. Temperature Dependence of IrMn Pinning: Single Crystal versus Polycrystalline Effects.** *P. Pong¹, C.L. Dennis¹ and W.F. Egelhoff¹*. *Magnetic Materials Group, National Institute of Standards and Technology, Gaithersburg, MD*
- EM-05. Exchange coupling between an amorphous ferromagnet and a crystalline antiferromagnet.** *M. Fecioru-Morariu¹, G. Güntherodt¹, M. Rührig², A. Lamperti³ and B. Tanner³*. *Physikalisches Institut (IIA), RWTH Aachen University, Aachen, Germany; 2. Corporate Technology, CT MM 1, Innovative Electronics, SIEMENSAG, Erlangen, Germany; 3. Department of Physics, Durham University, Durham, United Kingdom*
- EM-06. Local exchange anisotropy of epitaxial and polycrystalline MnIr/CoFe bilayers.** *H. Kato², T. Kato¹, S. Tsunashima² and S. Iwata¹*. *Department of Quantum Engineering, Nagoya University, Nagoya, Aichi, Japan; 2. Department of Electrical Engineering and Computer Science, Nagoya University, Nagoya, Aichi, Japan*

- EM-07. The significant enhancement of the thermal stability in Co/Cu/Co/IrMn spin valve through insert 1nm FeMn layer.** L. Wang¹, Q.Q. Qin¹, H.X. Wei¹ and X.F. Han¹. *Institute of Physics, Beijing, China*
- EM-08. Exchange bias in Cu/Ni/FeMn trilayer with perpendicular magnetic anisotropy.** L.T. Tu¹ and C. Kim¹. *Department of Materials Science and Engineering, Chungnam National University, Deajeon, South Korea*
- EM-09. Parallel and perpendicular exchange biases in epitaxial FePt-FeMn multilayers with different crystalline orientations.** N.N. Phuoc¹ and T. Suzuki¹. *Information Storage Materials Laboratory, Toyota Technological Institute, Nagoya, Aichi, Japan*
- EM-10. Enhanced Exchange Anisotropy by ultra-thin Co_xFe_{100-x} (x > 80) Layer Insertion at the Interface of L1₂-ordered Mn₃Ir/Co₆₅Fe₃₅ Bilayers.** K. Komagaki¹, M. Tsunoda², K. Noma¹, H. Kanai¹, K. Kobayashi¹, Y. Uehara¹ and M. Takahashi². *Advanced Head Technology Department, Head Division, FUJITSU LIMITED, Nagano, Japan; 2. Department of Electronic Engineering, Tohoku University, Sendai, Japan*
- EM-11. Lateral grain size effect on exchange bias in polycrystalline FeNi/FeMn bi-layer films.** P. Sharma¹, T. Huang¹, A. Sun¹ and J. Hsu¹. *Physics, National Taiwan University, Taipei, Taiwan*
- EM-12. The influence of different Mn-oxide structures on the exchange bias field in NiFe/Mn-oxide bilayers.** J. Guo¹, T. Chen¹, Y. Chiu¹, H. Ouyang¹, K. Lin¹, E. Vass² and J. van Lierop³. *1. Department of Materials Engineering, National Chung Hsing University, Taichung, Taiwan; 2. Institut für Experimentalphysik, University of Innsbruck, Innsbruck, Austria; 3. Department of Physics and Astronomy, University of Manitoba, Winnipeg, MB, Canada*
- EM-13. Effect of the ferromagnetic layer thickness on the blocking temperature in IrMn/CoFe exchange couples.** G. Vallejo-Fernandez¹, L.E. Fernandez-Outon¹, B. Kaeswurm¹ and K. O'Grady¹. *Physics, The University of York, York, North Yorkshire, United Kingdom*

- EM-14. Probing the influence of in-plane roughness on magneto-resistance in spin-valves using off-specular reflectivity techniques.** *J. Park*¹, *C. Furjanic*¹, *D. Draganova*¹, *C. Chen*¹, *S.M. Watson*², *J.A. Borchers*², *M. Carey*³, *P. Sparks*¹ and *J.C. Eckert*¹. *1. Physics, Harvey Mudd College, Claremont, CA; 2. NIST Center for Neutron Research, Gaithersburg, MD; 3. Hitachi Global Storage Technologies, San Jose, CA*

**WEDNESDAY
MORNING
9:00**

POLIVALENTE

**Session EN
SHIELDING, LEVITATION AND
TRANSPORT
(POSTER SESSION)**

Claudio Aroca, Chair

- EN-01. Intuitive operation of magnetically driven fish-type microrobot using smart interface.** *T. Honda*¹, *K. Ono*¹ and *J. Yamasaki*¹. *1. Department of Applied Science for Integrated System Engineering, Kyushu Institute of Technology, Kitakyushu, Fukuoka, Japan*
- EN-02. Three-dimensional motion of a small object by using a new magnetic levitation system having four I-shaped electromagnets.** *T. Ohji*¹, *H. Hara*¹, *K. Amei*¹ and *M. Sakui*¹. *1. University of Toyama, Toyama, Japan*
- EN-03. A Novel Design of a Disk-Shaped Bearingless PM Motor for Artificial Hearts.** *J. Asama*¹, *Y. Kishi*¹ and *A. Chiba*¹. *1. Electrical Engineering, Tokyo University of Science, Noda, Chiba, Japan*
- EN-04. Effect of the active damper coils of the superconducting magnetically levitated bogie in case of acceleration.** *S. Ohashi*¹. *1. Electrical and Electric Engineering, Kansai University, Osaka, Japan*
- EN-05. Assessing the Maglev Force Capabilities of Two Passive Flat Guideway Topologies when using Electrodynamic Wheels.** *J. Bird*^{1,2}. *1. Advanced Technology Center, General Motors Corporation, Torrance, CA; 2. Electrical and Computer Engineering, University of Wisconsin-Madison, Madison, WI*

- EN-06. Magnetic levitation with minimum power consumption using disturbance compensation.** *J. Ahn*¹, *S. Kim*², *J. Lee*¹ and *J. Choi*³ *1. Electrical Engineering, Hanyang University, Seoul, South Korea; 2. Electrical Engineering, Yuhan College, Buchon, Gyeonggi, South Korea; 3. Industry Application Research Division, Korea Electrotechnology Research Institute, Changwon, Gyeongnam, South Korea*
- EN-07. Design and Dynamic Analysis of Rectangular-Surface Electromagnets for Levitation Applications.** *S. Jang*¹, *J. Choi*¹, *J. Park*¹, *H. Sung*² and *S. Sung*² *1. Chungnam National University, Dae-jeon, South Korea; 2. Korea Institute of Machinery&Materials, Daejeon, South Korea*
- EN-08. Basic Characteristics of an Active Thrust Magnetic Bearing with a Cylindrical Rotor Core.** *K. Hijikata*¹, *S. Kobayashi*¹, *M. Takemoto*¹, *Y. Tanaka*¹, *A. Chiba*² and *T. Fukao*¹ *1. Mechanical Systems Engineering, Musashi Institute of Technology, Setagaya-ku, Tokyo, Japan; 2. Electrical Engineering, Tokyo University of Science, Noda-shi, Chiba, Japan*
- EN-09. Magnetically-Levitated Steel Plate Conveyance System Using Electromagnets and a Transverse-Flux Linear Induction Motor.** *J. Choi*¹ and *Y. Baek*¹ *1. Mechanical Engineering, Yonsei University, Seoul, South Korea*
- EN-10. Combination resonance of a rigid body levitated above a diamagnetic slab.** *T. Sugiura*¹ and *T. Hosono*¹ *1. Mechanical Engineering, Keio University, Yokohama, Japan*
- EN-11. Dynamic shielded room for biomagnetism.** *D. Costandache*¹ and *O. Baltag*¹ *1. University of Medicine and Pharmacy "Gr.T.Popa", Iasi, Romania*
- EN-12. Magnetic shielding design for magneto-electronic devices protection.** *W. Wang*¹ and *Z. Jiang*¹ *1. Electrical Engineering, University of Wisconsin - Milwaukee, Milwaukee, WI*
- EN-13. Measurement and calculation of shielding performance of reinforced concrete structures.** *M. Zhang*¹, *Z. Zhao*¹ and *X. Cui*¹ *1. North China Electric Power University, Baoding, Hebei, China*

- EN-14. Reduction of magnetic shaking flux leakage from loosely coupled cylindrical magnetic shield shells having active compensation.** *I. Sasada*¹ and *R. Takahashi*¹. *1. Applied Science for Electronics and Materials, Kyushu University, Kasuga, Japan*
- EN-15. Analysis of perforated magnetic shields.** *P. Sergeant*¹, *R. Sabariego*², *G. Crevecoeur*¹, *C. Geuzaine*² and *L. Dupre*¹. *1. Department of Electrical Energy, Systems and Automation, Ghent university, Gent, Belgium; 2. Department of Electrical Engineering and Computer Science, University of Liege, Liege, Belgium*
- EN-16. Optimal Design and Analysis of Faraday Shield Used in High Frequency Coaxial Transformer.** *X. Yang*¹ and *J. Lu*². *1. Province-Ministry Joint Key Laboratory of Electromagnetic Field and Electrical Apparatus Reliability, Hebei University of Technology, Tianjin, China; 2. School of Eng., Griffith University, Brisbane, QLD, Australia*
- EN-17. Electromagnetic wave absorption properties of double layers absorbers made of hollow glass microspheres electroless plated with FeCoNiB and NiCoZn ferrites.** *M. Han*¹, *F. Xiao*¹ and *Y. Ou*¹. *1. State Key Laboratory of Electronic Thin Films and Integrated Devices, University of Electronic Science and Technology of China, Chengdu, Sichuan, China*
- EN-18. Open-type Magnetic Shield Structure and its Performance.** *M. Fujikura*¹, *K. Segawa*¹, *K. Chikuma*¹, *K. Fujisaki*¹, *J. Mino*², *T. Morita*², *T. Saito*³, *H. Hirano*³ and *T. Shinnoh*³. *1. Nippon Steel corporation, Chiba, Japan; 2. Nippon Steel Engineering Co., LTD., Tokyo, Japan; 3. Kajima Corporation, Tokyo, Japan*
- EN-19. The Estimation on the shield capability of the Magnetic Shielding Room depending on the setting direction of GO based on the analysis with Homogenization Method for Thin Steel Plate.** *Y. Tomizawa*¹, *K. Fujisaki*^{2,3}, *M. Fujikura*², *J. Mino*⁴, *S. Tamaki*⁵ and *T. Morita*⁶. *1. Industrial Plant Engineering, Taiheikogyo Co.,Ltd, Toukai, Japan; 2. Technical Development Bureau, Nippon Steel Corp., Futtsu, Japan; 3. Graduate School of Environmental Studies, Tohoku University, Sendai, Japan; 4. Building Construction & Steel Structures, Nippon Steel Engineering Co.,Ltd, Chiyoda, Japan; 5. Nagoya Works, Nippon Steel Corp., Toukai, Japan; 6. NS Construction, Chiyoda, Japan*

EN-20. Open-Type Magnetically Shielded Room Combined with Square Cylinders made of Magnetic and Conductive Materials for MRI.

K. Yamazaki¹, S. Hirotsato¹, K. Kamata², K. Muramatsu³, K. Kobayashi⁴ and A. Haga⁵ 1. *Takenaka Corp., Chiba, Japan;* 2. *Kagoshima National College of Technology, Kagoshima, Japan;* 3. *Saga University, Saga, Japan;* 4. *Iwate University, Iwate, Japan;* 5. *Tohoku-Gakuin University, Miyagi, Japan*

EN-21. Shield Duct to Prevent Magnetic Field Leakage through Openings in Double-layered Magnetically Shielded Rooms.

K. Yamazaki¹, Y. Hatsukade², S. Tanaka² and A. Haga³ 1. *Takenaka Corp., Chiba, Japan;* 2. *Toyohashi University of Technology, Toyohashi, Japan;* 3. *Tohoku-Gakuin University, Miyagi, Japan*

EN-22. Features of a Wall with Open-type Magnetic Shield.

T. Saito¹ 1. *Kajima Corporation, Tokyo, Japan*

EN-23. Analysis of the shielding effectiveness of rectangular enclosure of metal structures with apertures.

M. Zhang¹, Z. Zhao¹, C. Gao¹ and S. Wang² 1. *North China Electric Power University, Baoding, Hebei, China;* 2. *Northeast Electric Power Design Institute, Changchun, Jilin, China*

WEDNESDAY

POLIVALENTE

MORNING

9:00

Session E0

MOLECULAR AND NOVEL MATERIALS-

II

(POSTER SESSION)

Clara Marquina, Chair

EO-01. Effect of La-substitution on magnetic and

ferroelectric properties of $\text{Bi}_{(1-x)}\text{La}_x\text{Dy}_{0.3}\text{FeO}_3$ system. *P. Kovur¹, S.P. Dutttagupta¹ and V.R. Palkar¹* 1. *Electrical Engineering, Indian Institute of Technology Bombay, Mumbai, Maharashtra, India*

- EO-02. Thermomagnetic characterization of the CeNi₄Cr compound.** *T. Tolinski*¹, *A. Kowalczyk*¹, *M. Reiffers*², *E. Gazo*², *M. Zapotokova*² and *G. Chelkowska*³. *1. Institute of Molecular Physics, Polish Academy of Sciences, Poznan, Poland; 2. Institute of Experimental Physics, SAS, Kosice, Slovakia; 3. Institute of Physics, Silesian University, Katowice, Poland*
- EO-03. Two dimensional ferromagnetic clusters in Ho_{0.8}La_{0.2}Mn₂O₅.** *H. Chou*¹, *C. Yu*¹, *C. Wang*², *C. Wu*² and *W. Li*². *1. Physics, National Sun Yat-sen University, Kaohsiung, Taiwan; 2. Physics and Center for Neutron Beam Application, National Central University, Jhongli, Taiwan*
- EO-04. The switching behavior of spin transition [Fe(PM-BiA)₂(NSC)₂] compound derived from pressure pulse type experiments.** *R. Tanasa*¹, *A. Stancu*¹, *J. Linares*², *E. Codjovi*², *F. Varret*² and *J. Letard*³. *1. Department of Physics, "Alexandru Ioan Cuza" University, Iasi, Romania; 2. Groupe d'Etude de la Matière Condensée (GEMaC) CNRS-UMR 8635, Université de Versailles, Versailles, France; 3. Groupe des Sciences Moléculaires, Institut de Chimie de la Matière Condensée de Bordeaux, UPR No. 9048 CNRS-Université Bordeaux I, Pessac, France*
- EO-05. Magnetic Properties of Zr₉Ni₁₁ Intermetallic Compound.** *V. Provenzano*¹, *R.D. Shull*¹, *R.M. Waterstrat*¹, *L.H. Bennett*^{1,2}, *E. Della Torre*^{1,2} and *H. Seyoum*³. *1. Magnetic Materials Group, NIST, Gaithersburg, MD; 2. Physics Department, George Washington University, Washington, DC; 3. Physics Department, University of the District of Columbia, Washington, DC*
- EO-06. First-Order Reversal Curve Analysis of Spin-Transition Thermal Hysteresis Under Pressure in Terms of Physical-Parameter Distributions and Their Correlations.** *A. Rotaru*^{1,2}, *J. Linares*¹, *E. Codjovi*¹, *F. Varret*¹ and *A. Stancu*². *1. Physique, GEMAC-Versailles University, Versailles, Yvelines, France; 2. Physique, Alexandru Ioan Cuza University, Iasi, Iasi, Romania*
- EO-07. Thermodynamic and electronic properties of DyNi₄Si compound.** *M. Falkowski*¹, *A. Kowalczyk*¹, *M. Reiffers*², *T. Tolinski*¹, *E. Gazo*², *M. Zapotokova*² and *G. Chelkowska*³. *1. Institute of Molecular Physics, Polish Academy of Sciences, Smoluchowskiego 17, Poznan, Poland; 2. Institute of Experimental Physics, Slovak Academy of Sciences, Watsonova 47, Kosice, Slovakia; 3. Institute of Physics, Silesian University, Uniwersytecka 4, Katowice, Poland*

- EO-08. Multiferroic, electronic and structural properties of Sr₂TiMnO₆ perovskite: experimental and ab-initio studies.** *J.A. Rodriguez¹, D.A. Landinez-Tellez¹, C. Salazar-M¹, P. Pureur², F.E. Fajardo¹ and J. Roa-Rojas¹*. *1. Dept. of Physics, Universidad Nacional de Colombia, Bogotá, D. C., Colombia; 2. Institute of Physics, Universidade Federal do Rio Grande do Sul, Proto Alegre RS, Brazil*
- EO-09. Physical Properties in Powder, Bulk and Thin Films of La_{2/3}Ca_{1/3}CrxMn(1-x)O₃ with Low Doping.** *D.L. Quintero¹ and D. Girata¹*. *1. Physics Institute, Universidad de Antioquia, Medellin, Antioquia, Colombia*
- EO-10. Magnetic relaxation behavior in Nd_{0.5}Sr_{0.5}MnO₃: observation of negative imaginary component of ac magnetic susceptibility.** *A.N. Ulyanov¹, H.D. Quang², K.W. Lee³, S.C. Yu⁴, N.H. Sinh⁵, Y.M. Kang¹ and S.I. Yoo¹*. *1. Department of Materials Science and Engineering, Seoul National University, Seoul 151-744, South Korea; 2. Solid State Physics Group, Department of Physics & Astronomy and SUPA Graduate School, University of Glasgow, G12 8QQ, United Kingdom; 3. Korea Research Institute of Standards and Science, Yusong, Taejon 305-340, South Korea; 4. Department of Physics, Chungbuk National University, Cheongju 361-763, South Korea; 5. Cryogenics Laboratory, Department of Physics, College of Natural Science, Hanoi National University, 334 Nguyen Trai Road, Thanh Xuan, Hanoi, Viet Nam*
- EO-11. Synthesis and characterization of multiferroic polycrystalline transition metal doped BiFeO₃ thin films.** *P. Kharel¹, S. Talebi^{2,1}, C. Sudakar¹, M.B. Sahana¹, V.M. Naik², R. Naik¹ and G. Lawes¹*. *1. Department of Physics and Astronomy, Wayne State University, Detroit, MI; 2. Department of Natural Sciences, University of Michigan-Dearborn, Dearborn, MI*

WEDNESDAY
MORNING
9:00

POLIVALENTE

Session EP
MAGNETODYNAMICS AND
MILLIMETRE WAVE DEVICES
(POSTER SESSION)

Andrei Slavin, Chair

- EP-01. Influence of current induced magnetic inhomogeneities on spin wave propagation.**
T. Neumann¹, A.A. Serga¹, M.P. Kostylev² and B. Hillebrands¹ 1. *Fachbereich Physik und Forschungsschwerpunkt MINAS, TU Kaiserslautern, Kaiserslautern, Germany;* 2. *School of Physics, University of Western Australia, Crawley, WA, Australia*
- EP-02. A YIG/GGG/GaAs-Based Magnetically Tunable Wideband Microwave Band-Pass Filter Using Cascaded Band-Stop Filters*.** G. Qiu¹, B.T. Wang² and C.S. Tsai^{1,3} 1. *Dept of Electrical Engineering and Computer Science, and Institute of Surface and Interface Science, University of California, Irvine, CA;* 2. *Wang, NMR Inc., Livermore, CA;* 3. *Institute of Electrooptics Engineering, National Taiwan University, Taipei, Taiwan*
- EP-03. Bistable control of ferromagnetic resonance frequencies in ferromagnetic trilayered dots.**
Y. Nozaki¹, K. Tateishi¹, S. Taharazako¹, S. Yoshimura¹ and K. Matsuyama¹ 1. *Dept. of Electronics, Kyushu University, Fukuoka, Japan*
- EP-04. An Electric Field Tunable Millimeter-Wave Ferrite-Piezoelectric Phase Shifter.** A.S. Tatarenko¹ and G. Srinivasan¹ 1. *Physics, Oakland University, Rochester, MI*
- EP-05. Design of Scandium and Indium doped hexaferrite microstripline phase shifters for X-band applications.**
T. Sakai¹, C. Chinnasamy¹, V. Ilancheliyan¹, S. Yoon¹, C. Vittoria¹ and V.G. Harris¹ 1. *Electrical&Computer Engineering, Northeastern university, Boston, MA*
- EP-06. Propagation characteristics of magnetostatic surface waves in a YIG-based one-dimensional magnonic crystal composed of rubber magnets.** K. Togo¹, K. Hatafuku¹, M.E. Dokukin¹, J. Kim¹, K. Shin² and M. Inoue¹ 1. *Toyohashi University of Technology, Toyohashi, Japan;* 2. *Kyungsung University, Pusan, South Korea*

EP-07. A magnetosensitive microwave absorption characterization of terbium. *G. Alvarez*¹, *H. Montiel*², *R. Zamorano*³ and *R. Valenzuela*¹. *1. Departamento de Materiales Metálicos y Cerámicos, Instituto de Investigaciones en Materiales de la Universidad Nacional Autónoma de México, Ciudad de México, México DF, Mexico; 2. Centro de Ciencias Aplicadas y Desarrollo Tecnológico de la Universidad Nacional Autónoma de México, Ciudad de México, México DF, Mexico; 3. Departamento de Ciencias de los Materiales, Instituto Politécnico Nacional, Ciudad de México, México DF, Mexico*

EP-08. Magnetic tuning of surface acoustic wave devices within high frequency range. *C. Cavaco*¹, *L.A. Francis*^{2,1}, *L. Lagae*¹ and *G. Borghs*¹. *1. IMEC, Leuven, Belgium; 2. Université catholique de Louvain, Louvain-la-Neuve, Belgium*

EP-09. Microwave Absorption Properties of The Hierarchically Branched Ni Nanowires Composites. *L. Qiao*¹, *J. Wang*¹, *X. Han*¹, *B. Gao*¹, *F. Wen*¹ and *F. Li*¹. *1. Lanzhou University, Institute of Applied Magnetism, Key Laboratory for Magnetism and Magnetic Materials of Ministry of Education, Lanzhou, Gansu, China*

**WEDNESDAY
MORNING
9:00**

POLIVALENTE

**Session EQ
MAGNETIC SEMICONDUCTORS-II
(POSTER SESSION)**

Benjamin Martinez, Chair

EQ-01. Magnetoresistance in Co/ZnO films. *X. Li*^{1,2}, *Z. Quan*², *X. Xu*² and *H. Wu*^{2,1}. *1. College of Chemistry and Chemical Engineering, Taiyuan University of Technology, Taiyuan, Shanxi, China; 2. School of Chemistry and Materials Science, Shanxi Normal University, Linfen, Shanxi, China*

EQ-02. Temperature dependent magneto-transport studies in ferromagnetic $\text{Ge}_{1-x}\text{Mn}_x\text{Te}$. *C. Sim*^{1,2}, *W. Chen*², *S. Lim*², *J. Bi*¹, *K. Teo*¹, *T. Liew*² and *T. Chong*². *1. Electrical & Computer Engineering, National University of Singapore, Singapore, Singapore; 2. Data Storage Institute, Singapore, Singapore*

- EQ-03. Exponential decrease of neutral dangling bonds density in rare-earth doped amorphous Si films.** W. Iwamoto¹, P.G. Pagliuso¹, C. Rettori¹ and A.R. Zanatta². *1. DEQ, IFGW - Unicamp, Campinas, São Paulo, Brazil; 2. Instituto de Física de São Carlos, USP, São Carlos, São Paulo, Brazil*
- EQ-04. Study on absence of room-temperature ferromagnetism in the Mn-AlN films with various Mn concentrations.** T. Sato¹, Y. Endo², Y. Kawamura¹, F. Kirino³, R. Nakatani¹ and M. Yamamoto¹. *1. Department of Materials Science and Engineering, Osaka University, Osaka, Japan; 2. Department of Electrical and Communication Engineering, Tohoku University, Sendai, Japan; 3. Conservation of Cultural Property, Tokyo National University of Fine Arts and Music, Tokyo, Japan*
- EQ-05. Growth parameter dependence of structural characterization of diluted magnetic semiconductor (Ga,Cr)As.** J. Lu¹, J. Bi¹, W. Wang¹, G. Gan¹, H. Meng¹, H. Zheng¹ and J. Zhao¹. *1. State Key Laboratory for Superlattices and Microstructures, Institute of Semiconductors, Chinese Academy of Sciences, Beijing, China*
- EQ-06. Coexistence of ferromagnetism and paramagnetism in highly dilute Ga_{1-x}Mn_xN.** D. Sedmidubský¹, Z. Sofer¹, J. Hejtmánek², M. Maryško² and K. Jurek². *1. Institute of Chemical Technology, Prague, Czech Republic; 2. Institute of Physics ASCR, v.v.i., Prague, Czech Republic*
- EQ-07. Effect of strain relaxation on the anisotropic magnetoresistance of GaMnAs microbars.** E. De Ranieri¹, K. Olejník², K. Vyborný², A.C. Irvine¹, R.P. Campion³, B.L. Gallagher³, T. Jungwirth^{2,3}, H. Siringhaus¹ and J. Wunderlich^{4,2}. *1. Microelectronics Research Centre, University of Cambridge, Cambridge, United Kingdom; 2. Institute of Physics ASCR, Prague, Czech Republic; 3. School of Physics and Astronomy, University of Nottingham, Nottingham, United Kingdom; 4. Hitachi Cambridge Laboratory, Cambridge, United Kingdom*
- EQ-08. Preparation of (Ge_{1-y}Pb_y)_{1-x}Mn_xTe thin films and their magnetic properties.** H. Asada¹, Y. Fukuma², D. Kitabori¹, A. Ohji¹, Y. Kamimoto¹ and T. Koyanagi¹. *1. Department of Materials Science and Engineering, Yamaguchi University, Ube, Japan; 2. Yamaguchi Prefectural Industrial Technology Institute, Ube, Japan*

EQ-09. Properties of ternary rare earth REXY compounds with 18 valence electrons. *F. Casper*¹ and *C. Felser*¹. *Institute for inorganic and analytical chemistry, Mainz, Germany*

EQ-10. Effect of local magnetic field on the transport properties of GaMnAs. *J. Suh*^{1,2}, *J. Chang*¹, *E. Kim*², *M. Sapozhnikov*³ and *A. Fraerman*³. *1. Center for Spintronics Research, KIST, Seoul, South Korea; 2. Quantum-Function Spinics Lab. and Department of Physics, Hanyang University, Seoul, South Korea; 3. Institute for Physics of Microstructures RAS, Nizhny Novgorod, Russian Federation*

**WEDNESDAY
MORNING
9:00**

POLIVALENTE

**Session ER
MAGNETIC SEMICONDUCTORS - III
(POSTER SESSION)**

Alicia Andres, Chair

ER-01. Structural and magnetic properties of Co-doped ZnO thin films. *M. Fonin*¹, *G. Mayer*¹, *S. Voss*¹, *E. Goering*², *U. Rüdiger*¹, *R. Schneider*³ and *D. Gerthsen*³. *1. Fachbereich Physik, Universität Konstanz, Konstanz, Germany; 2. Max Planck-Institut für Metallforschung, Stuttgart, Germany; 3. Laboratorium für Elektronenmikroskopie, Universität Karlsruhe, Karlsruhe, Germany*

ER-02. Ferromagnetism observed in transition metal doped high K oxides. *Q. Wen*¹, *H. Zhang*¹, *Y. Song*¹, *Q. Yang*¹ and *Y. Liu*¹. *1. State Key Laboratory of Electronic Films and Integrated Devices,, University of Electronic Science and Technology of China, Chengdu, Sichuan, China*

ER-03. Evidence of oxygen vacancies enhancing the room temperature ferromagnetism in CeO₂ nanopowders. *M. Li*¹, *S. Ge*¹, *Y. Zuo*¹, *X. Zhou*¹, *L. Zhang*¹ and *S. Yan*¹. *1. Lanzhou University, Lanzhou, China*

- ER-04. Zeeman splitting induced positive magnetoresistance in Co-doped ZnO and Co-doped Cu₂O ferromagnetic nanoparticles.** Y. Tian^{1,2}, J. Antony¹, R. Souza¹, D. Meyer¹, A. Sharma¹ and Y. Qiang¹.
Department of Physics, University of Idaho, Moscow, ID; 2. School of Physics and Microelectronics, Shandong University, Jinan, Shandong, China
- ER-05. ZnO:Co films obtained by oxidation of ZnTe and Co diffusion.** I. Mínguez Bacho¹, O. de Melo^{2,3}, R. Sanz¹, A. Climent-Font^{3,4}, A. Jacas Rodríguez¹ and M. Hernández-Vélez^{1,3}.
1. ICMM-CSIC, Madrid, Spain; 2. Facultad de Física, Universidad de La Habana, La Habana, Cuba; 3. Departamento de Física Aplicada, Universidad Autónoma de Madrid, Madrid, Spain; 4. Centro de Micro-Análisis de Materiales, Universidad Autónoma de Madrid, Madrid, Spain
- ER-06. Magnetic properties of TiO₂/Co₃O₄ system.** A. Serrano¹, A. Quesada^{1,4}, I. Lorite², L. Pérez¹, J. Fernandez², J. Costa-Kramer³, M. Martin-Gonzalez³, S. Steplecaru³, J. Llopis¹ and M. Garcia¹.
1. Dpt Material Science, Universidad Complutense de Madrid, Madrid, Spain; 2. Dpt Electroceramics, Institute for Ceramic and glasses - CSIC, Madrid, Madrid, Spain; 3. Institute of Microelectronics, CSIC, Madrid, Madrid, Spain; 4. Institut for applied magnetism, Universidad Complutense de Madrid, Las Rozas, Madrid, Spain
- ER-07. EXPERIMENTAL EVIDENCE OF DOUBLE-EXCHANGE CONTRIBUTION TO FERROMAGNETISM IN Mn-Zn-O: A XANES ANALYSIS.** A. Quesada^{1,2}, F. Rubio Marcos⁴, M. García², J. Fernández⁴, F. Wilhelm³, A. Rogalev³, J. Llopis² and A. Hernando^{1,2}.
1. Institute of Applied Magnetism, Las Rozas, Madrid., Madrid, Spain; 2. Departamento Física de Materiales, Facultad de Ciencias Físicas. Universidad Complutense de Madrid., Madrid, Madrid, Spain; 3. ID12, European Synchrotron Radiation Facility., Grenoble, Isère, France; 4. Departamento de Cerámica, Instituto de Cerámica y Vidrio.CSIC., Cantoblanco, Madrid, Spain
- ER-08. Ferromagnetism in bulk Co-Zn-O.** E. Enríquez¹, A. Quesada^{1,2}, F. Rubio-Marcos³, L. Pérez¹, I. Lorite³, M. García¹, M. Martín-González⁴, J. Costa-Kramer⁴, S.C. Steplecaru⁴, J. Fernández³ and J. Llopis¹.
1. Dpt. Materials Science, Universidad Complutense de Madrid, Madrid, Madrid, Spain; 2. Institute for applied Magnetism, Universidad Complutense de Madrid, Las Rozas, Madrid, Spain; 3. Institute for Glass and Ceramics, CSIC, Madrid, Madrid, Spain; 4. Institute for Microelectronic, CSIC, Madrid, Madrid, Spain

ER-09. Magnetism and Transport Properties of ZnO films doped with Co or Mn and Al. *G. Gehring*¹, A.J. Behan¹, A. Mokhtari¹, H.J. Blythe¹, D. Score¹, J.R. Neal¹ and M. Fox¹. *Physics and Astronomy, University of Sheffield, Sheffield, United Kingdom*

ER-10. Ferromagnetism of manganese-doped indium tin oxide films deposited on flexible polymer substrates. *T. Nakamura*¹, K. Tanabe¹, S. Isozaki¹ and K. Tachibana¹. *Department of Electronic Science and Engineering, Kyoto University, Kyoto, Japan*

**WEDNESDAY
MORNING
9:00**

POLIVALENTE

**Session ES
RECORDING HEADS
(POSTER SESSION)
Robert Lamberton, Chair**

ES-01. Fabrication of shielded planar type single-pole head. *K. Ise*¹, T. Kiya¹, K. Taguchi¹ and K. Yamakawa¹. *AIT, Akita Prefectural R&D Center, Akita, Japan*

ES-02. New Type Side Shield Head for Ultra High Density Recording. *Y. Kim*¹, S. Kukhyun¹ and K. Na¹. *HDD Core Tech TF, SAIT(Samsung Advanced Institute of Technology), Yongin-Si, Gyeonggi-Do, South Korea*

ES-03. Optimal Side Shield Write Head Design for Ultra High Recording Density. *Y. Kim*¹, S. Kukhyun¹ and K. Shin¹. *HDD Core Tech TF, SAIT(Samsung Advanced Institute of Technology), Yongin-Si, Gyeonggi-Do, South Korea*

ES-04. Magnetic 1/f noise in MgO tunneling magnetoresistive sensors. *N. Smith*¹, D. Mauri¹, J.A. Katine¹ and Y. Hong¹. *Hitachi Global Storage Technologies, San Jose, CA*

ES-05. Proposal of new method to fabricate nano-contacts in CoFe-NOL. *Y. Shiokawa*¹, Y. Saki¹, S. Kawasaki¹, M. Doi¹ and M. Sahashi¹. *Electronic Engineering, Tohoku univ., Sendai, Japan*

- ES-06. Effect of Spin Transfer Torque on 1/f Noise in TMR Heads.** *J. Masuko¹, H. Akimoto¹, H. Kanai¹ and Y. Uehara¹*. *1. Fujitsu Limited, Nagano, Japan*
- ES-07. The role of pre-oxidation on the interface structure of Co/MgO multilayers.** *D.S. Eastwood¹, W.F. Egelhoff, Jr.² and B.K. Tanner¹*. *1. Physics, Durham University, Durham, United Kingdom; 2. National Institute of Standards and Technology, Gaithersburg, MD*
- ES-08. Hard bias effect on magnetic noise in different types of tunnel magnetoresistive heads.** *G. Han¹, B. Zong¹, P. Luo¹ and Z. Guo¹*. *1. Data Storage Institute, A*STAR, Singapore, Singapore*
- ES-09. Effect of annealing and barrier thickness on MgO-based Co/Pt and Co/Pd multilayered perpendicular magnetic tunnel junctions.** *L. Ye¹, C. Lee^{1,2}, J. Syu^{1,3}, Y. Wang¹, K. Lin⁴, Y. Chang⁴ and T. Wu^{1,2,1}*. *Taiwan SPIN Research Center, National Yunlin University of Science and Technology, Douliou, Taiwan; 2. Graduate School of materials science, National Yunlin University of Science and Technology, Douliou, Taiwan; 3. Graduate School of Optoelectronics, National Yunlin University of Science and Technology, Douliou, Taiwan; 4. Laser Application Technology Center, Industrial Technology Research Institute, Tainan, Taiwan*
- ES-10. Effects of Current-Confined-Path on the Spin-Torque Noise in CPP-GMR Heads with a Current-Screen Layer.** *M. Shiimoto¹, H. Katada¹, K. Nakamoto¹ and H. Hoshiya¹*. *1. Central research laboratory, Hitachi, Ltd., Odawara-shi, Kanagawa-ken, Japan*
- ES-11. Electrical 1/f noise in CPP-GMR with current-confined-pass nano-oxide layer.** *M. Shimizu¹, M. Takagishi¹, M. Takashita¹ and H. Iwasaki¹*. *Corporate Research & Development Center, Toshiba corporation, Kawasaki, Japan*
- ES-12. Dependence of Thermal Stability on Cap Layer and Top Lead for Current Screen CPP-GMR Sensor.** *K. Hoshino¹, H. Hoshiya¹ and Y. Sato¹*. *Storage Technology Research Center, Central Research Laboratory, Hitachi, Ltd., Odawara-shi, Japan*

WEDNESDAY
MORNING
9:00

POLIVALENTE

Session ET
MAGNETOELASTIC AND
MAGNETOELECTRIC MATERIALS
(POSTER SESSION)

Nicoleta Lupu, Chair

ET-01. Stoichiometry and sintering temperature influence on magnetostrictive properties of cobalt ferrites.

*L. Boutiuc*¹, *O. Caltun*¹, *I. Dumitru*¹, *M. Feder*², *N. Lupu*³ and *H. Chiriac*³. *1. 'Alexandru Ioan Cuza' University, Iasi, Romania; 2. National Institute of Material Physics, Bucharest, Romania; 3. National Institute of R&D for Technical Physics, Iasi, Romania*

ET-02. Spontaneous magnetostriction of $R_2Fe_{13.6}Si_{3.4}$ (R =

U, Lu). *A.V. Andreev*¹ and *S. Daniš*². *1. Institute of Physics, Prague, Czech Republic; 2. Charles University, Prague, Czech Republic*

ET-03. Tuning the magneto-electric effect of multiferroic composites via crystallographic texture.

*M. Vopsaroiu*¹, *M. Stewart*¹, *M. Cain*¹ and *G. Srinivasan*². *1. Functional Materials, National Physical Laboratory, Teddington, United Kingdom; 2. Physics Department, Oakland University, Rochester, MI*

ET-04. Multiferroic properties of spin-spray deposited $Ni_{0.23}Co_{0.13}Fe_{2.64}O_4$ ferrite film on PZT substrate.

*M. Liu*¹, *O. Obi*¹, *J. Lou*¹, *S. Stoute*¹, *Y. Chen*¹, *V.G. Harris*¹ and *N.X. Sun*¹. *1. Electrical and Computer engineering, Northeastern University, Boston, MA*

ET-05. Stress and magneto-elastic properties control of amorphous $Fe_{80}B_{20}$ thin films during triode sputtering deposition. *I. Fernández-Martínez*¹,

*J.L. Costa-Krämer*¹ and *F. Briones*¹. *1. Inst. Microelectronica Madrid, CNM-CSIC, Tres Cantos, Spain*

ET-06. Poisson ratio of amorphous nanoporous alumina as determined from thermal expansion of Ni nanowires at low temperatures. *C.A. Ramos*¹, *E. Vassallo*

*Brigneti*¹, *S. García*² and *M. Vázquez*². *1. Centro Atómico Bariloche and Insituto Balseiro, Comisión Nacional de Energía Atómica and Universidad Nacional de Cuyo, S. C. de Bariloche, Rio Negro, Argentina; 2. Instituto de Ciencias de Materiales, CSIC, Madrid, Spain*

- ET-07. Customizing the magnetic properties of magnetostrictive amorphous $(\text{Fe}_{80}\text{Co}_{20})_{80}\text{B}_{20}$ multilayers with orthogonal anisotropies by using different buffer layers to control the induced-deposition stress.** *M. González-Guerrero*¹, *J. Prieto*², *P. Sánchez*¹ and *C. Aroca*¹. *Física Aplicada, ETSI Telecomunicación UPM, Madrid, Madrid, Spain*; 2. *ISOM, Universidad Politécnica de Madrid, Madrid, Madrid, Spain*
- ET-08. Low Temperature Magnetoelastic Effects In Template Grown Ferromagnetic Nanowires.** *J. De La Torre Medina*¹, *M. Darques*¹ and *L. Piraux*¹. *Université Catholique de Louvain, Louvain-la-Neuve, Bravant Wallon, Belgium*
- ET-09. Magnetostriction of Fe-Ti alloys.** *C. Bormio-Nunes*¹, *A.B. Belarmino*¹, *C.T. Santos*¹, *V.C. Ugeda*¹, *L. Ghivelder*² and *C.A. Baldan*¹. *Escola de Engenharia de Materiais, Universidade de Sao Paulo, Lorena, Sao Paulo, Brazil*; 2. *Instituto de Física, UFRJ, Rio de Janeiro, RJ, Brazil*

**WEDNESDAY
MORNING
9:00**

POLIVALENTE

**Session EU
FERRITE DYNAMICS AND
APPLICATIONS
(POSTER SESSION)
Patrick Queffelec, Chair**

- EU-01. Picosecond magnetization dynamics of single-crystal Fe_3O_4 thin films.** *C. Bunce*¹, *J. Wu*¹, *R. Chantrell*¹, *Y. Lu*² and *Y. Xu*². *Department of Physics, University of York, York, United Kingdom*; 2. *Electronics, University of York, York, United Kingdom*
- EU-03. Deconvolution of the ferromagnetic resonance absorption through the Verwey transition of magnetite.** *H. Montiel*¹, *G. Alvarez*², *R. Valenzuela*² and *R. Zamorano*³. *1. Tecnociencia, CCADET-UNAM, Mexico DF, Mexico DF, Mexico*; 2. *Metálicos y Cerámicos, IIM-UNAM, Mexico D.F., Mexico, D.F., Mexico*; 3. *Física, ESFM-IPN, Mexico D.F., Mexico, D.F., Mexico*

- EU-04. Dynamic Magnetic Properties of NiFe₂O₄ Nanoparticles Embedded in SiO₂ Matrix.** S. Mitra¹, K. Mandal¹ and E. Choi². *1. Materials Science, S. N. Bose National Centre for Basic Sciences, Kolkata, West Bengal, India; 2. National High Magnetic Field Laboratory, Tallahassee, FL*
- EU-05. Analyzing the permeability and permittivity dispersion spectra of (Ni_{0.4}Zn_{0.59}Co_{0.01})Fe_{1.98}O₄ spinel ferrites with Fe deficiency.** M. Han¹ and L. Deng¹. *1. State Key Laboratory of Electronic Thin Films and Integrated Devices, University of Electronic Science and Technology of China, Chengdu, Sichuan, China*
- EU-06. Magnetic and Microwave properties Sm-doped SrFe₁₂O₁₉ single crystals.** J. Jalli^{1,2}, Y. Hong^{1,2}, S. Gee^{1,3}, J. Lee^{1,2}, S. Bae^{1,2}, G.S. Abo^{1,2}, A. Lyle^{1,2}, H. Han^{1,2}, J. Kim⁴, H. Lee⁴ and S. Lee⁴. *1. Electrical and Computer Engineering, University of Alabama, Tuscaloosa, AL; 2. MINT Center, University of Alabama, Tuscaloosa, AL; 3. Seagate Technology, Bloomington, MN; 4. Pohang Superconductivity Center, Pohang University of Science and Technology, Pohang, South Korea*
- EU-07. Relaxation Effect of NiCr_{1.8}In_{0.1}Fe_{0.1}O₄ with Magnetic Anisotropy.** S. Park¹, D. Choi¹ and C. Kim¹. *1. Department of Physics, Kookmin University, Seoul, South Korea*
- EU-08. Temperature dependence of magnetic losses in soft ferrites.** F. Fiorillo¹, C. Beatrice¹ and L. Zhemchuzhna¹. *1. Istituto Nazionale di Ricerca Metrologica INRIM, Torino, Italy*
- EU-09. Suppression of GHz noise emitted from a four-layered PWB with a ferrite-plated inner ground layer.** S. Yoshida¹, K. Kondo¹ and T. Kubodera². *1. NEC TOKIN Corporation, Sendai Miyagi, Japan; 2. System Design Laboratory Co., Ltd., Ebina Kanagawa, Japan*
- EU-10. Fabrication of novel chip temperature sensing device using Mn substituted Li-Zn-Cu ferrite.** M. Naoe¹, M. Oishi¹, S. Okazaki¹, T. Sato¹, K. Yamasawa¹ and Y. Miura¹. *1. Spin Device Technology Center, Shinshu University, Nagano, Japan*

- EU-11. Effect of Co-Z type ferrite on broadband antenna miniaturization.** *J. Choi*¹, *K. Moon*¹, *J. Kim*¹ and *I. Kim*². *1. Metallurgy and materials engineering, Hanyang university, Ansan, South Korea; 2. Central R&D institute, Samsung eletro-mechanics Co. LTD., Suwon, South Korea*

WEDNESDAY
MORNING
9:00

POLIVALENTE

Session EV
MAGNETORESTRIVTIVE SHAPE
MEMORY ALLOYS/DEVICES
(POSTER SESSION)
Simon Busbridge, Chair

- EV-01. Enhancement of magnetostriction in internally-biased Terfenol-D 2-2 composites.** *L. Garcia-Gancedo*¹, *S.C. Busbridge*² and *T.W. Button*¹. *1. IRC in Materials Processing, School of Engineering, University of Birmingham, Birmingham, United Kingdom; 2. School of Environment and Technology, University of Brighton, Brighton, United Kingdom*
- EV-02. Magnetoelastic properties of Tb-Dy-Ho-Fe-Co alloys.** *I. Tereshina*¹, *G. Burkhanov*¹, *O. Chistyakov*¹, *S. Nikitin*² and *G. Politova*². *1. Baikov Institute of Metallurgy and Material Science RAS, Moscow, Russian Federation; 2. Faculty of Physics, M.V. Lomonosov Moscow State University, Moscow, Russian Federation*
- EV-03. Modeling of bimorph type cantilever for actuators.** *G. Yun*^{1,2} and *B. Narsu*¹. *1. department of physics, inner mongolia university, Hohhot, inner mongolia, China; 2. department of physics, inner mongolia normal university, Hohhot, inner mongolia, China*
- EV-04. Microstructure and magnetic properties of Fe-Ga composite.** *K. Perduta*¹, *S. Busbridge*¹ and *M. Nabialek*². *1. School of Engineering, University of Brighton, Brighton, United Kingdom; 2. Institute of Physics, Czestochowa University of Technology, Czestochowa, Poland*

- EV-05. Giant Magnetostriction on the Metamagnetic Transition of the Ho₅Ge₄** *A.M. Pereira*¹, *P. Algarabel*², *C. Sacristan*³, *L. Morellon*^{2,3}, *C. Magen*⁴, *M.R. Ibarra*^{2,3}, *J.B. Sousa*¹ and *J.P. Araujo*¹ *1. IFIMUP Faculdade de Ciências da Universidade do Porto, Porto, Portugal; 2. ICMA - Universidad de Zaragoza and Consejo Superior de Investigaciones Científicas, Zaragoza, Spain; 3. Instituto de Nanociencia de Aragón, Universidad de Zaragoza, Zaragoza, Spain; 4. Oak Ridge Natl Lab, High Temp Mat Lab, Oak Ridge, TN*
- EV-06. Voltage controlled magnetic properties of polycrystalline Terfenol-D film on PMN-PT single crystal substrate.** *J. Kim*¹, *V. Ravindranath*¹ and *S. Shin*¹ *1. Physics, KAIST, Daejeon, South Korea*
- EV-07. Study of giant magnetostrictive acceleration sensors.** *R. Yan*¹, *Q. Yang*¹, *W. Yang*¹, *S. Hou*^{1,2}, *F. Liu*¹ and *W. Yan*¹ *1. Hebei University of Technology, Tianjin, China; 2. Tianjin University of Commerce, Tianjin, China*
- EV-08. Influence of the magnetic anisotropy on the magnetic entropy change of Ni₂MnGa memory shape alloy.** *J.C. Leitão*¹, *D. Rocco*¹, *J. Amaral*¹, *M. Reis*¹, *V. Amaral*¹, *N. Martins*² and *P. Tavares*² *1. Physics, Universidade de Aveiro, Aveiro, Aveiro, Portugal; 2. Chemistry, Universidade de Trás-os-Montes e Alto Douro, Vila Real, Vila Real, Portugal*
- EV-09. Coincidence of magnetic and martensitic transition in NiMnGa thin films obtained by changing growth parameters.** *F. Albertini*¹, *F. Casoli*¹, *S. Fabbri*¹, *L. Righi*², *V.A. Chernenko*³, *S. Besseghini*³ and *A. Gambardella*³ *1. IMEM-CNR, Parma, Italy; 2. Dipartimento Chimica GIAF, Università di Parma, Parma, Italy; 3. IENI – CNR, Lecco, Italy*
- EV-10. MFM domain imaging of textured Ni-Mn-Ga/substrate thin film composites.** *R. Lopez Anton*^{1,2}, *V. Chernenko*³, *J. Barandiaran*⁴, *I. Orue*⁴, *S. Besseghini*³, *M. Ohtsuka*⁵ and *A. Gambardella*³ *1. ISIS, STFC Rutherford Appleton Laboratory, Didcot, United Kingdom; 2. ICMA, CSIC-Universidad de Zaragoza, Zaragoza, Spain; 3. CNR-IENI, Lecco, Italy; 4. Universidad del Pais Vasco, Bilbao, Spain; 5. IMRAM, Tohoku University, Sendai, Japan*

WEDNESDAY
MORNING
9:00

POLIVALENTE

Session EW
MULTIFERROICS, FERRITES AND
OTHER MATERIALS
(POSTER SESSION)

Aria Yang, Chair

- EW-01. Substrate dependent structure and magnetic properties in HoMnO₃ films.** *T. Han*¹ and *J. Lin*². *1. Department of Applied Physics, National University of Kaohsiung, Kaohsiung, Taiwan; 2. Center for Condensed Matter Sciences, National Taiwan University, Taipei, Taiwan*
- EW-02. Effect of iron-doping on the structural and magnetic properties of LuMnO₃.** *J. Lin*¹ and *T. Han*². *1. Center for Condensed Matter Sciences, National Taiwan University, Taipei, Taiwan; 2. Department of Applied Physics, National University of Kaohsiung, Kaohsiung, Taiwan*
- EW-03. Magnetic hysteresis in ErFeO₃ near the 4.1 K ordering transition.** *L.T. Tsymbal*¹, *Y.B. Bazaliy*^{2,3}, *G.N. Kakazei*^{3,4}, *F.J. Palomares*⁴ and *P.E. Wigen*⁵. *1. O. Galkin Donetsk Physics and Technology Institute, Donetsk, Ukraine; 2. University of South Carolina, Columbia, SC; 3. Institute of Magnetism, National Academy of Science, Kyiv, Ukraine; 4. Instituto de Ciencia de Materiales de Madrid, Madrid, Spain; 5. Ohio State University, Columbus, OH*
- EW-04. Mössbauer studies of ⁵⁷Fe-doped in LiCoPO₄ at low temperatures.** *S. Moon*¹ and *C. Kim*¹. *1. Department of Physics, Kookmin University, Seoul, South Korea*
- EW-05. Effects of gallium distribution on terbium bismuth gallium iron garnet.** *I. Park*¹ and *C. Kim*¹. *1. Physics, Kookmin University, Seoul, South Korea*
- EW-06. Physical properties of Fe_{3-x}Mg_xO₄ ferrite films on MgO(001) and SrTiO₃(001) grown by molecular beam epitaxy.** *D. Lee*¹ and *G. Chern*². *1. Electrical Engineering Department, Da-Yeh University, Chang-Hua, Taiwan; 2. Physics, National Chung Cheng University, Chia-Yi, Taiwan*

EW-07. Enhancement of magnetoelastic properties of highly magnetostrictive cobalt ferrite through control of sintering conditions. *I. Nlebedim*¹, N. Ranvah¹, A.J. Moses¹, D.C. Jiles¹, P.I. Williams¹, Y. Melikhov¹, J.E. Snyder¹ and F. Anayi¹. *Wolfson Centre for Magnetism, Cardiff School of Engineering, Cardiff, United Kingdom*

EW-08. Comparative study of the microstructural and magnetic properties of cobalt ferrites synthesized by ceramic and oxidation wet methods. M. Feder², L. Diamandescu², I. Bibicu², O.F. Caltun¹, I. Dumitru¹, L. Boutiuc Hrib¹, H. Chiriac³, N. Lupu³, M. Vilceanu⁴ and V. Vilceanu⁴. *1. Physics, Al, I. Cuza University, Iasi, Romania; 2. National Institute of Materials Physics, Bucharest-Magurele, Romania; 3. National Institute of R&D for Technical Physics, Iasi, Romania; 4. AferoExim ltd., Buharest, Romania*

EW-09. Nonequilibrium cation influence on the Néel temperature in ZnFe₂O₄. *I. Al-Omari*¹, H.M. Widadallah¹, F.R. Sives² and S.J. Stewart^{1,2}. *1. Physics, Sultan Qaboos University, Muscat, Oman; 2. IFLP-CONICET and Departamento de Física, Universidad Nacional de La Plata, La Plata, Argentina*

EW-10. Synthesis and magnetic properties of surface coated magnetite superparamagnetic nanoparticles. K. Kim¹, M. Kim², Y. Choa², Y. Cha¹, T. Hwang¹ and D. Kim¹. *1. Dept. of Physics, Yeungnam University, Gyeongsan, South Korea; 2. Dept. of Chemical Engineering, Hanyang University, Ansan, South Korea*

EW-11. Magnetic properties of Hf_{1-x}R_xFe₆Ge₆ compounds. J. Rubin¹, C. Piquer¹, N. Plugaru¹, J. Bartolomé¹ and F. Grandjean². *1. Instituto de Ciencia de Materiales de Aragón, 50009 Zaragoza, Spain; 2. Dept. of Physics, Université de Liège, B-4000 Sart-Tilman, Belgium*

EW-12. Mössbauer study of iron sulfide nano-compound. S. Hyun¹, I. Shim¹ and C. Kim¹. *1. Physics, Kookmin University, SEOUL, South Korea*

EW-13. Preparation of Metal-Polymer composite films by metal-polymer co-electrodeposition method. N. Fujita¹, M. Matsuba¹, Y. Toujou¹, T. Kazuya¹, N. Satoru¹, I. Masanobu² and I. Mitsuteru². *1. Nara National College of Technology, Yamatokoriyama, Japan; 2. Toyohashi University of Technology, Toyohashi, Japan*

EW-14. Nonlinear homogenisation technique for saturable soft magnetic composites. *O. Bottauscio*¹, *M. Codegone*³, *V. Chiado' Piat*³, *M. Chiampi*² and *A. Manzin*¹. *Electromagnetics, Istituto Nazionale di Ricerca Metrologica, Torino, Italy; 2. Dip. Ingegneria Elettrica, Politecnico di Torino, Torino, Italy; 3. Dip. Matematica, Politecnico di Torino, Torino, Italy*

EW-15. Structural and magnetic properties of nanocrystalline strontium hexaferrite prepared by an ionic reaction technique. *J. Araujo*¹, *F. Cabral*^{1,4}, *J. Soares*², *M. Ginani*³, *F. Machado*⁴ and *J. Cunha*⁵. *1. Departamento de Física Teórica e Experimental, Universidade Federal do Rio Grande do Norte, Natal, Rio Grande do Norte, Brazil; 2. Departamento de Física, Universidade do Estado do Rio Grande do Norte, Mossoró, Rio Grande do Norte, Brazil; 3. Departamento de Química, Universidade Federal do Rio Grande do Norte, Natal, Rio Grande do Norte, Brazil; 4. Departamento de Física, Universidade Federal de Pernambuco, Recife, Pernambuco, Brazil; 5. Instituto de Física, Universidade Federal do Rio Grande do Sul, Porto Alegre, Rio Grande do Sul, Brazil*

**WEDNESDAY
MORNING
9:00**

POLIVALENTE

**Session EX
MAGNETIC TUNNEL JUNCTIONS -II
(POSTER SESSION)
Berthold Ocker, Chair**

EX-01. Tunnel spin-polarization of low-work-function ferromagnets. *R. Patel*¹, *B. Min*¹, *S. Dash*¹, *M. de Jong*¹ and *R. Jansen*¹. *MESA+ Institute for Nanotechnology, University of Twente, Enschede, Netherlands*

EX-02. Strain dependence of magnetoresistance in magnetostrictive magnetic tunnel junctions. *J.G. Deak*¹. *Advanced Technology, NVE Corporation, Eden Prairie, MN*

EX-03. Broadband Ferromagnetic Resonance Linewidth Measurements of Magnetic Tunnel Junction Multilayers. *J. Sierra*¹, *F. Aliev*¹, *R. Heindl*², *S. Russek*² and *W. Rippard*². *1. Condensed Matter Physics, UAM, Madrid, Spain; 2. NIST, Boulder, CO*

- EX-04. Effect of interface roughness on magnetoresistance and magnetization switching in magnetic tunnel junction.** *B. Chun*¹, *M. Coey*¹, *S. Lee*², *J. Hwang*², *J. Rhee*², *H. Yim*², *T. Kim*³, *Y. Kim*⁴ and *Y. Kim*⁴. *1. School of Physics, Trinity College, Dublin, Ireland; 2. Department of Physics, Sookmyung Women's University, Seoul, South Korea; 3. Nanotechnology and Advanced Materials Engineering, Sejong University, Seoul, South Korea; 4. Department of Materials Science and Engineering, Korea University, Seoul, South Korea*
- EX-05. Appearance of a tunneling spectrum peak by electrical breakdown of tunneling junction.** *K. Horikiri*¹ and *K. Shiiki*¹. *Applied Physics and Physico-Informatics, Keio University, Yokohama, Kanagawa, Japan*
- EX-06. Magnetostriction and tunneling magnetoresistance of Co/AlOx/Co/IrMn junctions.** *Y. Chen*^{1,2}, *S. Jen*^{1,2} and *Y. Yao*^{2,1}. *1. Institute of Physics, Academia Sinica, Institute of Physics, Taipei, Taiwan; 2. Department of Materials Engineering, Department of Materials Engineering, Tatung University, Taipei, Taiwan*
- EX-07. Magneto-transport in a single nano-object with a conductive AFM.** *P. Zermatten*¹, *G. Gaudin*¹ and *A. Schuhl*¹. *1. SPINTEC, CEA/CNRS, Grenoble, France*
- EX-08. Huge electron mean free path in MgO - Detection of the valence band in buried Co₂MnSi-MgO half-metallic ferromagnetic tunnel junctions by means of photo emission spectroscopy.** *B. Balke*¹, *G.H. Fecher*¹, *A. Gloskowskii*¹, *S. Ouardi*¹, *C. Felser*¹ and *M. Yamamoto*². *1. University Mainz, Mainz, Germany; 2. Graduate School of Informatic Science and Technology, Hokkaido University, Sapporo, Japan*
- EX-09. X-ray magnetic dichroism studies of half-metallic Heusler alloys and magnetic tunnel junctions.** *N.D. Telling*¹, *P.S. Keatley*², *G. van der Laan*^{1,5}, *R.J. Hicken*², *E. Arenholz*³, *Y. Sakuraba*⁴, *M. Oogane*⁴, *Y. Ando*⁴ and *T. Miyazaki*⁴. *1. Magnetic Spectroscopy Group, STFC Daresbury Laboratory, Warrington, United Kingdom; 2. School of Physics, University of Exeter, Exeter, United Kingdom; 3. Advanced Light Source, Lawrence Berkeley National Laboratory, Berkeley, CA; 4. Department of Applied Physics, Tohoku University, Aoba-yama 6-6-05, Japan; 5. Diamond Light Source Ltd, Harwell Science and Innovation Campus, Didcot, Oxfordshire, United Kingdom*

- EX-10. Fabrication of magnetic tunnel junctions with Co_2FeSi Heusler alloy and MgO crystalline barrier.** *W. Lim*¹, *G. Choi*¹ and *T. Lee*¹. *Department of Materials Science and Engineering, KAIST, Daejeon, South Korea*
- EX-11. (110) manganite electrodes for magnetic tunnel junctions.** *I.C. Infante*¹, *F. Sánchez*¹, *J. Fontcuberta*¹, *S. Fusil*², *K. Bouzehouane*², *G. Herranz*² and *A. Barthélémy*². *1. Magnetic Materials and their Applications, Institut de Ciència de Materials de Barcelona, Bellaterra, Barcelona, Spain; 2. Unité Mixte de Physique CNRS/Thales, Orsay, France*
- EX-12. Magneto-transport characteristics of magnetic tunnel junction with a synthetic antiferromagnetic amorphous CoFeSiB free-layer.** *B. Chun*¹, *M. Coey*¹, *S. Lee*², *J. Hwang*², *J. Rhee*², *H. Yim*², *T. Kim*³ and *Y. Kim*⁴. *1. School of Physics, Trinity College, Dublin, Ireland; 2. Department of Physics, Sookmyung Women's University, Seoul, South Korea; 3. Nanotechnology and Advanced Materials Engineering, Sejong University, Seoul, South Korea; 4. Department of Materials Science and Engineering, Korea University, Seoul, South Korea*
- EX-13. Structure and magnetic properties of epitaxial full-Heusler alloy $\text{Co}_2\text{FeAl}_{0.5}\text{Si}_{0.5}$ films on MgO-buffered MgO (001) substrates and TMR using their electrodes.** *H. Sukegawa*^{1,2}, *W. Wang*², *R. Shan*² and *K. Inomata*². *1. International Center for Young Scientists (ICYS), National Institute for Materials Science (NIMS), Tsukuba, Japan; 2. Magnetic Material Center, National Institute for Materials Science (NIMS), Tsukuba, Japan*
- EX-14. Coherent effects for electronic equilibrium and transport in perfect magnetic junctions.** *Y.G. Pogorelov*¹ and *H.G. Silva*^{2,1}. *1. IFIMUP/IN, Universidade do Porto, Porto, Porto, Portugal; 2. CEOT, Universidade do Algarve, Faro, Algarve, Portugal*
- EX-15. Spin Transport in a Double Magnetic Tunnel Junction Quantum Dot System with Noncollinear Magnetization.** *M. Ma*¹ and *M. Jalil*¹. *Department of Electrical and Computer Engineering, Information Storage Materials Laboratory, Singapore, Singapore*

WEDNESDAY
AFTERNOON
2:30

AUDITORIO A

Session FA
SYMPOSIUM ON SPIN TORQUE
TRANSFER FOR MRAM

J. Wang, Chair

2:30

FA-01. Spin torque effects in magnetic nanostructures.
(Invited) R. Buhrman¹1. Cornell University, Ithaca, NY

3:00

FA-02. The development of magnetic tunnel junction memory: from first devices to Mbit MRAMs to emerging spin-torque transfer MRAMs. *(Invited) W.J. Gallagher¹1. IBM Watson Research Center, Yorktown Heights, NY*

3:30

FA-03. Spin torque devices for high density MRAM and nano-oscillators. *(Invited) N.D. Rizzo¹, R.W. Dave¹, F.B. Mancoff¹, P.G. Mather¹, B. Butcher¹ and S. Tehrani¹1. Technology Solutions Organization, Freescale Semiconductor, Chandler, AZ*

4:00

FA-04. Spin Torque Transfer Switching of Perpendicular Magnetoresistive elements for High Density MRAMs. *(Invited) H. Yoda¹, T. Kishi¹, T. Kai¹, T. Nagase¹, M. Yoshikawa¹, M. Nakayama¹, E. Kitagawa¹, M. Amano¹, H. Aikawa¹, N. Shimomura¹, K. Nishiyama¹, T. Daibou¹, S. Takahashi¹, S. Ikegawa¹, K. Yakushiji², T. Nagahama², H. Kubota², A. Fukushima², S. Yuasa², Y. Nakatani³, M. Oogane⁴, Y. Ando⁴, Y. Suzuki^{5,2}, K. Ando² and T. Miyazaki⁶1. Corporate R & D center, Toshiba, Kawasaki, Japan; 2. Nanoelectronics Research Institute, AIST, Tsukuba, Japan; 3. Computer Science, The University of Electro-Communications, Tokyo, Japan; 4. Applied Physics, Tohoku University, Sendai, Japan; 5. Materials Engineering Science, Osaka University, Osaka, Japan; 6. WPI Advanced Institute for Materials Research, Tohoku University, Sendai, Japan*

WEDNESDAY
AFTERNOON
2:30

MADRID

Session FB
SPIN INJECTION AND SPIN HALL
EFFECT

M Jong, Chair

2:30

- FB-01. Giant Spin Hall Effect in Perpendicularly Spin-Polarized FePt/Au Devices. (Invited) T. Seki¹, Y. Hasegawa¹, S. Mitani¹, K. Takanashi¹, S. Takahashi^{1,2}, S. Maekawa^{1,2}, H. Imamura^{3,2} and J. Nitta⁴***1. Institute for materials research, Tohoku Univ., Sendai, Japan; 2. CREST, Japan Science and Technology Agency, Tokyo, Japan; 3. National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan; 4. Graduate School of Engineering, Tohoku University, Sendai, Japan*

3:00

- FB-02. Electrical Generation, Modulation and Detection of Spin Currents in Silicon in a Lateral Transport Geometry.** *B. Jonker¹, O. van 't Erve¹, G. Kioseoglou¹, A. Hanbicki¹, C. Awo-Affouda¹, M. Holub¹, C. Li¹ and P. Thompson¹**1. Naval Research Laboratory, Washington, DC*

3:15

- FB-03. Electrical transport properties of MgO/ferromagnet contacts to p-Si for spin injection and detection.** *T. Dimopoulos¹, T. Uhrmann¹, D. Schwarz¹, V. Lazarov², D. Kirk², A. Kohn², S. Weyers³, U. Paschen³ and H. Brückl¹**1. Nano-System-Technologies, Austrian Research Centers GmbH - ARC, Vienna, Austria; 2. Department of Materials, University of Oxford, Oxford, United Kingdom; 3. Microelectronic Circuits and Systems, Fraunhofer Institute, Duisburg, Germany*

3:30

- FB-04. Spin Coulomb Drag: a Limitation for Spintronics?**
(Invited) I. D'Amico¹ and C.A. Ullrich² *1. Physics, University of York, York, United Kingdom; 2. Physics and Astronomy, University of Missouri-Columbia, Columbia, MO*

4:00

- FB-05. Organic spintronics: on the spin injection at the CuPc/GaAs interface.** M. Cinchetti¹, H. Ding², Y. Gao², J. Wüstenberg¹, M. Sánchez Albaneda¹, O. Andreyev¹, M. Bauer¹ and M. Aeschlimann¹ *1. Department of Physics, University of Kaiserslautern, Kaiserslautern, Germany; 2. Department of Physics and Astronomy, University of Rochester, Rochester, NY*

4:15

- FB-06. Spin injection through MgO tunnel barrier in an InAs quantum well semiconductor.** S.H. Shim^{1,2}, Y.J. Park^{1,3}, J. Chang¹, Y. Lee², J. Moodera³ and S. Han¹ *1. Center for Spintronics Research, Korea Institute of Science and Technology, Seoul, South Korea; 2. National Research Laboratory for Nano Device Physics, Department of Physics, Korea University, Seoul, South Korea; 3. Francis Bitter Magnet Laboratory, Massachusetts Institute of Technology, Cambridge, MA*

WEDNESDAY

ROMA

AFTERNOON

2:30

Session FC**MAGNETO-ELECTRONICS DEVICES**

Claude Chappert, Chair

2:30

- FC-01. High sensitivity spin valve sensors with antiferromagnetically coupled flux guides.**
 I.G. Trindade^{1,2}, J. Oliveira², J. Teixeira², J.B. Sousa^{1,2}, P.P. Freitas³, S. Cardoso³ and R.C. Chaves³ *1. Physics, Faculdade de Ciências da Universidade do Porto, Porto, Portugal; 2. IFIMUP-IN, Porto, Portugal; 3. INESC-MN-IN, Lisboa, Portugal*

2:45

- FC-02. Gate Controlled Magnetoresistance in a Ballistic Nanodevice.** S. Kumar^{1,2}, S. Tan¹ and M. Jalil² 1. *SMI, Data Storage Institute, Singapore, Singapore*; 2. *ISML, ECE, National University of Singapore, Singapore, Singapore*

3:00

- FC-03. Magnetic-tunnel-junction-based programmable logic devices by spin transfer torque switching.** X. Yao¹, Y. Zhang¹, H. Meng¹ and J. Wang¹ 1. *MINT Center & Electrical and Computer Engineering Department, Univ. Of Minnesota, Minneapolis., MN*

3:15

- FC-04. Transport properties of fully epitaxial magnetic tunnel transistor with a MgO barrier.** T. Nagahama¹, H. Saito^{1,2} and S. Yuasa¹ 1. *AIST, Tsukuba, Ibaraki, Japan*; 2. *PRESTO, Japan Science and Technology Agency, Kawaguchi, Saitama, Japan*

3:30

- FC-05. A Planar Magnetic Content Addressable Memory Cell.** W. Wang¹ and Z. Jiang¹ 1. *Electrical Engineering, University of Wisconsin - Milwaukee, Milwaukee, WI*

3:45

- FC-06. Investigation on Magneto-Optoelectronic properties in Metal/Organic Heterostructure Films.** N. Lee¹, T. Kim¹, J. Lee², H. Cho³ and C. Lee³ 1. *Department of Physics, Ewha Womans University, Seoul, South Korea*; 2. *Microgate, Inc., Anyang, South Korea*; 3. *School of Electrical Engineering & Computer Science, Seoul National University, Seoul, South Korea*

4:00

FC-07. Electrical switching controlled by magnetic field.

J. Lee¹, S. Joo^{1,4}, T. Kim¹, J. Hong^{1,4}, K. Rhie^{1,4},
 B. Lee², T. Kim³ and K. Shin⁴. *1. Applied Physics, Korea
 University, Chochiwon, South Korea; 2. Physics, Inha
 University, Incheon, South Korea; 3. Physics, Pohang
 University of Science and Technology, Pohang, South
 Korea; 4. Korea Institute of Science and Technology,
 Seoul, South Korea*

4:15

FC-08. Micromagnetic Investigation of Interaction between Spin-Polarized Current and Spin-wave.

S. Seo¹ and
 K. Lee¹. *1. Korea University, Seoul, South Korea*

WEDNESDAY

PARIS

AFTERNOON

2:30

Session FD**MAGNETIC OXIDES & HEUSLER
 ALLOYS II**

Jacobo Santamaria, Chair

2:30

FD-01. Ferromagnetic oxides for spin filtering. (Invited)

J. Fontcuberta¹, A. Barthelemy², M. Bibes²,
 U. Lüders¹, M. Gajec², K. Bouzehouane², J.F. Bobo³,
 S. Fusil², E. Jacquet², J.P. Contour², A. Fert²,
 F. Sánchez¹, X. Martí¹, F. Rigato¹, V. Laukhin¹,
 V. Skumryev¹ and M. Varela⁴. *1. ICMAB-CSIC,
 Bellaterra, Spain; 2. Unité Mixte de Physique CNRS-
 Thales., Palaiseau, France; 3. Lab. de Nanomagnétisme
 pour l'Hyperfréquence CNRS-ONERA, Toulouse,
 France; 4. Dept. Física Aplicada i Òptica. U. Barcelona,
 Barcelona, Spain*

3:00

- FD-02. Giant planar Hall effect in epitaxial Fe_3O_4 thin films and its temperature dependence.** *J.M. De Teresa*¹, *A. Fernandez-Pacheco*^{1,2}, *J. Orna*², *L. Morellon*^{1,2}, *P. Algarabel*¹, *J.A. Pardo*^{2,3} and *R. Ibarra*^{1,2}. *1. Instituto de Ciencia de materiales de Aragon, CSIC-University of Zaragoza, Zaragoza, Spain; 2. Instituto de Nanociencia de Aragon, University of Zaragoza, Zaragoza, Spain; 3. Departamento de Ciencia y Tecnologia de Materiales y Fluidos, University of Zaragoza, Zaragoza, Spain*

3:15

- FD-03. Time resolved precessional magnetization dynamics in Fe_3O_4 thin films measured by pulsed inductive microwave magnetometry.** *S. Serrano-Guisan*¹, *C. Boothman*², *M. Abid*², *J.D. Coey*² and *H.W. Schumacher*¹. *1. Physikalisch-Technische Bundesanstalt, Braunschweig, Germany; 2. CRANN and School of Physics, Trinity College, Dublin, Ireland*

3:30

- FD-04. Angular dependence of the magnetoresistance measured across a single-grain boundary.** *L.B. Steren*¹, *G. Alejandro*¹, *J.C. Rojas Sanchez*¹, *E.N. Monteblanco Vincas*¹ and *H. Pastoriza*¹. *1. Physics, Centro Atomico Bariloche, S.C. Bariloche, Rio Negro, Argentina*

3:45

- FD-05. Antiferromagnetic Heusler compounds with high spin-polarization.** *G. Liu*¹, *X. Dai*¹, *G. Fecher*¹ and *C. Felser*¹. *1. Institution for Inorganic and Analytical Chemistry, Johannes Gutenberg University of Mainz, Mainz, Germany*

4:00

- FD-06. Exchange constant and magnetic anisotropy in Co₂-based Heusler compounds.** *J. Hamrle*¹, *O. Gaier*¹, *B. Hillebrands*¹, *M. Jourdan*², *H. Schneider*², *G. Jakob*², *T. Kubota*³, *Y. Sakuraba*³, *M. Oogane*³, *Y. Ando*³ and *C. Felser*⁴. *1. Fachbereich Physik, Technische Universität Kaiserslautern, Kaiserslautern, Germany; 2. Institut für Physik, Johannes-Gutenberg-Universität, Mainz, Germany; 3. Department of Applied Physics, Graduate School of Engineering, Tohoku University, Sendai, Japan; 4. Institute of Inorganic and Analytical Chemistry, Johannes-Gutenberg-Universität, Mainz, Germany*

4:15

- FD-07. Spin transitions in DyCoO₃ investigated by measuring the electric quadrupole interactions.** *F.H. Cavalcante*¹, *A.W. Carbonari*¹, *G.A. Cabrera-Pasca*¹, *J. Mestnik-Filho*¹ and *R.N. Saxena*¹. *CRPq, IPEN, Sao Paulo, Sao Paulo, Brazil*

**WEDNESDAY
AFTERNOON
2:30**

LONDRES

Session FE**LIFE SCIENCE AND APPLICATIONS II**

Angel Millan, Chair

2:30

- FE-01. Prototyping and Evaluation of Magnetic Communication Coils between Inside and Outside of Body for Controlling FES.** *K. Kato*¹, *M. Goto*¹, *K. Sugano*¹, *M. Miyashita*¹, *F. Sato*¹, *H. Matsuki*¹, *Y. Handa*² and *T. Sato*³. *1. Department of Electrical and Communication Engineering, Graduate School of Engineering, Tohoku University, Sendai, Miyagi, Japan; 2. Graduate School of Medicine, Tohoku University, Sendai, Japan; 3. NEC TOKIN Corp., Sendai, Japan*

2:45

- FE-02. Bone Tissue Engineering using Magnetically Oriented Collagen.** *T. Shinohara*¹, *T. Saito*², *D. Saito*¹, *A. Nakahira*³, *M. Aoki*⁴ and *M. Kotani*² *1. Research Institute for Advanced Technologies, Tokyo Denki University, Inzai-shi, Chiba Pref., Japan; 2. Graduate School of Engineering, Tokyo Denki University, Kanda, Tokyo, Japan; 3. Graduate School of Engineering, Osaka Prefecture University, Sakai, Japan; 4. Neomax, Hitachi Metals, Ltd, Oomachichou, Saga Pref., Japan*

3:00

- FE-03. Modification of motor evoked potentials caused by electrical peripheral nerve stimulation in transcranial magnetic stimulation.** *O. Hiwaki*¹, *M. Odagaki*¹, *F. Hiroshi*¹, *A. Kodabashi*² and *T. Fujimoto*² *1. Graduate School of Information Sciences, Hiroshima City University, Hiroshima, Japan; 2. Fujimoto Hayasuzu Hospital, Miyakonojyo, Japan*

3:15

- FE-04. Detection of the terrestrial magnetism in migrating birds: Is it a question of vision?** *S. Migalski*^{1,2}, *T. Meydan*², *J.T. Erichsen*¹ and *V.P. Bingman*³ *1. Optometry and Vision Sciences, Cardiff University, Cardiff, United Kingdom; 2. Engineering, Cardiff University, Cardiff, United Kingdom; 3. Psychology, Bowling Green State University, Bowling Green, OH*

3:30

- FE-05. Computation of Current Distribution in Rat Head by Transcranial Magnetic Stimulation and Electroconvulsive Therapy.** *M. Lu*¹, *S. Ueno*², *T. Thorlin*³, *P. Miranda*¹ and *M. Persson*⁴ *1. Institute of Biophysics and Biomedical Engineering, Faculty of Sciences, University of Lisbon, Lisbon, Portugal; 2. Department of Applied Quantum Physics, Graduate School of Engineering, Kyushu University, Fukuoka, Japan; 3. Institute for Clinical Neuroscience, Sahlgrenska University Hospital, Gothenburg, Sweden; 4. Department of Signals and Systems, Chalmers University of Technology, Gothenburg, Sweden*

3:45

FE-06. Spintronic biosensors based on Fe/MgO/Fe(001) tunnelling junctions. *R. Bertacco*¹, *S. Brivio*¹, *M. Cantoni*¹, *A. Cattoni*¹ and *D. Petti*¹. *Center LNESS, Politecnico di Milano, Como, Italy*

4:00

FE-07. MTJ based biosensor with top Au electrodes and functionalization layers. *F.A. Cardoso*^{1,2}, *S. Cardoso*^{1,2}, *V.C. Martins*^{1,3} and *P.P. Freitas*^{1,2}. *1. INESC-MN, Lisboa, Portugal; 2. Instituto Superior Técnico, Lisboa, Portugal; 3. Center for Biological and Chemical Engineering (CEBQ), Lisboa, Portugal*

4:15

FE-08. Stem Cell Separator and Counter. *J. Loureiro*^{1,2}, *S. Cardoso*^{1,2}, *C.L. Silva*^{2,3}, *J.M. Cabral*^{2,3} and *P.P. Freitas*^{1,2}. *1. INESC-Microsystems and Nanotechnologies, Lisbon, Portugal; 2. Instituto Superior Técnico (IST), Lisbon, Portugal; 3. CEBQ - IST, Lisbon, Portugal*

**WEDNESDAY
AFTERNOON
2:30**

BERLIN

**Session FF
MICROWAVE DEVICES AND FMR**

Raul Valenzuela, Chair

2:30

FF-01. Experimental realization of spin-wave logic gates. *A.A. Serga*¹, *T. Schneider*¹, *B. Leven*¹, *B. Hillebrands*¹, *M.P. Kostylev*² and *R.L. Stamps*². *1. Fachbereich Physik und Forschungsschwerpunkt MINAS, Technische Universität Kaiserslautern, Kaiserslautern, Germany; 2. School of Physics, University of Western Australia, Crawley, WA, Australia*

2:45

- FF-02. Microwave signal processor based on spin waves in permalloy (Py) films.** G.A. Melkov¹, Y.V. Koblyanskiy¹, R.A. Slipec¹, A.V. Talalaevskij¹ and A.N. Slavin². *1. Faculty of Radiophysics, Kiev National Taras Shevchenko University, Kiev, Ukraine; 2. Department of Physics, Oakland University, Rochester, MI*

3:00

- FF-03. Design and optimization of one-dimensional YIG film based magnonic crystal.** A. Chumak^{1,2}, A.A. Serga¹ and B. Hillebrands¹. *1. Fachbereich Physik und Forschungsschwerpunkt MINAS, Technische Universität Kaiserslautern, Kaiserslautern, Germany; 2. Department of Radiophysics, Taras Shevchenko National University of Kiev, Kiev, Ukraine*

3:15

- FF-04. Experimental Verification of Skin Effect Suppression in Multilayer Thin-Film Conductor Taking Advantage of Negative Permeability of Magnetic Film beyond FMR frequency.** S. Shiozawa¹, Y. Shimada¹, M. Yamaguchi¹, K. Kim², Y. Zhuang³, M. Vroubel³ and B. Rejaei³. *1. Electrical and Communication Engineering, Tohoku University, Sendai, Japan; 2. Physics, Yeungnam University, Gyeongsan, South Korea; 3. Electronic Components, Technology, and Materials, Delft University of Technology, Delft, Netherlands*

3:30

- FF-05. Selective excitation and imaging of precessional modes in soft-magnetic squares.** A. Neudert¹, P.S. Keatley¹, V.V. Kruglyak¹, J. McCord² and R.J. Hicken¹. *1. School of Physics, University of Exeter, Exeter, United Kingdom; 2. Institute for Metallic Materials, IFW Dresden, Dresden, Germany*

3:45

- FF-06. Electrically detected ferromagnetic resonance in electrodeposited spin valves under AC excitation.** N. Biziere¹, E. Murè¹ and J. Ansermet¹. *1. Institut de Physique des nanostructures, Ecole Polytechnique Federale de Lausanne, Lausanne, Switzerland*

4:00

- FF-07. Ferromagnetic resonance modes below the critical thickness of stripe domain formation.** *J. McCord*¹, *A. Gerber*² and *E. Quandt*². *1. Institute for Metallic Materials, IFW Dresden, Dresden, Germany; 2. Institute for Inorganic Functional Materials, CAU Kiel, Kiel, Germany*

4:15

- FF-08. Ferromagnetic resonance study of Fe/FePt coupled films with perpendicular anisotropy.** *D. Schmool*¹, *A. Apolinário*¹, *F. Casoli*² and *F. Albertini*². *1. Physics, Universidade do Porto, Porto, Portugal; 2. IMEM, CNR, Parma, Italy*

WEDNESDAY

AMSTERDAM

AFTERNOON

2:30

Session FG

NANOSTRUCTURED HARD MAGNETIC MATERIALS - II

Oliver Gutfleisch, Chair

2:30

- FG-01. Inter-phase exchange coupling in Sm(Co,Cu)₅/α-Fe nanocomposite obtained by mechanical milling and annealing.** *V. Pop*^{1,2}, *O. Isnard*², *D. Givord*² and *I. Chicinas*³. *1. Faculty of Physics, Babes-Bolyai University, 400084 Cluj-Napoca, Romania, Cluj-Napoca, Romania; 2. Institut Néel, CNRS, associé à l'Université Joseph Fourier de Grenoble, BP166, 38042 Grenoble, Cedex 9, France, Grenoble, France; 3. Materials Sciences and Technology Dept., Technical University of Cluj-Napoca, 103-105 Muncii ave., 400641 Cluj-Napoca, Romania, Cluj-Napoca, Romania*

2:45

- FG-02. Isotropic Sm_x(Co,Fe,Mn)_{100-x} Magnets Via High-Energy Ball Milling.** *A. Gabay*¹, *J. Liu*² and *G.C. Hadjipanayis*¹. *1. University of Delaware, Newark, DE; 2. Electron Energy Corporation, Landisville, PA*

3:00

- FG-03. Effect of TiC and Cr additions on magnetic properties of nanocrystalline (Pr,Nd)FeB alloys.** V.C. de Franco², R.K. Murakami³, H.R. Rechenberg⁴, T. Yonamine¹, F.P. Missell^{1,2} and V. Villas-Boas². *1. Divisão de Metrologia de Materiais, INMETRO, Duque de Caxias, Rio de Janeiro, Brazil; 2. Centro de Ciências Exatas e Tecnologia, Universidade de Caxias do Sul, Caxias do Sul, Rio Grande do Sul, Brazil; 3. Universidade do ABC, Santo André, São Paulo, Brazil; 4. Instituto de Física, Universidade de São Paulo, São Paulo, São Paulo, Brazil*

3:15

- FG-04. Two Major Effects of Process Temperature on the Characteristic of Bulk Nanostructured Nd-Fe-B / Fe-Co Composite Magnets.** C.H. Chen¹, Y. Shen², M. Huang³ and A.K. Higgins¹. *1. University of Dayton Research Institute, Dayton, OH; 2. FutureTek Corp, Dayton, OH; 3. UES / Wright Patterson Air Force Base, Dayton, OH*

3:30

- FG-05. Nd₂Fe₁₄B based Magnetic Nanocomposites Synthesized by Electrodeposition, Microemulsion and Melt Spinning Techniques.** R. Ramanujan¹, Z. Liu¹, S. Viswanathan¹, P.K. Deheri¹ and S. Shukla¹. *1. School of Mater. Sci. Eng., Nanyang Tech. Univ., Singapore, Singapore*

3:45

- FG-06. Improvement in Morphology and Magnetic Properties of Thick Nanocomposite Film-Magnets with Multi-Layered Structure.** H. Fukunaga¹, H. Nakayama¹, M. Nakano¹, M. Ishimaru², M. Itakura² and F. Yamashita³. *1. Department of Electrical Engineering and Electronics, Nagasaki University, Nagasaki, Nagasaki, Japan; 2. Department of Applied Science for Electronics and Materials, Kyushu University, Kasuga, Fukuoka, Japan; 3. Matsushita Electric Industrial Co., Ltd., Daito, Osaka, Japan*

4:00

FG-07. Magnetic properties of Nd-Fe-B thin films with island structure prepared on Mo buffer layer.

*T. Shima*¹, *H. Kato*¹ and *T. Sato*² *1. Faculty of Engineering, Tohoku Gakuin University, Tagajo, Japan; 2. Toyota Central R&D Labs., Nagakute, Japan*

4:15

FG-08. Highly Coercive Nanocrystalline Electro-Deposited CoPt Thin Films.

*K. Zuzek Rozman*¹, *J. Kovac*², *P.J. McGuiness*¹ and *S. Kobe*¹ *1. Department for Nanostructured Materials, Jozef Stefan Institute, Ljubljana, Slovenia; 2. Department of Surface Engineering and Optoelectronics, Jozef Stefan Institute, Ljubljana, Slovenia*

**WEDNESDAY
AFTERNOON
2:30**

CARACAS

**Session FH
OXIDE MULTIFERROICS AND
FERRITES**

Yevgen Melikhov, Chair

2:30

FH-01. Magnetism and magnetocaloric effect in multiferroic

LuFe_2O_4 *J. Gass*¹, *N. Frey*¹, *M. Phan*¹, *H. Srikanth*¹, *M. Angst*², *B. Sales*² and *D. Mandrus*² *1. Department of Physics, University of South Florida, Tampa, FL; 2. Materials Science and Technology Division, Oak Ridge National Laboratory, Oak Ridge, TN*

2:45

FH-02. Design and processing of new ferrite materials from an atomistic perspective.

*A. Yang*¹, *A. Geiler*¹, *X. Zuo*², *C. Vittoria*¹ and *V.G. Harris*¹ *1. Center for Microwave Magnetic Materials and Integrated Circuits, Electrical and Computer Engineering, Northeastern University, Boston, MA; 2. College of Information Technical Science, Nankai University, Tianjin, China*

3:00

FH-03. Texture analysis of ferrite materials by means of electron backscatter diffraction (EBSD).

A.D. Koblischka-Veneva¹, M.R. Koblischka² and F. Muecklich¹ 1. Institute for Functional Materials, University of the Saarland, Saarbruecken, Saarland, Germany; 2. Institute of Experimental Physics, Saarland University, Saarbrucken, Saarland, Germany

3:15

FH-04. Oxide electrode on LAO (110) substrate for studying low-symmetry perovskite oxides.

J. Kim¹, J. Kim¹, H. Na¹, B. Lee¹, I. Choi¹, C. Jung¹ and S. Chae² 1. Dept. of Physics, Hankuk University of Foreign Studies, Yongin, Kyunggi-do, South Korea; 2. School of Physics and Astronomy, Seoul National University, Seoul, South Korea

3:30

FH-05. Mössbauer studies of the $\text{Co}_{1-x}\text{Zn}_x\text{Fe}_2\text{O}_4$ Ferrite.

Y. Zhang¹, X. Yuan¹, Z. Ren¹, Z. Kou¹, X. Bai², Y. Zhai^{1,2}, Y. Xu³, J. Du² and H. Zhai² 1. Department of Physics, Southeast University, Nanjing, Jiangsu, China; 2. National Laboratory of Solid Microstructures, Nanjing University, Nanjing, Jiangsu, China; 3. Department of Electronics, University of York, York, United Kingdom

3:45

FH-06. Synthesis of iron oxide nanoparticles of controlled size, shape and magnetic properties.

P. Guardia¹, A. Labarta¹ and X. Batlle¹ 1. Fundamental Physics, UB, Barcelona, Catalunya, Spain

4:00

FH-07. The dispersion of $\text{BaFe}_{12}\text{O}_{19}$ particles in a liquid.

D. Lisjak¹ and M. Drogenik^{1,2} 1. Jozef Stefan Institute, Ljubljana, Slovenia; 2. Faculty of Chemistry and Chemical Engineering, University of Maribor, Maribor, Slovenia

4:15

FH-08. FREEZE Granulation: A novel technique for low-loss MnZn ferrites. *V. Tsakaloudi*¹, G. Kogias¹ and V.T. Zaspalis¹. *Laboratory of Inorganic Materials, Centre for Research and Technology Hellas, Thessaloniki, Greece*

WEDNESDAY
AFTERNOON
4:40

AUDITORIO A

Session WA
INTERMAG PLENARY SESSION

Josef Fidler, Chair

THURSDAY
MORNING
9:30

AUDITORIO A

Session GA
SYMPOSIUM ON BIT PATTERNED MEDIA

Manfred Schabes, Chair

9:30

GA-01. Achieving tight physical and magnetic sigmas in bit patterned media recording disks. (Invited) *D. Weller*¹, A.Y. Dobin¹, D. Kuo¹, K.Y. Lee¹, J. Hwu¹, X. Yang³, S. Xiao³, G. Gauzner¹, M. Feldbaum¹, M. Ostrowski², G. Ju³, H.J. Richter¹, B. Lu¹, B. Valcu¹, X. Zhu³ and R. van de Veerdonk³. *1. Media R&D, Seagate Technology, Fremont, CA; 2. Recording Heads Operations, Seagate Technology LLC, Normandale, MN; 3. Research, Seagate Technology LLC, Pittsburgh, PA*

10:00

- GA-02. Modeling and Simulation of the Writing Process on Bit-Patterned Perpendicular Media. (Invited)** *H. Muraoka*¹, *S.J. Greaves*¹ and *Y. Kanai*² *1. RIEC, Tohoku University, Sendai, Japan; 2. Niigata Institute of Technology, Kashiwazaki, Japan*

10:30

- GA-03. Nanoscale perpendicular magnetic island arrays fabricated by extreme ultraviolet interference lithography. (Invited)** *F. Luo*¹, *L.J. Heyderman*¹ and *H.H. Solak*¹ *1. Laboratory for Micro- and Nanotechnology, Paul Scherrer Institut, Villigen, Switzerland*

11:00

- GA-04. Magnetic films on self-assembled nanoparticles: An approach for bit-patterned media. (Invited)** *M. Albrecht*¹, *C. Brombacher*¹, *H. Rohrmann*², *P. Kappenberger*⁴, *O. Hellwig*³, *A. Goncharov*⁵ and *T. Schrefl*⁵ *1. Institute of Physics, Chemnitz University of Technology, Chemnitz, Germany; 2. Data Storage, OC Oerlikon Balzers AG, Balzers, Liechtenstein; 3. San Jose Research Center, Hitachi Global Storage Technologies, San Jose, CA; 4. Nanoscale Materials Science, Empa, Duebendorf, Switzerland; 5. Department of Engineering Materials, University of Sheffield, Sheffield, United Kingdom*

11:30

- GA-05. Self-Assembly Pattern Multiplication for 1Tb/in² Patterned Media Templates. (Invited)** *R. Ruiz*¹, *E. Dobisz*¹, *D.S. Kercher*¹, *T. Wu*¹, *T.R. Albrecht*¹, *H. Kang*² and *P.F. Nealey*² *1. San Jose Research Center, Hitachi Global Storage Technologies, San Jose, CA; 2. Department of Chemical and Biological Engineering, University of Wisconsin, Madison, WI*

12:00

- GA-06. Fabrication and Characterization of High-density Patterned Media. (Invited)** *N. Yasui*^{1,2}, *S. Ichihara*¹, *T. Nakamura*¹, *A. Imada*¹, *T. Saito*¹, *R. Horie*¹, *Y. Ohashi*¹, *T. Den*¹, *K. Miura*² and *H. Muraoka*² *1. Canon Research Center, Tokyo, Japan; 2. RIEC, Tohoku Univ., Sendai, Japan*

THURSDAY
MORNING
9:30

MADRID

Session GB
MR BASED HEADS (GMR, MTJ, CPP)

Brendan Lafferty, Chair

9:30

- GB-01. An investigation of noise increased in TMR readers during drive operation.** *P. Wong*¹. *SAE Magnetics (HK) Ltd, Hong Kong, China*

9:45

- GB-02. Improvement of TMR effect of magnetic tunneling junctions with very thin MgO barrier sputtered by noble gas mixture at low RA product below 1.0 $\Omega\mu\text{m}^2$** *K. Noma*¹, *K. Komagaki*², *K. Sunaga*², *H. Kanai*², *Y. Uehara*² and *T. Umehara*¹. *Head Manufacturing, Fujitsu Ltd., Nagano, Japan; 2. Advanced Head Technology, Fujitsu Ltd., Nagano, Japan*

10:00

- GB-03. Atomic layer deposition Al₂O₃ films for permanent magnet isolation in TMR read heads.** *M. Kautzky*¹, *A. Demtchouk*¹, *Y. Chen*¹, *S. McKinlay*¹, *K. Brown*¹ and *J. Xue*¹. *Advanced Transducer Development, Seagate Technology, Bloomington, MN*

10:15

- GB-04. Analysis of the current-confined-paths in the film plane for CPP-GMR films.** *H. Fukuzawa*¹, *M. Hara*¹, *H. Yuasa*¹ and *Y. Fuji*¹. *Corporate R&D Center, Toshiba Corporation, Kawasaki, Japan*

10:30

- GB-05. Development of CPP-GMR Heads for High-Density Magnetic Recording, (Invited)** *J.R. Childress*¹, M.J. Carey¹, S. Maat¹, N. Smith¹, X. Liu¹, H. Balamane¹, S. Chandrashekariaih¹, T.D. Boone¹, R.E. Fontana¹, P. Vanderheijden¹, Y. Hong¹, K. Carey¹, J. Tabib¹, J. Li¹, B. York¹, T. Lin¹, J.A. Katine¹, W. Jayasekara¹, N. Robertson¹, M. Alex¹, J. Moore¹ and C. Tsang¹. *Hitachi Global Storage Technologies, San Jose, CA*

11:00

- GB-06. Current Confined Path (CCP) Giant Magneto Resistive (GMR) Sensors.** *X. Peng*¹, P. Kolbo¹, K. Nikolaev¹, S. Chen¹, Z. Wang¹, T. Boonstra¹, P. Anderson¹, S. Kalderon¹, P. Czoschke¹, A. Morrone¹, D. Dimtrov¹, S. Xue¹ and Y. Chen¹. *RHO, Seagate Technology, Bloomington, MN*

11:15

- GB-07. Current Density Limitation by Spin Transfer Torque for CPP-GMR Heads.** *K. Yamada*¹, M. Takagishi¹, M. Takashita¹ and H. Iwasaki¹. *Corporate R&D Center, Toshiba Corporation, Kawasaki, Japan*

11:30

- GB-08. Suppression of spin-torque in current perpendicular to the plane spin-valves by addition of Dy caps.** *S. Maat*¹, M.J. Carey¹, N. Smith¹ and J.R. Childress¹. *Hitachi Global Storage Technologies, San Jose, CA*

11:45

- GB-09. Transport and magnetic properties of CPP-GMR sensor with CoMnSi Heusler alloy.** *T. Mizuno*¹, Y. Tsuchiya¹, T. Machita¹, S. Hara¹, D. Miyauchi¹, K. Shimazawa¹, K. Noguchi¹ and K. Tagami¹. *SQ Research Center, TDK CORPORATION, 543 Otai, Sakushi, Nagano, Japan*

12:00

- GB-10. Mesoscopic Extraordinary Magnetoresistance and the Effects of Impact Ionization and Velocity Saturation. (Invited)** *T.D. Boone*¹, *L. Folks*¹, *J.A. Katine*¹, *E.E. Marinero*¹, *N. Smith*¹ and *B.A. Gurney*¹. *San Jose Research Center, Hitachi Global Storage Technologies, San Jose, CA*

THURSDAY
MORNING
9:30

ROMA

Session GC
ULTRAFAST DYNAMICS

Juergen Fassbender, Chair

9:30

- GC-01. Ultrafast Magnetic Switching with Terahertz Fields. (Invited)** *H. Siegmann*¹, *S.J. Gamble*^{2,6}, *M.H. Burkhardt*^{2,6}, *A. Kashuba*³, *R. Allenspach*⁴, *S.S. Parkin*⁵ and *J. Stöhr*⁶. *1. PULSE Center Stanford University, Stanford, CA; 2. Dept. of Applied Physics, Stanford University, Stanford, CA; 3. Bogolyubov Institute for Theoretical Physics, Kiev, Ukraine; 4. IBM Research, Zurich Research Laboratory, 8803 Rueschlikon, Switzerland; 5. IBM Almaden Research, San Jose, CA; 6. Stanford Synchrotron Radiation Laboratory, Stanford, CA*

10:00

- GC-02. Terahertz Emission Spectroscopy as a Probe of Laser-Induced Ultrafast Demagnetization Dynamics. (Invited)** *E. Beaurepaire*¹, *J. Arabski*¹, *M. Vomir*¹, *J. Bigot*¹, *S.M. Harrel*², *J.M. Schleicher*² and *C.A. Schmuttenmaer*². *1. IPCMS-GEMME, CNRS, Strasbourg, France; 2. Dept. of Chemistry, Yale University, New Haven, CT*

10:30

- GC-03. Atomistic and Multiscale calculations of picosecond magnetisation dynamics. (Invited)** *R.W. Chantrell¹, U. Nowak¹, O. Chubykalo-Fesenko² and A. Rebei³*. *1. Physics, The University of York, York, United Kingdom; 2. ICM, Madrid, Spain; 3. Seagate Research, Pittsburgh, PA*

11:00

- GC-04. Femtosecond transfer of angular momentum in ferromagnets probed by X-ray spectroscopy. (Invited)** *H.A. Dürr¹*. *1. BESSY, Berlin, Germany*

11:30

- GC-05. Laser-induced reorientation of spins in Co/SmFeO₃ heterostructures.** *J. Loïc¹, F. Nolting¹, A. Kirilyuk², R. Pisarev³, T. Rasing² and A. Kimel²*. *1. SLS, Paul Scherrer Institut, Villigen-PSI, Switzerland; 2. IMM, Radboud University Nijmegen, Radboud, Netherlands; 3. Ioffe Physical Technical Institute, St. Petersburg, Russian Federation*

11:45

- GC-06. Heusler alloys: The role of band structure on the ultrafast demagnetization.** *T. Roth¹, D. Steil¹, A. Conca², M. Jourdan², M. Aeschlimann¹ and M. Cinchetti¹*. *1. Physics, TU Kaiserslautern, Kaiserslautern, Germany; 2. Institute of Physics, University of Mainz, Mainz, Germany*

12:00

- GC-07. Dynamics of the coercivity in (ultrafast) pump-probe experiments.** *D. Steil¹, T. Roth¹, M. Cinchetti¹ and M. Aeschlimann¹*. *1. FB Physik, AG Aeschlimann, TU Kaiserslautern, Kaiserslautern, Germany*

12:15

- GC-08. LLB-Micromagnetic modelling of ultra-fast optical magnetisation dynamics.** *U. Atxitia*¹, O. Chubykalo-Fesenko¹, N. Kazantseva², D. Hinzke², U. Nowak² and R.W. Chantrell². *1. POMT, ICMM-CSIC, Madrid, Spain; 2. Department of Physics, University of York, York, United Kingdom*

**THURSDAY
MORNING
9:30**

PARIS

**Session GD
MRAM**

Freitas Paulo, Chair

9:30

- GD-01. Switching Characteristics and Bias Voltage Dependence of Spin Torque Switching in MgO based Magnetic Tunnel Junctions.** *S. Oh*¹, K.T. Nam¹, J.E. Lee¹, W.J. Kim¹, J.H. Jeoung¹, D.K. Kim¹, S.Y. Lee¹, K. Kim², U. Chung¹ and J.T. Moon¹. *1. Memory Division, Semiconductor Business, Samsung Electronics Co., LTD., Yongin-City, Gyeonggi-Do, South Korea; 2. Semiconductor Device Lab, Samsung Advanced Institute of Technology, Yongin-City, Gyeonggi-Do, South Korea*

9:45

- GD-02. Impact of antiferromagnet-induced magnetization fluctuation control on switching current distribution reduction in MRAM.** *Y. Katoh*¹, H. Hada¹ and N. Kasai¹. *1. Device Platforms Research Laboratories, NEC Corporation, Kanagawa, Japan*

10:00

- GD-03. Spin Torque Random Access Memory down to 22nm Technology.** *X. Wang*¹, Y. Chen¹, H. Li¹, D. Dimitrov¹ and H. Liu¹. *1. Seagate Technology, Bloomington, MN, MN*

10:15

- GD-04. Multilevel Magnetic Random Access Memory Based on Spin Transfer Torque Switching.** *Y. Zhang¹, X. Yao¹ and J. Wang¹. MINT Center & Electrical and Computer Engineering Department, University of Minnesota, Minneapolis, MN*

10:30

- GD-05. Heat-assisted magnetization reversal using pulsed laser irradiation in patterned magnetic thin film with perpendicular anisotropy.** *K. Waseda¹, R. Doi¹, B. Purnama¹, S. Yoshimura¹, Y. Nozaki¹ and K. Matsuyama¹. Dept. of Electronics, Kyushu University, Fukuoka, Japan*

10:45

- GD-06. Estimation of Thermal Stability Factor in Current-Induced Magnetization Switching.** *H. Suh¹ and K. Lee¹. Korea University, Seoul, South Korea*

11:00

- GD-07. Nano-ring MTJ and nano-ring MRAM.** *X. Han¹, Z. Wen¹ and H. Wei¹. State Key Lab of Magnetism, Institute of Physics, CAS, Beijing, China*

11:15

- GD-08. Magnetic characterization of embedded MgO ferromagnetic contacts for spin injection in silicon.** *T. Uhrmann¹, T. Dimopoulos¹, D. Schwarz¹, V. Lazarov², D. Kirk², A. Kohn², S. Weyers³, U. Paschen³ and H. Brückl¹. Nano-Systemtechnologies, Austrian Research Centers GmbH - ARC, Vienna, Austria; 2. Department of Materials, University of Oxford, Oxford, United Kingdom; 3. Fraunhofer Institute of Microelectronic Circuits and Systems, Duisburg, Germany*

11:30

- GD-09. High thermal stability and low switching current in a perpendicular-CPP-GMR with an ultrathin epitaxial FePt free layer.** *K. Yakushiji¹, S. Yuasa¹, A. Fukushima¹, H. Kubota¹, T. Nagahama¹, T. Katayama¹ and K. Ando¹*. *National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan*

11:45

- GD-10. Stress assisted reversal of perpendicular magnetization of thin films with giant magnetostriction constant.** *N. Saito¹ and S. Nakagawa¹*. *Dept. of Physical Electronics, Tokyo Institute of Technology, Tokyo, Japan*

12:00

- GD-11. A Novel Macro-Model for Spin-Transfer-Torque based Magnetic-Tunnel-Junction Elements.** *S. Lee¹, H. Lee¹, S. Lee¹ and H. Shin¹*. *Information Electronics Engineering, Ewha W. Univ., Seoul, South Korea*

12:15

- GD-12. Random number generation by current induced magnetization switching in a MgO magnetic tunnel junction.** *A. Fukushima¹, K. Yakushiji¹, H. Kubota¹, S. Yuasa¹ and K. Ando¹*. *NeRI, AIST, Tsukuba, Ibaraki, Japan*

THURSDAY
MORNING
9:30

LONDRES

Session GE
MAGNETIC NANOPARTICLES II

Dino Fiorani, Chair

9:30

- GE-01. Towards dense regular arrays of FePt nanomagnets by gas phase deposition onto bacterial S-layers within a horizontal magnetic field.** *U. Queitsch*¹, D. Pohl¹, A. Blüher², M. Mertig², L. Schultz¹ and B. Rellinghaus¹. *1. Metastable and Nanostructured Materials, Leibniz Institute for Solid State and Materials Research Dresden, Dresden, Saxony, Germany; 2. Max Bergmann Center of Biomaterials, Dresden University of Technology, Dresden, Saxony, Germany*

9:45

- GE-02. Magnetic anisotropy of a single Fe atom on Pt(111).** *T. Schuh*¹, T. Balashov¹, A.F. Takacs¹, W. Wulfhekel¹, A. Ernst², S. Ostanin², J. Henk², P. Bruno², T. Miyamachi³ and S. Suga³. *1. Physikalisches Institut, Universität Karlsruhe, Karlsruhe, Germany; 2. Max-Planck Institut für Mikrostrukturphysik, Halle, Germany; 3. Graduate School of Engineering Science, Osaka University, Osaka, Japan*

10:00

- GE-03. High-moment synthetic magnetic nanoparticles for biomedical applications.** *W. Hu*¹, R.J. Wilson¹, C.M. Earhart¹, A. Koh^{1,2}, A.Z. Faranesh³, R. Sinclair¹, S. Guccione³ and S.X. Wang^{1,4}. *1. Materials Science & Engineering, Stanford University, Stanford, CA; 2. Mechanical Engineering, Stanford University, Stanford, CA; 3. Radiology, Stanford University, Stanford, CA; 4. Electrical Engineering, Stanford University, Stanford, CA*

10:15

- GE-04. Highly anisotropic FePt nanomagnets obtained via Fe ion implantation on Pt films.** *R.A. Lukaszew*^{1,2}, *C. Clavero*¹ and *J.R. Skuza*². *1. Applied Science Dept., College of William and Mary, Williamsburg, VA; 2. Physics Department, College of William and Mary, Williamsburg, VA*

10:30

- GE-05. Surface relaxation and magnetism in monodisperse binary metal nanoparticles. (Invited)** *M. Farle*¹. *Physik, Universitaet Duisburg-Essen, Duisburg, Germany*

11:00

- GE-06. Synthesis and characterisation of polymer-coated Fe nanoparticles with high magnetisation.** *J. Marin*², *A. Garcia Prieto*¹, *I. Orue*³, *J. Vilas*², *M. Fdez-Gubieda*¹ and *L.M. Leon*². *1. Dpto Electricidad y Electronica, Universidad del Pais Vasco - UPV/EHU, Bilbao, Spain; 2. Dpto Química Macromolecular, Universidad del Pais Vasco - UPV/EHU, Bilbao, Spain; 3. SGIKER Medidas Magnéticas, Vicerrectorado de Investigación, Universidad del Pais Vasco - UPV/EHU, Bilbao, Spain*

11:15

- GE-07. Bulk-like magnetic properties in Fe₃O₄ nanoparticles: surface anisotropy, orbital moment and crystal quality.** *N. Pérez*^{1,2}, *P. Guardia*^{1,2}, *A.G. Roca*³, *M.P. Morales*³, *C.J. Serna*³, *F. Bartolomé*^{4,5}, *L.M. García*^{4,5}, *J. Bartolomé*^{4,5}, *J.C. Cezar*⁶, *A. Labarta*^{1,2} and *X. Batlle*^{1,2}. *1. Física Fonamental, Universitat de Barcelona, Barcelona, Catalonia, Spain; 2. Institut de Nanociencia i Nanotecnologia IN2UB, Universitat de Barcelona, Barcelona, Catalonia, Spain; 3. ICMN, CSIC, Madrid, Madrid, Spain; 4. ICMA, CSIC, Zaragoza, Aragón, Spain; 5. Física de la Materia Condensada, Universidad de Zaragoza, Zaragoza, Aragón, Spain; 6. ESRF, Grenoble, France*

11:30

- GE-08. On the spin reorientation of magnetic nano-dot arrays: Co/Au versus Co/Pt on SiGe.** *A. Persson*¹, *L. Gridneva*¹, *M.A. Niño*², *J. Camarero*², *J.J. de Miguel*², *R. Miranda*², *C. Hofer*³, *C. Teichert*³, *T. Bobek*⁴ and *D. Arvanitis*¹. *1. Physics Department, Uppsala University, Uppsala, Sweden; 2. Departamento de Física de la Materia Condensada, Universidad Autónoma de Madrid, Madrid, Spain; 3. Institut für Physik, Montanuniversität Leoben, Leoben, Austria; 4. Institute of Semiconductor Electronics, Aachen University, Aachen, Germany*

11:45

- GE-09. Perpendicular anisotropy in Co/Pt granular multilayers.** *J. Bartolome*¹, *L. García Vinuesa*¹, *F. Bartolomé*¹, *J. Stankiewicz*¹, *F. Luis*¹, *F. Petroff*², *C. Deranlot*², *F. Wilhelm*³, *A. Rogalev*³, *P. Bencok*³ and *N.B. Brookes*³. *1. Instituto de Ciencia de Materiales de Aragón, CSIC/U. de Zaragoza, Zaragoza, Spain; 2. Unité Mixte de Physique, CNRS/Thales, Orsay (Paris), France; 3. ESRF, Grenoble, France*

12:00

- GE-10. Evidence of L10 chemical order in CoPt nanoclusters: direct observation and magnetic signature.** *F. Tournus*¹, *A. Tamion*¹, *N. Blanc*¹, *A. Hannour*¹, *L. Bardotti*¹, *B. Prével*¹, *P. Ohresser*², *E. Bonet*³, *T. Epicier*⁴ and *V. Dupuis*¹. *1. LPMCN, Université de Lyon; Univ. Lyon 1; CNRS, Villeurbanne, France; 2. Synchrotron SOLEIL, Gif sur Yvette, France; 3. Institut Néel, CNRS/UJF, Grenoble, France; 4. MATEIS, CNRS; INSA Lyon; Université de Lyon, Villeurbanne, France*

12:15

- GE-11. Magnetic Hardening of FePt Nanomagnets by Ultra Short Time In-Flight Annealing.** *E. Mohn*¹, *B. Rellinghaus*¹ and *L. Schultz*¹. *Institute for Metallic Materials, IFW Dresden, Dresden, Germany*

THURSDAY
MORNING
9:30

BERLIN

Session GF
HEAD-MEDIA INTERFACE AND
TRIBOLOGY II

Singh Bhatia, Chair

9:30

- GF-01. Flying Characteristics on Discrete Track and Patterned Media With Thermal Protrusion Slider.** *(Invited)* B.E. Knigge¹, Z.Z. Bandic¹ and D. Kercher¹. *San Jose Research Center, Hitachi Global Storage Technologies, San Jose, CA*

10:00

- GF-02. Nonuniform distribution of molecularly thin lubricant caused by inhomogeneous buried layers of discrete track media.** K. Fukuzawa^{1,2}, T. Muramatsu¹, H. Amakawa¹, S. Itoh¹ and H. Zhang¹. *1. Micro/Nano Systems Engineering, Nagoya University, Nagoya, Japan; 2. PRESTO, JST, Kawaguchi, Japan*

10:15

- GF-03. Parametric Study of Contact Performance for Discrete Track Recording Media Using Finite Element Analysis.** C. Yeo¹ and A.A. Polycarpou¹. *Mechanical Science and Engineering, Univ. of Illinois at Urbana-Champaign, Urbana, IL*

10:30

- GF-04. Numerical and Experimental Investigation of “Flyability” of Sliders on Discrete Track Recording Media.** Y. Yoon¹, M. Duwensee², J. Lin³, S. Suzuki³ and F.E. Talke¹. *1. Mechanical Engineering, University of California, San Diego, La Jolla, CA; 2. Hitachi Global Storage Technologies, San Jose, CA; 3. Western Digital Corporation, San Jose, CA*

10:45

- GF-05. Dynamic analysis schemes for flying head sliders over discrete track media.** *S. Fukui*¹, *T. Kanamaru*¹ and *H. Matsuoka*¹. *1. Dept. of Applied Mathematics and Physics, Tottori University, Tottori City, Japan*

11:00

- GF-06. Effect of van der Waals Force on Ultimate Head-to-Disk Interface.** *K. Ono*¹. *1. Storage Technology Research Center, Hitachi Central Research Laboratory, Fijisawa-shi, Japan*

11:15

- GF-07. STUDY ON CONTACT OF THERMAL ACTUATED SLIDER AND DISK.** *M. Zhang*¹, *B. Liu*^{1,2} and *S. Hu*¹. *1. Spintronics, Media and Interface Division, Data Storage Institute, Singapore, Singapore; 2. Nanyang Technological University, Singapore, Singapore*

11:30

- GF-08. Numerical and Experimental Analyses of Nanometer-scale Flying Height Control of Magnetic Head with Heating Element.** *J. Juang*¹, *T. Nakamura*³, *B. Knigge*¹, *Y. Luo*², *W. Hsiao*², *K. Kuroki*³, *F. Huang*¹ and *P. Baumgart*¹. *1. San Jose Research Center, Hitachi GST, San Jose, CA; 2. Hitachi GST, San Jose, CA; 3. Hitachi GST, Fujisawa-shi, Kanagawa-ken, Japan*

11:45

- GF-09. Dynamics of Fly-Contact Head-Disk Interface.** *S. Yu*¹, *B. Liu*¹, *W. Hua*¹, *W. Zhou*¹ and *C. Wong*¹. *1. Data Storage Institute, Singapore, Singapore*

12:00

- GF-10. Slider Optical Constant Distribution, n and k Correlation, and FH Measurement Accuracy.** *Z. Yuan*¹, *C. Ong*¹, *B. Liu*¹, *J. Liu*² and *S. Yoshida*². *1. DSI, Singapore, Singapore; 2. Hitachi Asia, SG, Singapore*

12:15

- GF-11. A Method for Identification of Pitch and Roll Stiffness of Head-Gimbal Assembly at Flying State.**
Q. Zeng¹, Y. Fu¹, C. Yang¹, B. Aujla¹ and E. Cha¹ I. SAE Magnetics, Milpitas, CA

**THURSDAY
 MORNING
 9:30**

AMSTERDAM

**Session GG
 HYSTERESIS MODELLING II**
 Alexandru Stancu, Chair

9:30

- GG-01. 2D finite element simulations for bulk steel hysteresis curve derivations.** *P. Meilland¹, S. He², S. Depeyre², M. Bernadou² and J. Cagnol² I. ArcelorMittal Maizières Research, Maizières-lès-Metz, France; 2. Pôle Universitaire Léonard de Vinci, Paris-La Défense, France*

9:45

- GG-02. Rotational saturation properties of isotropic vector hysteresis models using vectorized stop and play hysterons.** *T. Matsuo¹ I. Electrical Engineering, Kyoto University, Kyoto, Japan*

10:00

- GG-03. Viscous behavior of ferromagnets in the voltage and current driven regimes.** *S.E. Zirka¹, Y.I. Moroz¹, P. Marketos², A.J. Moses² and D.C. Jiles² I. Department of Applied Physics and Technology, Dnepropetrovsk National University, Dnepropetrovsk, Ukraine; 2. School of Engineering, Cardiff University, Cardiff, Wales, UK, United Kingdom*

10:15

- GG-04. Size effects influence on hysteresis and relaxation for a Random Anisotropy Ising System.** *C. Enachescu¹ and A. Stancu¹. Department of Physics, Alexandru Ioan Cuza University, Iasi, Romania*

10:30

- GG-05. Correction of permeability of a soft ferromagnet measured by using vibrating sample magnetometer.** *M. Chan¹, C. Ong¹ and Y. Wong¹. Department of Applied Physics and Materials Research Center, The Hong Kong Polytechnic University, Hong Kong, China*

10:45

- GG-06. The temperature dependence of magnetostatic interactions in nanowires systems.** *A. Diaconu¹, I. Dumitru¹ and A. Stancu¹. Department of Solid State and Theoretical Physics, "Alexandru Ioan Cuza" University, Iasi, Iasi, Romania*

11:00

- GG-07. A magnetostriction model with stress dependence for real-time control applications.** *D. Davino¹, A. Giustiniani² and C. Visone¹. Engineering Department, University of Sannio, Benevento, Italy; 2. DIIE, University of Salerno, Salerno, Italy*

11:15

- GG-08. An Improved Engineering Model of Vector Magnetic Properties of Grain-oriented Electrical Steels.** *Y. Zhang¹, Y. Eum², C. Koh² and D. Xie¹. 1. School of Electrical Engineering, Shenyang University of Technology, Shenyang, Liaoning 110023, China; 2. School of Electrical & Computer Engineering, Chungbuk National University, Cheongju, Chungbuk 361- 763, South Korea*

11:30

- GG-09. Magnetic behaviour of assemblies of nanoparticles with core/shell morphology: Interparticle interaction effects.** *M. Vasilakaki*¹, *K.N. Trohidou*¹ and *J.A. Blackman*². *1. Institute of Materials Science, NCSR "Demokritos", Athens, Greece; 2. Department of Physics, Reading University, Reading, United Kingdom*

11:45

- GG-10. Compensation of Hysteresis and Time-dependent Error for Magnetostrictive Actuators.** *H. Choi*¹ and *Y. Park*¹. *1. Mechatronics Engineering, Chungnam National University, Daejeon, South Korea*

12:00

- GG-11. Rotational hysteresis first-order reversal curves diagrams as test problem for vectorial hysteresis models.** *L. Stoleriu*¹, *P. Postolache*¹, *P. Andrei*² and *A. Stancu*¹. *1. Department of Physics, Alexandru Ioan Cuza University, Iasi, Romania; 2. Department of Electrical and Computer Engineering, Florida State University and Florida A&M University, Tallahassee, FL*

12:15

- GG-12. Identification of the parameters of reduced vector Preisach model by neural networks.** *M. Trapanese*¹. *Dipartimento di Ingegneria Elettrica, Elettronica e delle Telecomunicazioni, University of Palermo, Palermo, Italy*

THURSDAY
MORNING
9:30

CARACAS

Session GH
PERMANENT MAGNET MATERIALS -
APPLICATIONS III
Jesus Gonzalez, Chair

9:30

GH-01. Analysis of Permanent Magnet Demagnetization Accounting for Minor BH-curves. *Y. Zhilichev*¹.
Magnequench International, Inc, Durham, NC

9:45

GH-02. A Hybrid Dual-Memory Motor. *C. K.t.*¹, *G. Yu*^{1,2} and *J. Jianzhong*².
1. Electrical and Electronic Engineering, the University of Hong Kong, Hongkong, China; 2. Automation, Shanghai University, Shanghai, China

10:00

GH-03. Study on Detachment of a Permanent Magnet-Wheel for a Wall-Climbing Mobile Robot using Magnetic Inducement. *H. Yi*¹, *J. Kim*¹ and *S. Han*².
1. Mechanical Engineering, Yeungnam University, Gyeongsan, Gyeongsangbuk-do, South Korea; 2. Automobile engineering, Yeungnam College of Science & Technology, Daegu, South Korea

10:15

GH-04. Ironless and leakage free voice-coil motor made of bounded magnets. *G. Lemarquand*¹, *M. Remy*², *B. Castagnede*¹ and *G. Guyader*².
1. LAUM, Universite du Maine, Le Mans, France; 2. Renault, Guyancourt, France

10:30

- GH-05. Generic Algorithm-Based Optimal Design of New Electromagnetic Engine Valve Actuator for Reduction of Transition Time.** *J. Kim*¹, *K. Han*² and *J. Chang*³ *1. Mechanical Engineering, Yeungnam University, Gyeongsan, Gyeongsangbuk-do, South Korea; 2. Electrical Engineering, Florida Institute of Technology, Melbourne, FL; 3. Transverse Flux Machines Research Group, Korea Electrotechnology Research Institute, Changwon, Kyungsangnam-Do, South Korea*

10:45

- GH-06. Self-Assembly of Millimeter-Scale Components using Integrated Micromagnets.** *S.B. Shetye*¹ and *D.P. Arnold*¹ *1. Interdisciplinary Microsystems Group, University of Florida, Gainesville, FL*

11:00

- GH-07. Minimization of Cogging Torque in an IPM Machine.** *C. Hwang*¹, *P. Li*¹ and *C. Liu*² *1. EE, Feng Chia University, Seatwen, Taichung, Taiwan; 2. EE, National Sun Yat-sen University, Kaohsiung, Taiwan*

11:15

- GH-08. Static Eccentricity Fault Diagnosis in Permanent Magnet Synchronous Motor using Time Stepping Finite Element Method.** *B. Ebrahimi*¹, *J. Faiz*¹ and *A. Zargham Nejhad*¹ *1. Department of Electrical and Computer Engineering, University of Tehran, University of Tehran, Tehran, Iran*

11:30

- GH-09. Six-degree-of-freedom motion analysis of a planar actuator with a magnetically levitated mover by six-phase current controls.** *Y. Ueda*¹ and *H. Ohsaki*¹ *1. Department of Advanced Energy, The University of Tokyo, Kashiwa, Japan*

11:45

- GH-10. Optimal Halbach Permanent Magnet Shapes for Slotless Tubular Actuators.** *J.J. Paulides¹, K.J. Meessen¹, B.L. Gysen¹ and E.A. Lomonova¹. Technical university Eindhoven, Eindhoven, Netherlands*

12:00

- GH-11. Development of Inverse Magnetostrictive Actuator.** *H. Park¹, Y. Park¹ and H. Choi¹. I. Mechatronics Engineering, Chungnam National University, Daejeon, South Korea*

- GH-12. WITHDRAWN**

**THURSDAY
MORNING
9:00**

POLIVALENTE

**Session GL
MULTILAYER FILMS AND
SUPERLATTICES II
(POSTER SESSION)**

Alex Dobin, Chair

- GL-01. Interface effects in the magnetic properties of $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3/\text{SrTiO}_3$ heterostructures.** *(Invited) F.Y. Bruno¹, J. Garcia-Barriocanal¹, A. Rivera¹, Z. Sefrioui¹, C. Leon¹, J. Santamaria¹, N.M. Nemes², M. Garcia-Hernandez², M. Varela³ and S.J. Pennycook³. 1. GFMC. Dpto. Fisica Aplicada III., Universidad Complutense de Madrid, Madrid, Madrid, Spain; 2. Instituto de Ciencia de Materiales de Madrid, Consejo Superior de Investigaciones Cientificas, Cantoblanco, Madrid, Spain; 3. Condensed Matter Science Division, Oak Ridge National Laboratory, Oak Ridge, TN*
- GL-02. Control of the degree of out-of-plane anisotropy of CoFe/Tb multilayer by applying an external in-plane field during film deposition.** *K. Lee¹, Y. Jang¹, J. Kim¹, S. Lee¹ and B. Cho¹. I. School of Photonics, MSE, GIST, Gwangju, South Korea*

- GL-03. Effect of the Cr insertion layer on synthetic antiferromagnetic coupling in magnetic tunnel junctions.** K. Kim¹, W. Kim², S. Oh², D. Kim², I. Hwang¹, K. Kim¹, S. Seo¹, J. Jeong², K. Nam² and J. Lee². *1. Semiconductor Devices Lab, Samsung Advanced Institute of Technology (SAIT), Yongin-Si, Gyeonggi-Do, South Korea; 2. Process Development Team, Samsung Electronics Co., Ltd, Yongin-Si, Gyeonggi-Do, South Korea*
- GL-04. Preparation and magnetic characterization of Fe/MgO layered granular thin films.** A. García-García¹, J.A. Pardo^{2,3}, P.A. Algarabel¹, C. Magén⁴, P. Strichovanec², L. Morellón^{1,2}, J.M. De Teresa¹, A. Vovk² and M.R. Ibarra^{1,2}. *1. Instituto de Ciencia de Materiales de Aragón, Universidad de Zaragoza-CSIC, Zaragoza, Spain; 2. Instituto de Nanociencia de Aragón, Universidad de Zaragoza, Zaragoza, Spain; 3. Departamento de Ciencia y Tecnología de Materiales y Fluidos, Universidad de Zaragoza, Zaragoza, Spain; 4. Centre d'Elaboration de Matériaux et d'Etudes Structurales, CNRS, Toulouse, France*
- GL-05. FMR Investigation of (Ga_{1-x}Mn_x)As Tri-layers.** M. Cubukcu¹, K. Khazen¹, H. von Bardeleben¹, J. Cantin¹, M. Elsen², H. Jaffrès², J. George², L. Thevenard³ and A. Lemaître³. *1. Institut des Nanosciences de Paris (INSP), Université Paris 6, UMR 75-88 au CNRS, Paris, Ile de France, France; 2. Unité Mixte de Physique CNRS-Thales, associée à l'Université Paris XI, Palaiseau, Ile de France, France; 3. Laboratoire de Photonique et Nanostructures, Marcoussis, Ile de France, France*
- GL-06. Interplay between magnetic anisotropy and interlayer exchange coupling in amorphous CoSi / Si multilayers.** L.M. Álvarez-Prado¹, C. Quirós¹, L. Zárata¹, J.I. Martín¹ and J.M. Alameda¹. *1. Departamento de Física, Universidad de Oviedo, Oviedo, Asturias, Spain*
- GL-07. Creation of out-of-plane magnetization ordering by increasing multilayer number N in [Co/Au]_N multilayers.** M. Tekielak^{1,2}, P. Mazalski¹, A. Maziewski^{1,3}, R. Schäfer², J. McCord², B. Szymanski⁴, M. Urbaniak⁴ and F. Stobiecki⁴. *1. Department of Physics, University of Białystok, Białystok, Poland; 2. Leibniz-Institut für Festkörper- und Werkstofforschung Dresden e.V, Dresden, Germany; 3. Laboratoire de Physique des Solides, Université Paris-Sud, Orsay, France; 4. Institute of Molecular Physics, Polish Academy of Sciences, Poznan, Poland*

- GL-08. Magnetostatic waves in the magnetic/nonmagnetic periodic structures.** *M. Krawczyk*¹. *Faculty of Physics, Adam Mickiewicz University, Poznan, Poland*
- GL-09. Investigations on magnetic properties of NiFe film doped with Gd by ferromagnetic resonance.** Y. Fu¹, L. Sun^{1,3}, J. Wang¹, Z. Kou¹, Y. Zhai^{1,2}, X. Bai², J. Wu³, Y. Xu⁴, J. Du², H. Lu² and H. Zhai². *Department of Physics, Southeast University, Nanjing, Jiangsu, China; 2. National Laboratory of Solid Microstructures, Nanjing University, Nanjing, Jiangsu, China; 3. Department of Physics, University of York, York, United Kingdom; 4. Department of Electronics, University of York, York, United Kingdom*
- GL-10. Hard Magnetic Nanocomposite [NdFeBNbCu/FeBSi]_{xn} Multilayer Films with Low Crystallization Temperature.** *H. Chiriac*¹, M. Grigoras¹, N. Lupu¹ and M. Urse¹. *National Institute of Research & Development for Technical Physics, Iasi, Romania*
- GL-11. Magneto-optical circular dichroism properties of fept layers with perpendicular anisotropy.** *C. de Julian Fernandez*¹, R. Novak², F. Albertini³, F. Casoli³, S. Fabbri³ and A. Caneschi¹. *1. Chemistry, INSTM-University of Florence, Sesto Fiorentino (FI), Italy; 2. Physics, INSTM- University of Florence, Sesto Fiorentino (FI), Italy; 3. Magnetic Materials, IMEM - CNR, Parma, Italy*
- GL-12. Structural and Magnetic Properties of Fe/Polyimide Multilayer Thin Film.** *J. Kim*¹, S. Kim¹, N. Oh¹, H. An¹, J. Kim¹, D. Jeong¹, C. Kim¹ and C. Yoon¹. *Materials Science and Engineering, Hanyang University, Seoul, South Korea*
- GL-13. The magnetic anisotropies of FeCo and FeCoGd films.** L. Sun^{1,2}, J. Wang¹, Y. Fu¹, Z. Kou¹, Y. Zhai^{1,4}, X. Bai⁴, J. Wu³, Y. Xu², J. Du⁴, H. Lu⁴ and H. Zhai⁴. *Department of Physics, Southeast University, Nanjing, Jiangsu, China; 2. Department of Physics, University of York, York, United Kingdom; 3. Department of Electronics, University of York, York, United Kingdom; 4. National Laboratory of Solid Microstructures, Nanjing University, Nanjing, Jiangsu, China*

THURSDAY
MORNING
9:00

POLIVALENTE

Session GM
PERMANENT MAGNET MACHINES IV
(POSTER SESSION)

Aly Flores Filho, Chair

- GM-01. The energy loss by drag force of superconductor flywheel energy storage system with permanent magnet rotor.** *J. Lee¹, Y. Han¹, S. Jung¹, T. Sung¹ and B. Park¹*. *Korea Electric Power Research Institute, Daejeon, South Korea*
- GM-02. Analysis of eddy-current loss in a double-stator cup-rotor PM machine.** *S. Niu¹, K. Chau¹ and J. Jiang²*. *Dept. of Electrical and Electronic Engineering, The University of Hong Kong, Hong Kong, China; 2. School of Electromechanical Engineering and Automation, Shanghai University, Shanghai, China*
- GM-03. Comparison of stator-permanent-magnet brushless machines.** *C. Liu¹ and K. Chau¹*. *Dept. of Electrical and Electronic Engineering, The University of Hong Kong, Hong Kong, China*
- GM-04. Segmentation of magnets to reduce losses in permanent magnet synchronous machines.** *P. Sergeant¹ and A. Van den Bossche¹*. *Department of Electrical Energy, Systems and Automation, Ghent university, Gent, Belgium*
- GM-05. Cogging Torque Reduction in Brushless DC Motors Due to the Magnetization Distribution in Permanent Magnets.** *T. Ishikawa¹, K. Yonetake¹, M. Matsunami¹ and M. Tsuchiya²*. *Electronic Engineering, Gunma University, Kiryu, Japan; 2. Tokyo Parts Industrial Co.,LTD., Isesaki, Japan*
- GM-06. Negative Stiffness of Toroidally-Wound BLDC Machine.** *M. Noh¹ and H. Lee¹*. *Mechatronics Engineering, Chungnam National University, Daejeon, South Korea*
- GM-07. A STUDY ON THE DESIGN OF AN INSET PERMANENT MAGNET TYPE FLUX-REVERSAL MACHINE.** *T. Kim¹*. *Electrical Engineering, Gyeongsang National University, Jinju, South Korea*

- GM-08. A Comprehensive Comparison of Flux-Switching and Flux-Reversal Brushless PM Machines.** *H. Wei*¹, *C. Ming*¹, *Z. Wenxiang*¹, *Z. Jianzhong*¹ and *J. Hongyun*¹. *School of Electrical Engineering, Southeast University, Nanjing, 210096, China*
- GM-09. Optimization and electromagnetic analysis of stator interior permanent magnet machine with minimum cogging torque.** *J. Zhang*¹, *M. Cheng*¹ and *W. Zhao*¹. *school of electrical engineering, Southeast University, Nanjing, Jiangsu, China*
- GM-10. Design and analysis of line-starting three- and single-phase interior permanent magnet synchronous motors; direct comparison to induction motor characteristics.** *T. Mar čič*¹, *B. Stumberger*^{2,1}, *G. Stumberger*^{2,1}, *M. Hadziselimovi ć*^{2,1}, *P. Vrtič*¹ and *D. Dolinar*^{2,1}. *1. TECES, Research and Development Centre for Electrical Machines, Maribor, Slovenia; 2. University of Maribor, Faculty of Electrical Engineering and Computer Science, Maribor, Slovenia*
- GM-11. Design and analysis of large capacity line-start permanent magnet synchronous motors.** *Q. Lu*¹ and *Y. Ye*¹. *college of electrical engineering, Hangzhou, Zhejiang, China*
- GM-12. An Application of the Latin Hypercube Sampling Strategy for Optimal Design of Large Scale Permanent magnet pole using Adaptive Response Surface Method.** *P. Shin*¹, *S. Woo*¹, *Y. Zhang*² and *C. Koh*². *1. Electrical Engineering, Hongik University, Chungnam, South Korea; 2. Electrical and Computer Engineering, Chungbuk National University, Chungbuk, South Korea*

THURSDAY
MORNING
9:00

POLIVALENTE

Session GN
MOTORS AND ACTUATORS III
(POSTER SESSION)
Ranran Lin, Chair

- GN-01. Development of an axial-flux brushless motor for low-profile fan applications.** *L. Hsu¹, C. Huang¹, M. Tsai¹ and G. Yan²*. *1. Electric Motor Technology Research Center, National Cheng Kung University, Tainan, Taiwan; 2. Metal Industries Research & Development Centre, Kaohsiung, Taiwan*
- GN-02. Sliding Mode Control for Optical Image Stabilization Actuators.** *H. Yu^{1,2}, T. Liu¹ and C. Chiang¹*. *1. Department of Mechanical Engineering, National Chiao Tung University, Hsinchu, Taiwan; 2. Electronics and Opto-electronics Research Laboratories, Industrial Technology Research Institute, Hsinchu, Taiwan*
- GN-03. Characteristic Comparison between the Spiral and Lamination Stator in Axial Field Slotless Machines.** *S. Lee¹, J. Hong¹, T. Lee² and J. Park²*. *1. Automotive Engineering, Hanyang university, Seoul, South Korea; 2. Mechanical Engineering, Hanyang university, Seoul, South Korea*
- GN-04. Investigation and comparison of inductance calculation methods in interior permanent magnet synchronous motors.** *T. Sun¹, S. Kwon¹, J. Lee¹ and J. Hong¹*. *1. Department of Mechanical Engineering, Hanyang University, Seoul, South Korea*
- GN-05. Two-DOF micro magnetostrictive bending actuator for wobbling motion.** *T. Ueno¹, C. Saito², N. Imaizumi² and T. Higuchi¹*. *1. University of Tokyo, Tokyo, Japan; 2. Namiki Precision Jewel Co., LTD, Tokyo, Japan*
- GN-06. Thrust calculations and measurements of cylindrical linear oscillatory actuator with halbach array moving magnet using transfer relations theorem.** *S. Jang¹, H. Kim¹, J. Choi¹ and S. Lee²*. *1. Chungnam National University, Daejeon, South Korea; 2. Korea Institute of Industrial Technology, Kwangju, South Korea*

- GN-07. CHARACTERISTIC ANALYSIS OF A FLUX-REVERSAL MOTOR WITH FOUR-SWITCH CONVERTER.** H. Kang², T. Kim¹ and B. Lee². *Electrical Engineering, Gyeongsang National University, Jinju, South Korea; 2. Sungkyunkwan University, Suwon, South Korea*
- GN-08. Iron Loss Calculation in an Amorphous Transformer Using Coupled Preisach Modeling & Finite Element Method.** Y. Cho¹ and S. Mun¹. *Electrical Engineering, Hanbat National University, Daejeon, South Korea*
- GN-09. Reduction of Lateral Force using V-skew in Permanent Magnet Linear Synchronous Motor.** D. Lee¹, K. Jang¹ and G. Kim¹. *Electrical Engineering, Changwon National University, Changwon, Gyeongsangnam-do, South Korea*
- GN-10. Axial-gap type permanent magnet motor modeling for transient analysis.** S. Won¹, J. Choi¹ and J. Lee¹. *Electrical Eng., Hanyang University, Seoul, South Korea*
- GN-11. Analysis of Total Harmonic Distortion in microspeaker considering electromagnetic mechanical acoustic coupling effect.** J. Kwon¹, S. Hwang¹ and G. Hwang². *1. Mechanical Engineering, Pusan National University, Busan, Busan, South Korea; 2. Computer Engineering, Youngsan University, Yangsan-city, Kyungnam-do, South Korea*

THURSDAY
MORNING
9:00

POLIVALENTE

Session GO
LIFE SCIENCES: TECHNIQUES AND
INSTRUMENTATION II
(POSTER SESSION)

Jose Rivas, Chair

- GO-01. Wide dynamic range digital FLL system using high- T_c SQUID for biomagnetic measurements.**
D. Oyama^{1,2}, K. Kobayashi¹, M. Yoshizawa¹ and Y. Uchikawa³ 1. *Graduate School of Engineering, Iwate University, Morioka, Iwate, Japan;* 2. *Japan Society for the Promotion of Science Research Fellow, Tokyo, Japan;* 3. *Department of Electronics and Computer Engineering, School of Science and Engineering, Tokyo Denki University, Hatoyama, Saitama, Japan*
- GO-02. Double relaxation oscillation SQUID mounted on Pulse Tube cryocooler.** *M.J. Eshraghi¹ and I. Sasada¹* 1. *Applied science for electronics and materials, Kyushu University, Kasuga, Fukuoka, Japan*
- GO-03. Quantitative magnetic immunoassays with a SQUID by means of mutual inductance calculations.**
A. Bruno¹, H.R. Carvalho¹, S.R. Louro¹ and C. Paulo¹ 1. *Physics, Pontifical Catholic University of Rio de Janeiro, Rio de Janeiro, Brazil*
- GO-04. Detection of MCG signal by using MgB₂ SQUID on pulse-tube cooler.** *D. Oyama^{1,2}, Y. Harada³, Y. Fujine¹, K. Kobayashi¹, Y. Uchikawa⁴ and M. Yoshizawa¹* 1. *Graduate School of Engineering, Iwate University, Morioka, Iwate, Japan;* 2. *Japan Society for the Promotion of Science Research Fellow, Tokyo, Japan;* 3. *Japan Science and Technology Agency Innovation Satellite Iwate, Morioka, Iwate, Japan;* 4. *Department of Electronics and Computer Engineering, School of Science and Engineering, Tokyo Denki University, Hatoyama, Saitama, Japan*
- GO-05. Biomagnetic Signal Detection Using Very High Sensitive MI Sensor for Medical Applications.**
T. Uchiyama¹, S. Tajima¹, S. Shibata¹, L. Ji¹ and K. Bushida² 1. *Electrical Engineering, Nagoya University, Nagoya, Japan;* 2. *UNITIKA LTD, Tokyo, Japan*

- GO-06. Giant magnetoimpedance of electrochemically surface modified Co-based amorphous ribbons.** *V. Fal Miyar*¹, *M. Cerdeira*¹, *J.A. García*¹, *A.P. Potatov*², *R. Pierna*³, *F.F. Marzo*³, *J.M. Barandiarán*⁴ and *G.V. Kurlyandskaya*⁴*1. Department of Physics, University of Oviedo, Oviedo, Asturias, Spain; 2. Institute of Metal Physics, Ekaterinburg, Russian Federation; 3. Dpto. de Ingeniería Química y Medio Ambiente, Universidad del País Vasco, San Sebastián, Basque Country, Spain; 4. Department of Electricity and Electronics, Basque Country University, Bilbao, Basque Country, Spain*
- GO-07. Spatially arterial pulse diagnostic apparatus using array Hall devices.** *S. Lee*¹, *G. Kim*², *M. Ahn*³, *Y. Park*³, *D. Hwang*¹, *J. Rhee*⁴ and *H. Yoon*⁵*1. Oriental Biomedical Engineering, Sangji University, Wonju, Gangwondo, South Korea; 2. Oriental Medicine Science, Sangji University, Wonju, Gangwondo, South Korea; 3. Oriental-western Biomedical Engineering, Sangji University, Wonju, Gangwondo, South Korea; 4. Physics, Sookmyung Women's University, Seoul, Seoul, South Korea; 5. Biomedical Engineering, Yonsei University, Wonju, Gangwondo, South Korea*
- GO-08. Various Types of Hall Sensors for Single Particle Detection.** *O. Kazakova*¹, *J. Gallop*¹, *D. Cox*^{1,2}, *A. Cuenat*¹, *L. Brown*¹, *K. Suzuki*³, *L. Bernau*⁴ and *I. Utke*⁴*1. NPL, Teddington, United Kingdom; 2. Surrey University, Guilford, United Kingdom; 3. NTT Basic Research Laboratories, Kanagawa, Japan; 4. EMPA, Thun, Switzerland*
- GO-09. Microwaves Doppler transducer for noninvasive monitorisation of the cardiorespiratory activity.** *O.I. Baltag*² and *M.P. Costin*^{1,2}*1. Computer Science Institute, Romanian Academy, Iasi, Romania; 2. Faculty of Biomedical Engineering, "Gr.T.Popa" University of Medicine and Pharmacy, IASI, Romania*
- GO-10. Investigating the cortical connectivity in the brain by combined TMS and EEG.** *K. Iramina*^{1,2}, *T. Arimatsu*¹, *H. Sato*¹, *A. Hyodo*², *T. Hayami*³ and *S. Ueno*⁴*1. Department of Intelligent Systems, Kyushu University, Fukuoka, Japan; 2. Graduate School of Systems Life Sciences, Kyushu University, Fukuoka, Japan; 3. Digital Medicine Initiative, Kyushu University, Fukuoka, Japan; 4. Department of Applied Quantum Physics, Kyushu University, Fukuoka, Japan*

- GO-11. Fabrication of new magnetic micro-machines for low-invasive surgery.** C. Troisi¹, M. Knaflitz¹, E. Olivetti², L. Martino² and G. Durin². *1. Dep. of Electronics, Politecnico di Torino, Torino, Italy; 2. Istituto Nazionale di Ricerca Metrologica, Torino, Italy*
- GO-12. Magnetic Tracking of Eye Motion in Small, Fast-Moving Animals.** A. Plotkin¹, E. Paperno¹, G. Vasserman² and R. Segev². *1. Electrical and Computer Engineering, Ben-Gurion University of the Negev, Beer-Sheva, Israel; 2. Life Sciences, Ben-Gurion University of the Negev, Beer-Sheva, Israel*
- GO-13. Minimization of Computational Errors in Diffusion Simulation of Nuclear Magnetization.** T. Imae^{1,2}, H. Shinohara², M. Sekino³, H. Ohsaki³, S. Ueno⁴, K. Mima¹ and K. Ootomo¹. *1. Department of Radiology, University of Tokyo Hospital, Tokyo, Japan; 2. Graduate School of Human Health Science, Tokyo Metropolitan University, Tokyo, Japan; 3. Graduate School of Frontier Sciences, University of Tokyo, Chiba, Japan; 4. Graduate School of Engineering, Kyushu University, Fukuoka, Japan*
- GO-14. Discriminative detection of extracellular and intracellular sodiums in nerve fibers by magnetic resonance spectroscopy.** S. Yamaguchi-Sekino¹, H. Tatsuoka², M. Sekino³, H. Ohsaki³, Y. Abe¹ and S. Ueno⁴. *1. Department of Biomedical Engineering, Graduate School of Medicine, The University of Tokyo, Tokyo, Japan; 2. Research Center for Frontier Medical Engineering, Chiba University, Chiba, Japan; 3. Department of Advanced Energy, Graduate School of Frontier Sciences, The University of Tokyo, Chiba, Japan; 4. Department of Applied Quantum Physics, Graduate School of Engineering, The Kyusyu University, Fukuoka, Japan*
- GO-15. Detection of single Magnetic bead using Spin Valve Structure for an Array of PHR Sensor.** S. Oh¹, H. Tran Quang¹, K. Kim¹ and C. Kim¹. *1. Chung nam univ., Daejeon, South Korea*

THURSDAY
MORNING
9:00

POLIVALENTE

Session GP
SWITCHED RELUCTANCE MACHINES
(POSTER SESSION)
Jeremy Hall, Chair

- GP-01. Extraction of design parameters of linear switched reluctance motor based on force calculation.** S. Jang¹, J. Park¹, J. Choi¹ and H. Sung². *1. Electrical Engineering, Chungnam National University, Daejeon, South Korea; 2. Korea Institute of Machinery & Materials, Daejeon, South Korea*
- GP-02. Dynamic Analysis of Rotor Eccentricity in Switched Reluctance Motor with Parallel Winding.** L. Jian¹. *Electrical Engineering, Dong-A University, Busan, South Korea*
- GP-03. Comparison of 12/8 and 6/4 Switched Reluctance Motor: Noise and Vibration Aspects.** L. Jian¹. *Electrical Engineering, Dong-A University, Busan, South Korea*
- GP-04. Comparison of iron losses in switched reluctance motor with different winding arrangements and switching sequences.** T. Sun¹ and J. Hong¹. *Department of Mechanical Engineering, Hanyang University, Seoul, South Korea*
- GP-05. Optimum Design Criteria for Maximum Torque Density and Minimum Torque Ripple of Synchronous Reluctance Motor according to the Rated Wattage using Response Surface Methodology.** Y. Choi¹ and S. Mun¹. *Electrical Eng., Hanbat National University, Daejeon, South Korea*
- GP-06. The Evaluation of On-line Observer System of Synchronous Reluctance Motor Using a Coupled FEM & Preisach Model.** H. Lim¹, J. Lee¹, M. Lee¹ and D. Lee². *1. Electrical Engineering, Hanbat National University, Daejeon, South Korea; 2. Electrical Engineering, Hanyang University, Seoul, South Korea*

- GP-07. Design and Characteristic Analysis of Synchronous Reluctance Motors with Axial Lamination Rotor.** S. Hahn¹, J. Hong¹, J. Kim¹ and D. Koo²*1. Department of Electrical Engineering, Dong-A University, Busan, South Korea; 2. Mechatronics Research Group, Korea Electrotechnology Research Institute, Changwon, South Korea*
- GP-08. Design Solutions To Minimize Iron Core Loss In Synchronous Reluctance Motors Using Preisach Model & Finite Elements Method(FEM).** H. Lim¹, J. Lee¹, M. Lee¹ and D. Lee²*1. Hanbat National University, Daejeon, South Korea; 2. Electrical Engineering, Hanyang University, Seoul, South Korea*
- GP-09. Optimum Design of Synchronous Reluctance Motors Based on Torque/Volume Using Finite Element Method & Sequential Unconstrained Minimization Technique.** S. Mun¹ and Y. Cho¹*1. Electrical Engineering, Hanbat National University, Daejeon, South Korea*
- GP-10. Reduced windage loss rotor of SRM using magnetic saturation for high speed application.** S. Won¹ and J. Lee¹*1. Electrical Eng., Hanyang University, Seoul, South Korea*
- GP-11. Calculation of force characteristics of an electromechanical system using co-energy.** M. Hadziselimovic^{1,2}, P. Virtic¹, G. Stumberger^{1,2}, T. Marcic¹ and B. Stumberger^{1,2}*1. University of Maribor, FE&CS, Maribor, Slovenia; 2. TECES, Maribor, Slovenia*

THURSDAY
MORNING
9:00

POLIVALENTE

Session GR
SOFT NANOCRYSTALLINE ALLOYS
(POSTER SESSION)

Daichi Azuma, Chair
Patricia Crespo, Chair

- GR-01. Exchange bias in surface-crystalline FeNbB ribbons.** *L. Kraus*¹, *O. Zivotský*², *K. Postava*², *P. Švec*³ and *D. Janičkovič*³ *1. Institute of Physics v.v.i., Academy of Sciences of the Czech Republic, Prague, Czech Republic; 2. Department of Physics, Technical University of Ostrava, Ostrava, Czech Republic; 3. Institute of Physics, Slovak Academy of Sciences, Bratislava, Slovakia*
- GR-02. Surface magnetic properties and depth sensitivity of as-quenched FeNbB ribbons.** *O. Zivotský*¹, *K. Postava*¹, *L. Kraus*², *K. Hrabovská*¹ and *J. Pistora*¹ *1. Department of Physics, VSB-Technical University of Ostrava, Ostrava, Czech Republic; 2. Institute of Physics, Academy of Sciences of the Czech. Rep., Prague, Czech Republic*
- GR-03. Some Magnetic Properties of Bulk Amorphous Fe-Co-Zr-Hf-Ti-W-B-(Y) Alloys.** *M. Hasiak*¹, *K. Sobczyk*², *J. Zbroszczyk*², *W. Ciurzynska*², *J. Olszewski*², *M. Nabialek*², *J. Kaleta*¹, *J. Swierczek*² and *A. Lukiewska*² *1. Institute of Materials Science and Applied Mechanics, Wrocław University of Technology, Wrocław, 50-370, Poland; 2. Institute of Physics, Czestochowa University of Technology, Czestochowa, 42-200, Poland*
- GR-04. Magnetic properties of as - quenched Fe87-xZr3.5Nb3.5B6Cux nanocrystalline ribbons.** *J. Hu*¹, *B. Li*², *H. Qin*¹, *R. Zhang*¹ and *M. Jiang*¹ *1. Department of Physics, Shandong University, Jinan, China; 2. Central Iron & Steel Research Institute, Beijing, China*
- GR-05. Dynamics of the magnetic susceptibility of milled FexAl100-x (x = 70,71) alloys.** *D. Alba Venero*², *R. Rodríguez García*², *L. Fernández Barquín*², *E. Apiñaniz*¹, *J.J. Garitaonandia*¹ and *F. Plazaola*¹ *1. University of the Basque Country, Bilbao, Spain; 2. Universidad de Cantabria, CITIMAC, Santander, Spain*

- GR-06. EXAFS studies and magnetic behavior of FeCuZr Ball-milled alloys.** *A. Martinez*¹, *J.J. Romero*¹, *G. Castro*², *A. Yang*³, *V.G. Harris*³, *J.C. Woicik*⁴, *A. Hernando*¹ and *P. Crespo*¹. *1. Instituto de Magnetismo Aplicado, Las Rozas, Madrid, Spain; 2. Sp-line European Synchrotron Radiation Facility, ESRF, Grenoble, France; 3. Northeastern University, Boston, MA; 4. National Institute of Science and Technology, Gaithersburg, MD*
- GR-07. Mossbauer and structural studies of the system FeAlNb prepared by mechanical alloying.** *L.E. Zamora*^{1,3}, *G.A. Perez Alcazar*^{1,3}, *J.M. Greneche*² and *J.M. Gonzalez*³. *1. Física, Universidad del Valle, Cali, Valle, Colombia; 2. Laboratoire de Etat Condense, Université du Maine, 72085, Cedex 9, Le Mans, France; 3. Unidad Asociada, ICMM-IMA, Apdo. 155, 28230 Las Rozas, Madrid, Madrid, Spain*
- GR-08. Magnetic and structural characterization of mechanically alloyed Fe50Co50 samples.** *G.A. Pérez Alcázar*¹, *L.E. Zamora Alfonso*¹, *J.F. Marco*², *J.J. Romero*³, *J.M. Gonzalez*⁴ and *F.J. Palomares*⁵. *1. Physics, Universidad del Valle, Cali, Valle, Colombia; 2. Instituto de Física-Química Rocasolano, CSIC, C/Serano, 119. 28006, Madrid, Madrid, Spain; 3. Instituto de Magnetismo Aplicado, UC, P.O. Box 155, 28360, Las Rozas, Madrid, Madrid, Spain; 4. Unidad Asociada, ICMM-IMA, P.Box 155, 28360, Las Rozas, Madrid, Madrid, Spain; 5. Instituto de Ciencia de Materiales de Madrid, CSIC, C/Sor Juana Inés de la Cruz, 28049, Cantoblanco, Madrid, Madrid, Spain*
- GR-09. Residual strain induced in a crystal lattice upon annealing under stretching load in soft-magnetic Fe-based nanocrystalline alloys.** *N.V. Ershov*¹, *Y.P. Chernenkov*², *V.I. Fedorov*², *V.A. Lukshina*¹ and *A.P. Potapov*¹. *1. Institute of Metal Physics, Ural Division, Russian Academy of Sciences, Yekaterinburg, Russian Federation; 2. St.-Petersburg Institute of Nuclear Physics, Russian Academy of Sciences, Gatchina, Russian Federation*
- GR-10. Magnetic properties and reaction kinetics of synthesized Fe-Ni-Co alloy during H₂ reduction of Ni_{0.5}Co_{0.5}Fe₂O₄.** *M. Bahgat*¹, *M. Paek*¹ and *J. Pak*¹. *1. Metallurgical and material engineering, Hanyang university, Ansan, South Korea*

- GR-11. Magnetocaloric effect in the FeCrCuNbSiB amorphous materials.** A. Kolano-Burian¹, M. Kowalczyk², R. Kolano¹, R. Szymczak³, H. Szymczak³, T. Kulik² and J. Szyrowski¹. *1. Institute of Non-Ferrous Metals, Gliwice, Poland; 2. Faculty of Materials Science and Engineering, Warsaw University of Technology, Warsaw, Poland; 3. Institute of Physics, Polish Academy of Sciences, Warsaw, Poland*
- GR-12. Thermal and magnetic field-induced martensite-austenite transformation in melt spun Mn₅₀Ni₄₀In₁₀ ribbons.** J.L. Sanchez Llamazares¹, B. Hernando¹, J.D. Santos¹, M.J. Pérez¹, C. García², J. González² and R. Varga³. *1. Departamento de Física, Universidad de Oviedo, Oviedo, Asturias, Spain; 2. Departamento de Física de Materiales, Universidad del País Vasco, San Sebastián, Spain; 3. Institute of Physics, UPJS, Kosice, Slovakia*
- GR-13. Influence of the Fe/B ratio on the magnetocaloric response of Fe_{92-x}Cr₈B_x (x=12, 15) amorphous alloys.** V. Franco¹, A. Conde¹ and L.F. Kiss². *1. Department of Condensed Matter Physics, Sevilla University, Sevilla, Spain; 2. Research Institute for Solid State Physics and Optics, Hungarian Academy of Sciences, Budapest, Hungary*
- GR-14. XMCD-PEEM imaging of the micromagnetic structure of Co₂FeSi Heusler compound.** A. Gloskovskii¹, C. Blum¹, J. Barth¹, G. Fecher¹, P. Nagel², S. Schuppler², G. Schönhense³ and C. Felser¹. *1. Institut für Anorganische Chemie und Analytische Chemie, Johannes Gutenberg - Universität, Mainz, Germany; 2. Forschungszentrum Karlsruhe, Institut für Festkörperphysik, Karlsruhe, Germany; 3. Institut für Physik, Johannes Gutenberg - Universität, Mainz, Germany*
- GR-15. Transport and Magnetism in Nd₅Si_{1.45}Ge_{2.55}** A.M. Pereira¹, C. Magen⁴, P. Algarabel², L. Morellón^{2,3}, M.E. Braga¹, F. Carpineiro¹, M.R. Ibarra^{2,3}, J. Ventura¹, J.B. Sousa¹ and J.P. Araujo¹. *1. IFIMUP Faculdade de Ciências da Universidade do Porto, Porto, Portugal; 2. ICMA - Universidad de Zaragoza and Consejo Superior de Investigaciones Científicas, Zaragoza, Spain; 3. Instituto de Nanociencia de Aragón, Universidad de Zaragoza, Zaragoza, Spain; 4. Oak Ridge Natl Lab, High Temp Mat Lab, Oak Ridge, TN*

- GR-16. Magnetism and phase transformation in Fe / Fe oxide milled nanopowders.** *O. Crisan*¹, *R. Nicula*² and *I. Skorvanek*³. *1. National Institute for Materials Physics, Bucharest-Magurele, Romania; 2. Institute of Physics, Rostock University, Rostock, Germany; 3. Institute of Experimental Physics, Slovak Academy of Sciences, Kosice, Slovakia*
- GR-17. Magnetic properties of high Bs Fe-based amorphous powders produced by Spinning Water Atomization Process (SWAP).** *I. Otsuka*¹, *K. Wada*¹, *Y. Maeta*¹, *T. Kadomura*¹ and *M. Yagi*². *1. EPSON ATMIX CORPORATION, Hachinohe-shi, Aomori-ken, Japan; 2. Sojo University, Kumamoto, Japan*
- GR-18. Study on the microstructure and soft magnetic properties of Ni-Fe particles synthesized by a conventional and a microwave-assisted polyol method.** *Y. Shimada*¹, *Y. Endo*¹, *S. Okamoto*², *M. Yamaguchi*¹ and *O. Kitakami*². *1. Dept. of Electrical and Communication Engineering, Tohoku University, Sendai, Japan; 2. IMRAM, Tohoku Univ., Sendai, Japan*
- GR-19. Synthesis, Phase Transfer and Magnetic Properties of Monodisperse Magnetite Nanocubes.** *H. Yang*¹, *D. Hasegawa*², *M. Takahashi*¹ and *T. Ogawa*^{2,3}. *1. Niche, Tohoku University, Sendai, Miyagi, Japan; 2. Dep. of Electronics Engineering, Tohoku University, Sendai, Miyagi, Japan; 3. Cress, Tohoku University, Sendai, Miyagi, Japan*
- GR-20. Size controlled Fe nanoparticles through polyol process and their magnetic properties.** *R.J. Joseyphus*^{1,2}, *K. Shinoda*², *D. Kodama*² and *B. Jeyadevan*². *1. Department of Physics, National Institute of Technology, Tiruchirappalli, Tamilnadu, India; 2. Graduate School of Environmental Studies, Tohoku University, Sendai, Miyagi, Japan*
- GR-21. Magnetic behaviour of Gd₄(Co_{1-x}Cu_x)₃ compounds.** *T.M. Seixas*^{1,2}, *M.A. Salgueiro da Silva*², *J.M. Machado da Silva*^{1,2}, *H.F. Braun*³ and *G. Eska*³. *1. Instituto de Física dos Materiais da Universidade do Porto (IFIMUP), Porto, Portugal; 2. Departamento de Física da Universidade do Porto, Rua do Campo Alegre, 687, 4169-007, Porto, Portugal; 3. Physikalisches Institut, Universitaet Bayreuth, D – 95440, Bayreuth, Germany*
- GR-22. Exact Calculation of The Magnetostatic Interaction in Arrays of Nanowires.** *J. Velázquez*¹. *CAI Difracción Rayos X, Universidad Complutense de Madrid, Madrid, Spain*

THURSDAY
MORNING
9:00

POLIVALENTE

Session GS
POWER AND CONTROL MAGNETICS
(POSTER SESSION)

David Howe, Chair

- GS-01. Performance Analysis of Flyback Converter Based on Time-stepping FEA Incorporating Magnetic Hysteresis Effect.** J. Chen¹, Y. Guo², J. Zhu² and Z. Lin². *1. College of Electromechanical Engineering, Donghua University, Shanghai, Shanghai, China; 2. Faculty of Engineering, University of Technology Sydney, Sydney, NSW, Australia*
- GS-02. Chaoization of Permanent Magnet Synchronous Motors Using Stator Flux Regulation.** Z. Wang¹ and K. Chau¹. *1. Department of Electrical and Electronic Engineering, The University of Hong Kong, Hong Kong, China*
- GS-03. Fundamental Research about Parameter Design of Contactless Power Station for Moving Electric Loads.** N. Nakajima¹, Y. Kakubari¹, F. Sato¹ and H. Matsuki¹. *1. Tohoku University, Sendai, Miyagi, Japan*
- GS-04. Experimental Verification and Performance Analysis of Permanent Magnet Wind Turbine Generators considering Magnetic Losses using D-Q Axis Model.** S. Jang¹, J. Choi¹, K. Ko¹ and B. Kim². *1. Chungnam National University, Dae-jeon, South Korea; 2. Korea Electric Power Research Institute, Daejeon, South Korea*
- GS-05. Design, Fabrication and Experimental Validation of a Miniaturized Generator with Planar Coils via Genetic Algorithm.** P. Chao¹, J. Shen², E. Chiu¹ and J. Huang². *1. Electrical and Control Engineering, National Chiao Tung University, Hsinchu, Taiwan; 2. Mechanical Engineering, Chung Yuan Christian Univ., Chung Li, Taiwan*
- GS-06. Electromagnetic Analysis and Parameter Estimation of Permanent Magnet Wind Turbine Generators Considering Skew Effects.** S. Jang¹, J. Choi¹ and K. Ko¹. *1. Chungnam National University, Dae-jeon, South Korea*

- GS-07. Operating time estimation in acceleration and deceleration mode of high power FESS using electromagnetic field analysis of PM synchronous motor/generator.** *D. You*¹, *S. Jang*¹, *J. Lee*² and *T. Sung*²*1. chungnam national univ., daejeon, South Korea; 2. Korea Electric Power Research Institute, Daejeon, South Korea*
- GS-08. Magnetic Switch Topologies.** *W. Johnson*¹*1. Electrical and Computer Engineering, University of Kentucky, Lexington, Ky, KY*

**THURSDAY
MORNING
9:00**

POLIVALENTE

**Session GT
SPIN TORQUE EXCITATIONS IN
NANOMAGNETS
(POSTER SESSION)**

Dafine Ravelosona, Chair

- GT-01. Influence of Notch Shape and Size on Current-Driven Domain Wall Motions in a Magnetic Nanowire.** *H. Murakami*¹, *T. Komine*¹, *T. Nagayama*¹, *R. Sugita*¹ and *Y. Hasegawa*²*1. Department of Media and Telecommunications Engineering, Ibaraki University, Hitachi, Ibaraki, Japan; 2. Saitama University, Saitama, Saitama, Japan*
- GT-02. Multi-level transitions of closely-arranged spin valve pillars by spin transfer switching.** *N. Funabashi*¹, *K. Machida*¹, *K. Aoshima*¹, *Y. Miyamoto*¹, *N. Kawamura*¹, *K. Kuga*¹ and *N. Shimidzu*¹*1. NHK Science & Technical Research Laboratories, Tokyo, Japan*
- GT-03. Dependence of current induced switching properties on MgO formation method.** *J. Langer*¹, *J. Wrona*¹, *B. Ocker*¹, *W. Maass*¹, *A. Thomas*², *K. Rott*², *M. Schaefer*² and *G. Reiss*²*1. Singulus Nano Deposition Technologies GmbH, Kahl am Main, Germany; 2. Department of Physics, Bielefeld University, Bielefeld, Germany*

- GT-04. Dynamics of current-induced magnetic switching of a single-molecule magnet.** *M. Misiorny*¹ and *J. Barnas*^{1,2}. *1. Department of Physics, Adam Mickiewicz University, Poznan, Poland; 2. Institute of Molecular Physics, Polish Academy of Science, Poznan, Poland*
- GT-05. Spin mechatronics to facilitate spin transfer switching in magnetic tunnel junction.** *S. Kumar*^{1,2}, *N. Chen*¹, *S. Tan*¹ and *M. Jalil*². *1. SMI, Data Storage Institute, Singapore, Singapore; 2. ISML, ECE, National University of Singapore, Singapore, Singapore*
- GT-06. Spin transfer in Co/Cu/Co nanocontacts.** *M.N. Baibich*¹, *M.P. de Lucena*¹, *D.L. Baptista*¹, *R.B. da Silva*¹, *J.E. Schmidt*¹ and *L.G. Pereira*¹. *1. Instituto de Física UFRGS, Porto Alegre, RS, Brazil*
- GT-07. On the relation of the inelastic spin torque and the spin polarization.** *W. Wulfhekel*¹, *A.F. Takacs*¹, *T. Balashov*¹, *M. Däne*², *A. Ernst*² and *P. Bruno*². *1. Physikalisches Institut, Universität Karlsruhe, Karlsruhe, Germany; 2. Max-Planck Institut für Mikrostrukturphysik, Halle, Germany*
- GT-08. Microscopic theory of spin transfer torque based on the spin spiral texture.** *Y. Le Maho*¹ and *F. Piechon*². *1. Institut d'Electronique Fondamentale, CNRS / Univ. Paris Sud, Orsay, Paris, France; 2. Laboratoire de Physique des Solides, CNRS / Univ. Paris Sud, Orsay, Paris, France*
- GT-09. Current-induced domain wall motion in permalloy nanowires.** *W. Zhang*¹, *P. Wong*¹, *Y. Xu*¹, *X. Zou*² and *J. Wu*². *1. Spintronics and Nanodevice Laboratory, Department of Electronics, University of York, York, United Kingdom; 2. Department of Physics, University of York, York, United Kingdom*
- GT-10. Spin transfer switching in magnetic tunnel junction using a composite free layer.** *W. Chen*¹, *D. Wang*¹, *C. Yen*¹, *Y. Lee*¹, *S. Yang*¹, *C. Shen*¹, *C. Tsai*¹, *C. Hung*¹, *K. Shen*¹ and *M. Kao*¹. *1. Electronics and Optoelectronics Research Lab. (EOL), Industrial Technology Research Institute (ITRI), Hsinchu, Taiwan*

- GT-11. Current-induced Domain Wall Motion in L- and C-shaped Permalloy Nanowires.** *J. Yoon^{1,4}, J. Lee^{2,3}, C. You⁴, S. Choe³, K. Shin² and M. Jung¹*. *1. Quantum Material Research Team, Korea Basic Science Institute, Daejeon, South Korea; 2. Center for Spintronics Research, Korea Institute of Science and Technology, Seoul, South Korea; 3. physics, Seoul National University, Seoul, South Korea; 4. physics, Inha University, Incheon, South Korea*
- GT-12. Experimental study of thermally activated magnetization reversal with a spin-transfer torque in a nanowire.** *K. Seon Ock¹, W. Kim¹, T. Lee¹, K. Kim², S. Choe², Y. Jang³, S. Yoon³ and B. Cho³*. *1. Department of Materials Science and Engineering, Korea Advanced Institute of Science and Technology, Daejeon, South Korea; 2. Department of Physics and Astronomy, Seoul National University, Seoul, South Korea; 3. Department of Materials Science and Engineering, Gwangju Institute of Science and Technology, Gwangju, South Korea*
- GT-13. Spin-Transfer Switching in Elliptical Spin Valves in Subnanosecond Regime.** *R. Heindl¹, T. Silva¹, W. Rippard¹, S. Russek¹ and J. Katine²*. *1. Electromagnetics Division - Magnetics Group, National Institute of Standards and Technology (NIST), Boulder, CO; 2. Hitachi San Jose Research Center, San Jose, CA*
- GT-14. Shape dependence of current-induced magnetization switching.** *C. Tsai¹, Y. Lee¹, D. Wang¹, W. Chen¹, C. Yen¹, C. Shen¹, S. Yang¹, C. Hung¹, K. Shen¹ and M. Kao¹*. *1. Electronics and Optoelectronics Research Laboratories, Industrial Technology Research Institute, Hsinchu, Taiwan*
- GT-15. Static and Dynamic Depinning Current Density in Current-Induced Domain Wall Motion.** *S. Seo¹, H. Lee², W. Kim³, T. Lee³, S. Choe⁴, D. Kim⁵ and K. Lee¹*. *1. Korea University, Seoul, South Korea; 2. POSTECH, Pohang, South Korea; 3. KAIST, Daejeon, South Korea; 4. Seoul National University, Seoul, South Korea; 5. Chungbuk National University, Cheongju, South Korea*
- GT-16. Current-assisted variation of magnetization reversal process in tri-layer-ring spin valve.** *D. Chen¹, C. Yu² and Y. Yao^{1,3}*. *1. Department of Material Science and Engineering, National Chiao Tung University, Hsinchu, Taiwan; 2. Institute of Physics, Academia Sinica, Taipei, Taiwan; 3. The Department of Materials Engineering, Tatung University, Taipei, Taiwan*

- GT-17. Domain wall dynamics in the microwave frequency range probed by Spin diode effect.** S. Laribi^{1,2}, A. Anane¹, J. Grollier¹, V. Cros¹, K. Bouzehouane¹, G. Faini³ and A. Fert¹. *1. Unité Mixte de Physique CNRS/Thales and Université Paris Sud 11, Route départementale 128, 91767, Palaiseau, France; 2. ST Microelectronics, 850 Rue Jean Monnet, 38926, Crolles, France; 3. Phynano team, Laboratoire de Photonique et Nanostructures, LPN-CNRS, Route de Nozay, 91460, Marcoussis, France*
- GT-18. Current induced domain wall motion with step structure.** H. Ashida¹, T. Ochiai¹, Y. Shimizu¹ and A. Tanaka¹. *1. Fujitsu Limited., Atsugi, 243-0197, Japan*

THURSDAY
MORNING
9:00

POLIVALENTE

Session GU
MAGNETOCALORIC EFFECT AND
MATERIALS
(POSTER SESSION)

Julia Lyubina, Chair

- GU-01. Magnetocaloric Effect in Ni-Mn-Ga Alloys.** K. Mandal¹, D. Pal¹, O. Gutfleisch², J. Lyubina² and N. Scheerbaum². *1. Materials Science, S. N. Bose National Centre for Basic Sciences, Kolkata, West Bengal, India; 2. Institut für Metallische Werkstoffe, Leibniz Institute für Festkörper- und Werkstoffforschung Dresden (IFW Dresden), Dresden, saxony, Germany*
- GU-02. Magnetic properties and magnetocaloric effect in $Tb_8Co_{16}AX$ compounds where A=Al or Cu and $x \leq 4$.** R. Tetean¹, E. Burzo¹ and I.G. Deac¹. *1. Physics, Babes-Bolyai University, Cluj Napoca, Romania*
- GU-03. Synthesis and evaluation of magnetocaloric effect of rare earth nitrides.** Y. Hirayama¹, S. Nishio¹, T. Kusunose², T. Nakagawa³ and T.A. Yamamoto¹. *1. Graduate School of Engineering, Osaka University, Osaka, Japan; 2. Institute of Scientific and Industrial Research, Osaka University, Osaka, Japan; 3. Graduate School of Science and Engineering, Tokyo Institute of Technology, Tokyo, Japan*

- GU-04. Anisotropy of magnetocaloric effect in R₂Fe₁₇ single crystals with heavy RE metals and Y.** *K.P. Skokov*¹, *Y.G. Pastushenkov*¹, *Y.S. Koshkid'ko*¹, *T.I. Ivanova*² and *S.A. Nikitin*². *1. Department of Physics, Tver State University, Tver, Russian Federation; 2. Department of Physics, Moscow State University, Moscow, Russian Federation*
- GU-05. Magnetocaloric effect in Gd₄(Bi_xSb_{1-x})₃ alloys.** *N.A. de Oliveira*¹ and *M.B. Gomes*¹. *Instituto de Física, Universidade do Estado do Rio de Janeiro, Rio de Janeiro, Brazil*
- GU-06. Magnetocaloric effect in La(Fe_xSi_{1-x})₁₃ under applied pressure.** *N.A. de Oliveira*¹, *L.G. de Medeiros Jr*¹ and *A. Troper*^{1,2}. *1. Instituto de Física, Universidade do Estado do Rio de Janeiro, Rio de Janeiro, Brazil; 2. Centro Brasileiro de Pesquisas Físicas, Rio de Janeiro, Brazil*
- GU-07. Magnetocaloric Effect of the PrNi_{5-x}Co_x Hard Magnets.** *D.L. Rocco*¹, *R.P. Fernandes*², *M.S. Reis*¹, *J.S. Amaral*¹, *V.S. Amaral*¹, *J.P. Araújo*³, *P.B. Tavares*⁴ and *A.A. Coelho*⁵. *1. Departamento de Física e CICECO, Universidade de Aveiro, Aveiro, Portugal; 2. Technische Universität Hamburg-Harburg, Institut für Keramische Hochleistungswerkstoffe, Hamburg, Germany; 3. IFIMUP, Departamento de Física, Universidade do Porto, Porto, Portugal; 4. Departamento de Química and CQ-VR, Universidade de Trás-os-Montes e Alto Douro, Vila Real, Portugal; 5. Departamento de Física Gleb Wataguin, Universidade Estadual de Campinas – UNICAMP, Campinas, Brazil*

THURSDAY
MORNING
9:00

POLIVALENTE

Session GV
FAST SWITCHING OF FILMS AND
NANOSTRUCTURES
(POSTER SESSION)
Karsten Kuepper, Chair

- GV-01. Laser induced magnetisation switching in films with perpendicular anisotropy: a comparison between measurements and an LLB macro-spin model.** C. Bunce¹, J. Wu¹, G. Ju², B. Lu², D. Hinzke¹, N. Kazantseva¹, R. Chantrell¹ and U. Nowak¹. *1. Department of Physics, University of York, York, United Kingdom; 2. Seagate Research, 1251 Waterfront Place, Pittsburgh, PA*
- GV-02. Spin dynamics in patterned nanoscale Fe dot arrays.** J. Wu¹, S. Lepadatu¹, C. Bunce¹, X. Zou¹, D. Niu², Y.B. Xu², R. Chantrell¹ and G.P. Ju³. *1. Physics, University of York, York, United Kingdom; 2. Electronics, University of York, York, United Kingdom; 3. Seagate Research, Pittsburgh, PA*
- GV-03. FMR study of self-organized plane arrays of metallic magnetic elements.** M. Kostylev¹, R. Magaraggia¹, F.Y. Ogrin², V. Mescheryakov^{3,4}, N. Ross¹ and R.L. Stamps¹. *1. School of Physics, University of Western Australia, Crawley, WA, Australia; 2. School of Physics, University of Exeter, Exeter, United Kingdom; 3. Moscow Institute of Radioelectronics and Automation, Moscow, Russian Federation; 4. Institute of Crystallography of Russian Academy of Science, Moscow, Russian Federation*
- GV-04. Complex broadband magnetic response of periodic arrays of FeNi dots and of Fe/Cr multilayers studied by using FMR-VNA technique.** J. Sierra¹, A. Awad¹, V. Pryadun¹, F. Aliev¹ and G. Kakazei². *1. Departamento de Fisica de la Materia Condensada, Universidad Autonoma de Madrid, Spain, Madrid, Spain; 2. Institute of Magnetism NASU, Kiev, Ukraine*
- GV-05. Linear and Nonlinear Dynamics of the Gyrotropic Motion of a Magnetic Vortex in Ferromagnetic Nanodots.** K. Lee¹ and S. Kim¹. *1. Research Center for Spin Dynamics and Spin-Wave Devices & Nanospintronics Laboratory, Seoul National University, Seoul, South Korea*

- GV-06. Nonlinear phenomena in magnetic nanoparticle systems at microwave frequencies.** *M. Pardavi-Horvath*¹, G.S. Makeeva² and O.A. Golovanov³ *1. SEAS, The George Washington University, Washington, DC; 2. Penza State University, Penza, Russian Federation; 3. Penza Military Institute of Artillery, Penza-5, Russian Federation*
- GV-07. Parametric spin wave excitation and cascaded processes in thin films.** *K. Livesey*¹, M. Kostylev¹ and R. Stamps¹ *1. School of Physics, University of Western Australia, Crawley, WA, Australia*
- GV-08. Micromagnetic modeling of the magnetization dynamics in a circularly exchange biased tunnel junction.** *O.G. Heinonen*¹, D.K. Schreiber² and A.K. Petford-Long³ *1. Seagate Technology, Bloomington, MN; 2. Materials Science and Engineering, Northwestern University, Evanston, IL; 3. Materials Science Division, Argonne National Laboratory, Argonne, IL*
- GV-09. WITHDRAWN**
- GV-10. Size dependence of the magnetic switching of Co-nanoislands studied by spin-polarized scanning tunneling spectroscopy.** *D. Sander*¹, S. Wedekind¹, G. Rodary¹ and K. Jürgen¹ *1. Max Planck Institute, Halle, Germany*

**THURSDAY
MORNING
9:00**

POLIVALENTE

**Session GW
COMPUTATIONAL MAGNETICS
(POSTER SESSION)**

Claudio Serpico, Chair

- GW-01. Chemical order and size effects on the magnetic anisotropy of FePt and CoPt nanoparticles.** *F. Tournus*¹, S. Rohart^{1,2} and V. Dupuis¹ *1. LPMCN, Université de Lyon; Univ. Lyon 1; CNRS, Villeurbanne, France; 2. LPS, Université Paris Sud; CNRS, Orsay, France*

- GW-02. A study of the optimum dose of ferromagnetic nanoparticles suitable for cancer therapy using magnetic fluid hyperthermia.** *M. Pavel^{1,2}, G. Gradinariu^{1,2} and A. Stancu¹*. *Department of Solid State and Theoretical Physics, "Alexandru Ioan Cuza" University, Faculty of Physics, Iasi, Romania; 2. Department of Oncology, University of Medicine and Pharmacy "Gr. T. Popa", Iasi, Romania*
- GW-03. Influence of dipole interaction and thermal effect on static magnetization process of magnetic nanoparticle assembly.** *D. Hasegawa¹, T. Ogawa² and M. Takahashi³*. *1. Electronic Engineering, Tohoku University, Sendai, Japan; 2. CRESS, Tohoku University, Sendai, Japan; 3. NICHe, Tohoku University, Sendai, Japan*
- GW-04. Numerical Modeling and Characterization of Micromachined Flexible Magnetostrictive Thin Film Actuator.** *H. Lee¹ and C. Cho¹*. *Mechanical Engineering, Inha University, Incheon, South Korea*
- GW-05. Semi-analytical calculation of the armature reaction in a slotted tubular permanent magnet actuator with distributed windings.** *B. Gysen¹, J. Paulides¹, E. Lomonova¹ and A. Vandenput¹*. *Electrical Engineering, Eindhoven University of Technology, Eindhoven, Netherlands*
- GW-06. Sequential optimization method for the design of electromagnetic devices.** *G. Lei¹, Y. Guo² and J. Lavers³*. *1. College of Electrical and Electronic Engineering, Huazhong University of Science and Technology, Wuhan, HuBei, China; 2. Faculty of Engineering, University of Technology, Sydney, NSW, Australia; 3. Department of Electrical and Computer Engineering, University of Toronto, Toronto, ON, Canada*
- GW-07. A new field-circuit coupled method for the computation of additional losses in transformer.** *G. Jian¹, L. Heyun¹ and H. Siulau²*. *1. School of Electrical Engineering, Southeast University, Nanjing, Jiangsu, China; 2. Department of Electrical Engineering, Hong Kong Polytechnic University, Hong Kong, Hong Kong, China*
- GW-08. Accurate eddy current losses computation for ferromagnetic cores working in strongly distorted regimes.** *L. Mandache¹, D. Topan¹ and K. Al-Haddad²*. *1. Electrical Engineering, University of Craiova, Craiova, Romania; 2. Genie Electrique, Ecole de Technologie Superieure, Montreal, QC, Canada*

- GW-09. Modeling of effect of plastic deformation on Barkhausen noise and magnetoacoustic emission in iron with 2% silicon.** *M.J. Sablik¹, B. Augustyniak² and F.J. Landgraf³* 1. *Mechanical and Materials Engineering Div., Bldg. 139,, Southwest Res. Inst., San Antonio, TX;* 2. *Physics, Gdansk Institute of Technology, Gdansk, Poland;* 3. *Metallurgical Engineering, University of Sao Paulo, Sao Paulo, Brazil*
- GW-10. Fluxmetric and Magnetometric Demagnetizing Factors in Cylindrical and Rectangular Geometries.** *A. Vashghani Farahani¹ and A. Konrad¹* 1. *Electrical and computer engineering, University of Toronto, Toronto, ON, Canada*
- GW-11. Transmutation of momentum into position in magnetic vortices.** *S. Komineas¹ and N. Papanicolaou²* 1. *Max-Planck Institute, Dresden, Germany;* 2. *Department of Physics, University of Crete, Heraklion, Greece*
- GW-12. Reduction Design of Eddy Current Loss in Permanent Magnet.** *J. Jung¹, S. Lee¹ and J. Hong¹* 1. *Department of Mechanical Engineering, Hanyang University, Seoul, South Korea*

**THURSDAY
MORNING
9:00**

POLIVALENTE

**Session GX
MISCELLANEOUS I
(POSTER SESSION)**
Federico Cebollada, Chair

- GX-01. Magnon thermalization and formation of coherent Bose-Einstein condensate.** *S.O. Demokritov¹, V.E. Demidov¹, O. Dzyapko¹, G.A. Melkov² and A.N. Slavin³* 1. *Institute for Applied Physics, University of Muenster, Muenster, Germany;* 2. *Department of Radiophysics, National Taras Shevchenko University of Kiev, Kiev, Ukraine;* 3. *Department of Physics, Oakland University, Rochester, MI*
- GX-02. Critical Temperature for Thermal Runaway in a Magnetic Material.** *F. Farahmand¹, F.P. Dawson¹ and J. Lavers¹* 1. *ECE, The University of Toronto, Toronto, ON, Canada*

- GX-03. Effects of double-axis electromagnetic stirring in continuous casting.** R. Otake¹, T. Yamada², R. Hirayama³, K. Fujisaki^{1,3}, S. Shimasaki¹ and S. Taniguchi¹. *1. Graduate school of TOHOKU university, Sendai, Japan; 2. Nittetsu Plant Designing Corp., Futtsu, Japan; 3. Nippon Steel Corp., Futtsu, Japan*
- GX-04. Diamagnetic levitation of solids at micro scale.** C. Pigot¹, G. Poulin¹ and R. Gilbert¹. *1. Magnetic Microsystems, G2ELab, Grenoble, France*
- GX-05. Construction of Quasi-Cyclic LDPC Codes and the Performance over Magnetic Recording Channels.** X. Liu¹, H. Cheng¹ and Z. Wang². *1. Dept. of Electronics & Comm. Engr., Sun Yat-Sen University, Guangzhou, Guangdong, China; 2. School of Electrical Engineering and Computer Science, Oregon State University, Corvallis, OR*
- GX-06. A Novel Electromagnetic Device for Latching Valve in Automotive Engine.** J. Kim¹ and J. Chang². *1. Mechanical Engineering, Yeungnam University, Gyeongsan, Gyeongsangbuk-do, South Korea; 2. Transverse Flux Machines Research Group, Korea Electrotechnology Research Institute, Changwon, Kyungsangnam-Do, South Korea*
- GX-07. Air gag's influence on the performance of the transformer of an electromagnetic pump.** D. Morinigo^{2,1}, M.A. Rodríguez^{1,2}, A. Rivas¹ and J. Martín¹. *1. Light Alloys, CIDAUT Foundation, Valladolid, Spain; 2. Electrical Engineering, University of Valladolid, Valladolid, Spain*
- GX-08. A New Calibration Procedure for Magnetic Tracking Systems.** A. Plotkin¹, V. Kucher¹, Y. Horen² and E. Paperno¹. *1. Electrical and Computer Engineering, Ben-Gurion University of the Negev, Beer-Sheva, Israel; 2. Electrical and Electronic Engineering, Shamoon College of Engineering, Beer-Sheva, Israel*
- GX-09. Microstructural changes in Fe-doped $Gd_5Si_2Ge_2$** B. Podmiljsak¹, I. Skulj², B. Markoli³, P. McGuinness¹ and S. Kobe¹. *1. Jozef Stefan Institute, Ljubljana, Slovenia; 2. Institute of Metals and Technology, Ljubljana, Slovenia; 3. University of Ljubljana, Ljubljana, Slovenia*

- GX-10. Stress-strain relationship of magnetorheological fluids under tension mode.** *S.A. Mazlan¹, N.B. Ekreem¹ and A.G. Olabi¹*. *School of Mechanical and Manufacturing Engineering, Dublin City University, Dublin, Ireland*
- GX-11. Novel magnetic composite particles of carbonyl iron embedded in polystyrene and their magnetorheological characteristics.** *F. Fang¹ and H. Choi¹*. *Department of Polymer Science and Engineering, Inha University, Incheon, South Korea*
- GX-12. Barkhausen noise statistical properties in ferromagnetic thin films: dimensionality and range of the relevant interactions.** *F. Bohn¹, M.A. Corrêa^{2,1}, A. Viegas³, L.F. Schelp¹ and R.L. Sommer⁴*. *Departamento de Física, Universidade Federal de Santa Maria, Santa Maria, RS, Brazil; 2. Campus Caçapava do Sul, Universidade Federal do Pampa, Caçapava do Sul, RS, Brazil; 3. Departamento de Física, Universidade Federal de Santa Catarina, Florianópolis, SC, Brazil; 4. Centro Brasileiro de Pesquisas Físicas, Rio de Janeiro, RJ, Brazil*

**THURSDAY
MORNING
9:00**

POLIVALENTE

**Session GY
MISCELLANEOUS II
(POSTER SESSION)
Puerto Morales, Chair**

- GY-01. Coloring media by using nanopipette to store more data.** *M. Rashidi¹ and F. Wang¹*. *Centre for Grid Computing, Cambridge-Cranfield HPCF, Cranfield, United Kingdom*
- GY-02. AFM friction investigation with temperature.** *D. Kim¹*. *Samsung Information Systems America, Inc, San Jose, CA*

- GY-03. Arsenic Removal from Water by Magnetic Separation: A Review and a Case Study Using Magnetic Aggregates and Magnetic Stabilized Bed.** A.M. Estevez¹, P.A. Augusto^{2,1}, J.M. Rodriguez¹ and A. Alvaro¹. *1. Department of Chemical Engineering, University of Salamanca, Salamanca, Castilla y Leon, Spain; 2. DEQ, Faculdade de Engenharia da Universidade do Porto, Porto, Portugal*
- GY-04. Investigation of Nanoparticle Clusterization in Magnetic Fluids Driven by Surface-Coating Desorption.** F.M. Oliveira¹, P.C. Morais¹, K.S. Neto¹, A.P. Canizares¹ and L.C. Figueiredo¹. *Instituto de Física, Universidade de Brasília, Brasília, Brasília/DF, Brazil*
- GY-05. Detection of Low-Concentration Magnetic Fluid inside Body by Needle-Type GMR Sensor.** S. Yamada¹, C.P. Gooneratne¹, M. Iwahara¹ and M. Kakikawa¹. *Institute of Nature and Environmental Technology, Faculty of Engineering, Kanazawa University, Kanazawa, Ishikawa, Japan*
- GY-06. Suppression of electromyogram of hand muscle elicited by transcranial magnetic stimulation over the primary motor cortex.** M. Odagaki¹, S. Ohishi¹, H. Fukuda¹ and O. Hiwaki¹. *1. Graduate School of Information Sciences, Hiroshima City University, Hiroshima, Japan*
- GY-07. Formation of beta-Sheet Rich Fibrils in Cortex Cells from Mice Fetuses Cultured with Ferritin and Exposed to Radio Frequency Magnetic Fields.** O. Cespedes¹, O. Inomoto¹, S. Kai¹ and S. Ueno¹. *1. Applied Quantum Physics Department, Kyushu University, Fukuoka, Japan*
- GY-08. Effects of Radio Frequency Magnetic Fields on the Iron Release from Cage Proteins via 6-Hydroxydopamine.** O. Cespedes¹ and S. Ueno¹. *1. Applied Quantum Physics Department, Kyushu University, Fukuoka, Japan*
- GY-09. Short and long duration of rTMS effects on perceptual reversals.** S. Ge¹, T. Hayami², A. Hyodo³, S. Ueno⁴ and K. Iramina^{1,3}. *1. Department of Intelligent Systems, Kyushu University, Fukuoka, Japan; 2. Digital Medicine Initiative, Kyushu University, Fukuoka, Japan; 3. Graduate School of Systems Life Sciences, Kyushu University, Fukuoka, Japan; 4. Department of Applied Quantum Physics, Kyushu University, Fukuoka, Japan*

THURSDAY
AFTERNOON
2:30

AUDITORIO A

Session HA
SYMPOSIUM ON THE ROADMAP FOR
SPINTRONICS

Yongbing Xu, Chair
Atsufumi Hirohata, Chair

2:30

- HA-01. Prospects for Spin Memory Devices and Their Element Technologies in the Next 10 Years. (Invited)**
*S. Nakamura*¹*1. Corporate R&D Center, Toshiba Corporation, Kawasaki, Japan*

3:00

- HA-02. Spintronics devices based on the Tunneling Anisotropic Magnetoresistance and the Coulomb Blockade Anisotropic Magnetoresistance effect. (Invited)**
J. Wunderlich^{1,2}, *B. Park*¹, *A.C. Irvine*³, *A. Shick*², *R.P. Campion*⁴, *V. Novak*², *D.A. Williams*¹, *B.L. Gallagher*⁴ and *T. Jungwirth*^{2,4}*1. Hitachi Europe Ltd., Hitachi Cambridge Laboratory, Cambridge, United Kingdom; 2. Institute of Physics ASCR, Prague, Czech Republic; 3. Microelectronics Research Centre, University of Cambridge, Cambridge, United Kingdom; 4. School of Physics and Astronomy, University of Nottingham, Nottingham, United Kingdom*

3:30

- HA-03. Engineering magnetic nanostructures into complex devices for spin electronics. (Invited)**
C. Chappert^{1,2}*1. IEF, CNRS - UMR 8622, Orsay, France; 2. IEF, Université Paris Sud, Orsay, France*

4:00

- HA-04. Manipulating single spins and coherence for semiconductor spintronics. (Invited)**
*D.D. Awschalom*¹*1. Center for Spintronics and Quantum Computation, University of California, Santa Barbara, CA*

4:30

- HA-05. The road to silicon spintronics. (Invited) R. Jansen¹.**
*MESA+ Institute for Nanotechnology, University of
Twente, Enschede, Netherlands*

5:00

- HA-06. Spin Manipulation in Semiconductors and Metals.
(Invited) H. Ohno^{1,2}.**
*1. Laboratory for Nanoelectronics
and Spintronics, Research Institute of Electrical
Communication, Tohoku University, Sendai, Japan; 2.
ERATO, JST, Sendai, Japan*

**THURSDAY
AFTERNOON
2:30**

MADRID

**Session HB
INDUCTIVE RECORDING HEADS AND
MATERIALS**

Alan Johnston, Chair

2:30

- HB-01. Micromagnetic Model Analysis of a Single-Pole-Type
Head for 1 – 2 Tbit/in²** *Y. Kanai¹, K. Hirasawa¹,
T. Tsukamoto¹, K. Yoshida², S. Greaves³ and
H. Muraoka³* *1. Niigata Institute of Technology,
Kashiwazaki, Japan; 2. Kogakuin University, Tokyo,
Japan; 3. Tohoku University, Sendai, Japan*

2:45

- HB-02. 1 Turn Solenoid PMR Writer Design for High
Frequency Writing.** *E. Kim¹ and K. Sunwoo¹* *1. HDD
Core Tech TF, Samsung Advanced Institute of
Technology, Yongin, Kyoungki-Do, South Korea*

3:00

- HB-03. Advanced heads for areal density at 500Gb/in² and towards 1Tb/in². (Invited)** M. Ho¹, S. Mao¹, S. Li¹, L. Zhong¹, E. Champion¹, S. Song¹, J. Wang¹, T. Pan¹, K. Stoev¹, C. Macchioni¹, Y. Chen¹, L. Wang¹, Q. Leng¹, M. Pakala¹, Y. Li¹, U. Tran¹, M. Chapline¹, W. Yu¹, L. Hong¹, D. Li¹ and Y. Shen¹ *1. Western Digital Corp, Fremont, CA*

3:30

- HB-04. Writing performance of a planar single-pole head with a main pole fabricated by ion beam milling.** Y. Ohsawa^{1,2}, K. Yamakawa² and H. Muraoka² *1. CR&D center, Toshiba Corp., Kawasaki, Japan; 2. RIEC, Tohoku Univ., Sendai, Japan*

3:45

- HB-05. Thin film processing realities for Tbit/in² recording.** R. Fontana¹, N. Robertson¹ and S. Hetzler² *1. Hitachi GST, San Jose, CA; 2., IBM Research Division, San Jose, CA*

4:00

- HB-06. Exchange Coupling in Synthetic Antiferromagnetic Multilayers for Write Head.** Y. Xu¹, H. Jiang², K. Sin², Y. Chen² and J. Wang¹ *1. Dept. of Electrical and Computer Engineering, University of Minnesota, Minneapolis, MN; 2. Western Digital Corporation, Fremont, CA*

4:15

- HB-07. Laminated high moment FeCo films for perpendicular magnetic recording.** B. Ocker¹, K. Schuller¹, J. Wrona¹, J. Langer¹ and W. Maass¹ *1. Singulus Nano Deposition Technologies GmbH, Kahl am Main, Germany*

4:30

- HB-08. Comparison of Electrical and Magnetic Flux Rise Times in Tape Heads Using Impedance Measurements and High Speed Kerr Magnetometry.** A. Kaya^{1,3}, J.A. Bain¹, J.P. Nibarger² and K.D. McKinstry². *1. Carnegie Mellon University, Pittsburgh, PA; 2. Sun Microsystems, Louisville, CO; 3. Hitachi Global Storage, San Jose, CA*

4:45

- HB-09. Crosstalk between write transducers.** P. Herget¹ and R.G. Biskeborn¹. *1. IBM Corporation, San Jose, CA*

**THURSDAY
AFTERNOON
2:30**

ROMA

**Session HC
MAGNETIZATION DYNAMICS**

Bob Stamps, Chair

2:30

- HC-01. Dynamic interaction between vortices, antivortices and holes in domain walls investigated by means of time resolved Photoemission Electron Microscopy (PEEM). (Invited)** K. Kuepper¹, S. Wintz¹, M. Buess², J. Raabe², C. Quitmann² and J. Fassbender¹. *1. Ion Beam Physics and Materials Research, FZ Dresden-Rossendorf e. V., Dresden, Germany; 2. Swiss Light Source, Paul Scherrer Institut, Villigen, Switzerland*

3:00

- HC-02. Current-induced resonant motion of the magnetic vortex core in a ferromagnetic circular disk. (Invited)** S. Kasai¹, F. Peter², M. Im², K. Yamada¹, Y. Nakatani³, K. Kobayashi¹, H. Kohno⁴ and T. Ono¹. *1. Institute for Chemical Research, Kyoto University, Uji, Kyoto, Japan; 2. Center for X-Ray Optics, Lawrence Berkeley National Lab, Berkeley, CA; 3. Department of Computer Science, University of Electro-communications, Chofu, Tokyo, Japan; 4. Graduate School of Engineering Science, Osaka University, Toyonaka, Osaka, Japan*

3:30

- HC-03. Elementary Eigenmodes of Magnetic Vortex Gyrotropic Motions in Magnetic Nanoelements.** *K. Lee*¹, *S. Kim*¹, *D. Jung*¹, *Y. Yu*¹ and *Y. Choi*¹. *Research Center for Spin Dynamics and Spin-Wave Devices & Nanospintronics Laboratory, Seoul National University, Seoul, South Korea*

3:45

- HC-04. Unidirectional switching of the vortex core polarization by excitation with rotating magnetic fields.** *H. Stoll*¹, *B. Van Waeyenberge*^{1,2}, *K. Chou*¹, *M. Curcic*¹, *M. Weigand*¹, *V. Sackmann*¹, *A. Puzic*¹, *A. Vansteenkiste*², *T. Tyliczszak*³, *G. Woltersdorf*⁴, *C.H. Back*⁴ and *G. Schuetz*¹. *1. Max Planck Institute for Metals Research, Stuttgart, Germany; 2. Department of Subatomic and Radiation Physics, Ghent University, Ghent, Belgium; 3. Advanced Light Source, LBNL, Berkeley, CA; 4. Department of Physics, University of Regensburg, Regensburg, Germany*

4:00

- HC-05. Spin-dynamics and mode structure in lithographically patterned Permalloy nanostructures.** *J.M. Shaw*¹, *M. Schneider*^{1,2}, *T. Silva*¹, *R. McMichael*³, *S. Kim*¹, *W. Johnson*¹ and *P. Kabos*¹. *1. National Institute of Standards and Technology, Boulder, CO; 2. University of Montana, Missoula, MT; 3. National Institute of Standards and Technology, Gaithersburg, MD*

4:15

- HC-06. Microwave-assisted switching and demagnetizing of NiFe thin films patterned in micro-elements : a domain structure study by Kerr effect.** *M. Laval*¹, *J. Bonnefois*¹, *J. Bobo*¹, *F. Issac*² and *F. Boust*². *1. LNMH, CNRS ONERA, Toulouse, France; 2. DEMR, ONERA, Toulouse, France*

4:30

- HC-07. Modeling of microwave-assisted switching in micron-size magnetic ellipsoids.** R. Yanes¹, O. Chubykalo-Fesenko¹, P. Martin Pimentel², B. Leven², B. Hillebrands², V. Tyberkevich³ and A. Slavin³. *1. POMT, Instituto de Ciencia de Materiales de Madrid, CSIC, Madrid, Spain; 2. Technische Universitaet Kaiserslautern, Kaiserslautern, Germany; 3. Department of Physics, Oakland University, Rochester, MI*

4:45

- HC-08. Nonlinear processes during switching of a thin Permalloy film in different geometries.** K. Livesey¹, H. Nembach², M. Kostylev¹, P. Martin-Pimentel², S. Hermsdoerfer², B. Leven², R. Stamps¹ and B. Hillebrands². *1. School of Physics, University of Western Australia, Crawley, WA, Australia; 2. Fachbereich Physik und Forschungsschwerpunkt MINAS, Technische Universitaet Kaiserslautern, Kaiserslautern, Germany*

5:00

- HC-09. Precessional magnetization reversal in composite patterned media: Dependence on applied field parameters.** B. Livshitz¹, H.N. Bertram^{2,3}, A. Inomata⁴ and V. Lomakin¹. *1. Department of Electrical and Computer Engineering, UCSD, San Diego, CA; 2. Center for Magnetic Recording Research, UCSD, San Diego, CA; 3. Research Center, Hitachi Global Storage, San Jose, CA; 4. Storage and Intelligent Systems Laboratories, Fujitsu Laboratories Ltd, Atsugi, Japan*

5:15

- HC-10. Dynamics of bubble domains in nanodots with high anisotropy.** C. Moutafis¹, S. Komineas², C.F. Vaz³, J.C. Bland¹, T. Shima⁴, T. Seki⁵ and K. Takanashi⁵. *1. Cavendish Laboratory, Cambridge University, Cambridge, United Kingdom; 2. Max-Planck Institute for the Physics of Complex Systems, Dresden, Germany; 3. Applied Physics, Yale University, New Haven, CT; 4. Faculty of Engineering, Tohoku-Gakuin University, Tagajyo, Japan; 5. Institute for Materials Research, Tohoku University, Sendai, Japan*

THURSDAY
AFTERNOON
2:30

PARIS

Session HD
MICROMAGNETICS II
Massimiliano d'Aquino, Chair

2:30

HD-01. Control of domain wall motion in Permalloy nanowires using magnetostatic interactions. *S. Basu*¹, *D. Allwood*¹ and *T. Schrefl*¹. *1. Department of Engineering Materials, University of Sheffield, Sheffield, United Kingdom*

2:45

HD-02. Domain wall depinning from a notch under oscillating currents: the role of non-adiabaticity. *E. Martinez*¹, *L. Lopez-Diaz*², *O. Alejos*³ and *L. Torres*². *1. Ingenieria Electromecanica, University of Burgos, Burgos, Burgos, Spain; 2. Fisica Aplicada, University of Salamanca, Salamanca, Spain; 3. Electricidad y Electronica, University of Valladolid, Valladolid, Spain*

3:00

HD-03. Spin-Polarized Current Induced Switching of Composite Free Layers. *C. Yen*¹, *W. Chen*¹, *Y. Chen*¹, *D. Wang*¹, *C. Shen*¹, *S. Yang*¹, *C. Tsai*¹, *Y. Lee*¹, *C. Hung*¹, *K. Shen*¹ and *M. Kao*¹. *1. Electronics and Optoelectronics Research Laboratories (EOL), Industrial Technology Research Institute (ITRI), Hsinchu, Taiwan*

3:15

HD-04. Switching of vortex chirality in Ni₈₀Fe₂₀/Cu/Co nanopillars by a spin-polarized current pulse. *B.C. Choi*¹, *Y.K. Hong*², *J. Rudge*¹, *E. Girgis*¹, *J. Kolthammer*¹, *A. Lyle*² and *G.W. Donohoe*³. *1. Department of Physics & Astronomy, University of Victoria, Victoria, BC, Canada; 2. Department of Electrical and Computer Engineering, University of Alabama, Tuscaloosa, AL; 3. 2Department of Electrical and Computer Engineering, University of Idaho, Moscow, ID*

HD-05. WITHDRAWN**3:30**

HD-06. Temperature dependent exchange stiffness in FePt. *D. Hinzke*¹, *R.F. Evans*¹, *U. Nowak*¹, *R.W. Chantrell*¹, *U. Atxitia*², *O. Chubykalo-Fesenko*², *P. Asselin*³ and *O.N. Mryasov*³ *1. Physics, University of York, York, United Kingdom; 2. Instituto de Ciencia de Materiales de Madrid, Madrid, Spain; 3. Seagate Research, 1251 Waterfront Place, Pittsburgh, PA*

3:45

HD-07. An alternative finite element scheme for dynamic micromagnetic computations. *A. Manzin*¹, *O. Bottauscio*¹ and *M. Chiampi*² *1. Istituto Nazionale di Ricerca Metrologica, Torino, Italy; 2. Ingegneria Elettrica, Politecnico di Torino, Torino, Italy*

4:00

HD-08. Innovative weak formulation for the Landau-Lifschitz-Gilbert equation. *H. Szambolics*^{1,2}, *J. Toussaint*^{1,2}, *L.D. Buda-Prejbeanu*^{2,3}, *F. Alouges*⁴, *E. Kritsikis*^{2,3} and *O. Fruchart*¹ *1. Department of Nanosciences, Institut Neel, CNRS, Grenoble cedex 9, France; 2. Institut National Polytechnique de Grenoble, Grenoble, France; 3. Laboratoire SPINTEC, CEA, Grenoble, France; 4. Laboratoire de Mathématique, Université Paris XI, Orsay, France*

4:15

HD-09. Stochastic dynamics and optimal switching paths in thermally activated magnetization processes of ferromagnetic nanoparticles. *C. Serpico*¹, *G. Bertotti*², *C.S. Ragusa*³, *M. d'Aquino*⁴, *I.D. Mayergoyz*⁵ and *P. Ansalone*³ *1. Dipartimento di Ingegneria Elettrica, Università di Napoli "Federico II", Napoli, Italy; 2. Istituto Nazionale di Ricerca Metrologica (INRiM), Torino, Italy; 3. Dipartimento di Ingegneria Elettrica, Politecnico di Torino, Torino, Italy; 4. Dipartimento per le Tecnologie, Università di Napoli "Parthenope", Napoli, Italy; 5. ECE Department and UMIACS, University of Maryland, College Park, MD*

4:30

- HD-10. A Study of Pseudoelastic Phenomenon in Ferromagnetic Shape Memory Alloy NiMnGa by Phase-field Simulation.** *X. Ma*¹, *P. Wu*¹, *J. Zhang*² and *L. Chen*². *1. Department of Physics, University of Science and Technology Beijing, Beijing, China; 2. Department of Materials Science and Engineering, The Pennsylvania State University, University Park, PA*

4:45

- HD-11. Effects of nanowire roughness on spin wave propagation.** *S. Bance*¹, *T. Schrefl*¹, *D. Allwood*¹, *G. Hrkac*¹ and *A. Goncharov*¹. *1. University of Sheffield, Sheffield, United Kingdom*

5:00

- HD-12. Effect of interface exchange coupling on the reversal of single antiferromagnetic grains in exchange bias systems.** *J. Jackson*¹, *U. Nowak*¹ and *R. Chantrell*¹. *1. Physics, University of York, York, United Kingdom*

**THURSDAY
AFTERNOON
2:30**

LONDRES

**Session HE
PERMANENT MAGNET MATERIALS**

George Hadjipanayis, Chair

2:30

- HE-01. Microtexture and Magnetic Microstructure of Sputtered NdFeB Thick Films Destined for Application in Micro-Electro-Mechanical Systems (MEMS).** *T.G. Woodcock*¹, *K. Khlopkov*¹, *A. Walther*², *N.M. Dempsey*², *D. Givord*² and *O. Gutfleisch*¹. *1. Institute for Metallic Materials, IFW Dresden, Dresden, Germany; 2. Insitut Néel, CNRS, Grenoble, France*

2:45

- HE-02. Temperature dependent anisotropy in epitaxial Pr-Co films.** *A.K. Patra*¹, *M. Eisterer*², *R. Biele*^{1,3}, *S. Fähler*¹, *L. Schultz*¹ and *V. Neu*¹. *1. IFW Dresden, Dresden, Germany; 2. Atomic Institute of the Austrian Universities, Vienna, Austria; 3. University of Technology Dresden, Dresden, Germany*

3:00

- HE-03. Sintered Sm₂Co₁₇-based Magnets with Small Additions of Indium.** *A. Gabay*¹, *M. Marinescu*², *J. Liu*² and *G.C. Hadjipanayis*¹. *1. University of Delaware, Newark, DE; 2. Electron Energy Corporation, Landisville, PA*

3:15

- HE-04. Prediction of temperature demagnetization of bonded rare earth magnets by finite element analysis.** *T. Schliesch*¹ and *T. Lindner*¹. *1. Max Baermann GmbH, Bergisch Gladbach, Germany*

3:30

- HE-05. New Dy-substituted Ba hexaferrites with high coercivity.** *G. Litsardakis*¹, *I. Manolakis*¹, *A. Stergiou*², *C. Serletis*² and *K.G. Efthimiadis*². *1. Dept. of Electrical & Computer Engineering, Aristotle University, Thessaloniki, Greece; 2. Dept. of Physics, Aristotle University, Thessaloniki, Greece*

3:45

- HE-06. Strain-induced exchange bias effects in chemically ordered Pt₃Fe single crystal.** *S. Kobayashi*¹, *S. Takahashi*¹, *Y. Kamada*¹ and *H. Kikuchi*¹. *1. Faculty of Engineering, Iwate University, Morioka, Japan*

4:00

- HE-07. Fe-Pt thick film magnets prepared by high-speed PLD method.** *S. Shibata*¹, *M. Nakano*¹, *T. Yanai*¹ and *H. Fukunaga*¹. *1. Electronics and Electrical Engineering, Nagasaki University, Nagasaki, Japan*

4:15

- HE-08. Coercivity generation of surface Nd₂Fe₁₄B grains and mechanism of fcc-phase formation at Nd/Nd₂Fe₁₄B interface in Nd-sputtered Nd-Fe-B sintered magnets.** *T. Fukagawa*¹ and *S. Hirosawa*¹. *Magnetic Materials Research Laboratory NEOMAX Company, Hitachi Metals, Ltd., 2-15-17, Egawa, Shimamoto-cho, Mishima-gun, Osaka, Japan*

4:30

- HE-09. Wettability and interfacial microstructure between Nd₂Fe₁₄B and Nd-rich phases in Nd-Fe-B alloys.** *R. Goto*¹, *S. Nishio*¹, *M. Matsuura*¹, *N. Tezuka*¹ and *S. Sugimoto*¹. *Department of Materials Science, Tohoku University, Sendai, Japan*

4:45

- HE-10. The role of Cu addition in the coercivity enhancement of sintered Nd-Fe-B magnets.** *T. Ohkubo*^{1,2}, *W. Li*¹, *K. Hono*^{1,2}, *T. Akiya*³ and *H. Kato*³. *1. National Institute for Materials Science, Tsukuba, Japan; 2. CREST, JST, Japan; 3. Tohoku University, Sendai, Japan*

5:00

- HE-11. Magnetic Properties of Sm₂Co₁₇ & Sm₂Co₇ Sputtered and Post-annealed Thin Films. Effect of Mo Underlayer.** *I. Lucas*¹, *M. Maicas*², *L. Pérez*³ and *M. Díaz - Michelena*¹. *1. Dto: Space Programs and Space Sciences, I.N.T.A., 28850 Torrejón de Ardoz, Madrid, Spain; 2. (ISOM) ETSI Telecomunicación, Universidad Politécnica de Madrid (UPM), Madrid, Madrid, Spain; 3. Dto:Física de Materiales, Universidad Complutense de Madrid (UCM), Madrid, Madrid, Spain*

5:15

- HE-12. Preparation and magnetic study of the CoFe_2O_4 - CoFe_2 nanocomposite powders.** F. Cabral^{1,2}, F. Machado¹, J. Araújo², J. Soares³, A. Rodrigues¹ and A. Araújo². *1. Departamento de Física, Universidade Federal de Pernambuco, Recife, Pernambuco, Brazil; 2. Departamento de Física Teórica e Experimental, Universidade Federal do Rio Grande do Norte, Natal, Rio Grande do Norte, Brazil; 3. Departamento de Física, Universidade do Estado do Rio Grande do Norte, Mossoró, Rio Grande do Norte, Brazil*

**THURSDAY
AFTERNOON
2:30**

BERLIN

**Session HF
LIFE SCIENCE AND APPLICATIONS-III**

Ricardo Ibarra, Chair

2:30

- HF-01. Bimodal use of maghemite nanoparticles as contrast agents for magnetic resonance imaging (T1 and T2 CA's) through modulation of their stabilizing coating.** *(Invited)* E. Taboada¹, A. Roig¹, E. Rodriguez² and M. Delville³. *1. Institut de Ciència de Materials de Barcelona, ICMAB-CSIC, Bellaterra, Spain; 2. Center for Molecular Imaging Research, MGH-Harvard Medical Hospital, Boston, MA; 3. Institut de Chimie de la Matière Condensée de Bordeaux, ICMCB-CNRS, Bordeaux, France*

3:00

- HF-02. Magnetic Hyperthermia with Fe_3O_4 nanoparticles: the Influence of Particle Size and Domain Structure on Energy Absorption.** G.F. Goya¹, E. Lima Jr.², A.D. Arelaro², T. Torres¹, H.R. Rechenberg², L. Rossi³, C. Marquina^{4,1} and M.R. Ibarra^{1,4}. *1. Nanoscience Institute of Aragon, University of Zaragoza, Zaragoza, Zaragoza, Spain; 2. Physics Institute, University of Sao Paulo, Sao Paulo, Sao Paulo, Brazil; 3. Chemistry Institute, University of Sao Paulo, Sao Paulo, Sao Paulo, Brazil; 4. Instituto de Ciencia de Materiales de Aragón-CSIC, University of Zaragoza, Zaragoza, Zaragoza, Spain*

3:15

- HF-03. Synthesis and Cellular Uptake of Folate-Conjugated Hydrophobic Superparamagnetic Iron Oxide Nanoparticles.** *K. Woo*¹, *J. Moon*^{1,2}, *K. Choi*³, *K. Yoon*³ and *T. Seong*². *1. Nano-Materials Research Center, KIST, Seoul, South Korea; 2. Department of Materials Science and Engineering, Korea University, Seoul, South Korea; 3. Institute for Radiological Imaging Science, Wonkwang University School of Medicine, Iksan, South Korea*

3:30

- HF-04. Water based colloids of Fe₃O₄/SiO₂ magnetic nanoparticles with core/shell structure for magnetic hyperthermia.** *M.A. Gonzalez-Fernandez*¹, *T. Torres*², *M.A. Verges*³, *G.F. Goya*², *C.J. Serna*¹ and *M.P. Morales*¹. *1. Instituto de Ciencia de Materiales de Madrid, CSIC, Madrid, Spain; 2. Institute of Nanoscience of Aragon (INA), University of Zaragoza, Zaragoza, Spain; 3. Department of Organic and Inorganic Chemistry, Universidad de Extremadura, Badajoz, Spain*

3:45

- HF-05. Antiferromagnetic susceptibility in ferritin.** *N.J. Silva*¹, *A. Urtizberea*¹, *A. Millán*¹, *F. Palacio*¹, *E. Kampert*², *U. Zeitler*², *H. Rakoto*³ and *V.S. Amaral*⁴. *1. Física de la Materia Condensada, Instituto de Ciencia de Materiales de Aragón CSIC/Universidad de Zaragoza, Zaragoza, Spain; 2. Radboud Univ. Nijmegen, High Field Magnet Lab, Nijmegen, Netherlands; 3. LNCMP, Toulouse, France; 4. Departamento de Física and CICECO, Universidade de Aveiro, Aveiro, Portugal*

4:00

- HF-06. Iron oxide versus Fe₅₅Pt₄₅@Fe₂O₃ ferromagnetic nanoparticles: improved magnetic properties of core/shell nanostructure for biomedical applications.** *L.C. Varanda*¹, *F.J. Santos*², *I. Momotaro*³ and *M. Jafelicci Jr.*². *1. Físico-Química, Instituto de Química de São Carlos - USP, São Carlos, São Paulo, Brazil; 2. Físico-Química, Instituto de Química de Araraquara - UNESP, Araraquara, São Paulo, Brazil; 3. Física, Faculdade de Ciências - UNESP, Bauru, São Paulo, Brazil*

4:15

- HF-07. Surface modified superparamagnetic nanoparticles as a novel magnetic carrier.** *M. Lin*¹, *S. Li*², *J. Gu*¹, *H. Lee*³, *M. Mamoun*² and *D. Kim*¹. *1. Institute of Science and Technology in Medicine, Keele University, Stoke-on-Trent, United Kingdom; 2. Materials Chemistry Divisions, Royal Institute of Technology, Stockholm, Sweden; 3. Department of Materials Science and Engineering, Myongji University, Kyunggi-do, South Korea*

4:30

- HF-08. Magnetic porous hollow silica nanospheres for biomedicine application.** *H. Ma*¹, *J. Zhou*¹, *D. Caruntu*¹, *M. Yu*¹, *J. Chen*², *C. O'Connor*¹ and *W. Zhou*¹. *1. Advanced Materials Research Institute, University of New Orleans, New Orleans, LA; 2. Key Lab for Nanomaterials, Ministry of Education, Beijing University of Chemical Technology, Beijing, Beijing, China*

4:45

- HF-09. Hysteresis power loss heating of ferromagnetic nanoparticles designed for magnetic thermoablation.** *E. Kita*¹, *H. Yanagihara*¹, *S. Hashimoto*², *K. Yamada*², *T. Oda*², *M. Kishimoto*³ and *A. Tasaki*¹. *1. Institute of Applied Physics, University of Tsukuba, Tsukuba, Ibaraki, Japan; 2. Institute of Clinical Medicine, University of Tsukuba, Tsukuba, Ibaraki, Japan; 3. Hitachi Maxell, Ltd., Oyamazaki, Kyoto, Japan*

THURSDAY
AFTERNOON
2:30

AMSTERDAM

Session HG
MAGNETOELASTIC MATERIALS AND
DEVICES

Mike Gibbs, Chair

2:30

HG-01. The local atomic Joule magnetostriction of Fe₈₁Ga₁₉ *M.P. Ruffoni*¹, *S. Pascarelli*¹, *R. Grössinger*², *R. Sato-Turtelli*² and *R.F. Pettifer*³ *1. European Synchrotron Radiation Facility, Grenoble, France; 2. Technical University of Vienna, Vienna, Austria; 3. Department of Physics, University of Warwick, Coventry, United Kingdom*

2:45

HG-02. The Effect of Tempering on the Magnetostriction of Fe-Ga Alloys. *T.A. Lograsso*^{1,2} and *M. Huang*¹ *1. Institute for Physical Research and Technology, Iowa State University, Ames, IA; 2. Materials and Engineering Physics, Ames Laboratory, Ames, IA*

3:00

HG-03. Magnetic field and stress dependence of FeGa 3-D shaped polycrystalline magnetostrictive materials properties. *N. Lupu*¹ and *H. Chiriac*¹ *1. Magnetic Materials and Devices, National Institute of Research and Development for Technical Physics, Iasi, Romania*

3:15

HG-04. Magnetostriction of Fe-X (X = B, Al, Ga, Si, Ge) intermetallic alloys. *G. Roland*¹, *S. Reiko*¹ and *M. Nasir*¹ *1. Inst. of Solid State Physics, Techn. Univ. Vienna, Vienna, Austria*

3:30

- HG-05. Magnetic and magnetoelastic properties of electrodeposited FeGa/CoFeB multilayered films and nanowires arrays.** *N. Lupu*¹, *P. Pascariu*¹, *C. Gherasim*¹ and *H. Chiriac*¹. *Magnetic Materials and Devices, National Institute of Research and Development for Technical Physics, Iasi, Romania*

3:45

- HG-06. Modelling and experimental analysis of magnetostrictive devices: from the material characterisation to their dynamic behaviour.** *O. Bottauscio*¹, *R. Bonin*¹, *A. Lovisolo*¹, *P. Roccatò*², *C. Sasso*¹ and *M. Zucca*¹. *1. Electromagnetics, Istituto Nazionale di Ricerca Metrologica, Torino, Italy; 2. Dip. Ingegneria Elettrica, Politecnico di Torino, Torino, Italy*

4:00

- HG-07. Design of a multipurpose magnetostrictive device.** *O. Bottauscio*¹, *A. Lovisolo*¹, *P. Roccatò*² and *M. Zucca*¹. *1. Electromagnetics, INRIM, Torino, Italy; 2. Dip. Ing. Elettrica, Politecnico di Torino, Torino, Italy*

4:15

- HG-08. Temperature dependence of magnetostriction of $\text{Co}_{1+x}\text{Ge}_x\text{Fe}_{2-2x}\text{O}_4$ for magnetostrictive sensor and actuator applications.** *N. Ranvah*¹, *I.C. Nlebedim*¹, *S.H. Song*², *Y. Melikhov*¹, *J.E. Snyder*¹, *D.C. Jiles*¹, *A.J. Moses*¹ and *P.I. Williams*¹. *1. Wolfson Centre for Magnetism, Cardiff University, Cardiff, Wales, United Kingdom; 2. Materials Science and Engineering Department, Iowa State University, Ames, IA*

4:30

- HG-09. Magnetostriction studies on antiferromagnetic $\text{Mn}_x\text{Fe}_{100-x}$ ($30 \leq x \leq 55$) alloys.** *M. Yan*¹, *T. Ma*¹, *J. Zhang*¹ and *Y. Xu*¹. *1. Department of Materials Science and Engineering, Zhejiang University, Hangzhou, China*

4:45

- HG-10. Magnetic softening of magnetostrictive $(\text{Fe}_{80}\text{Co}_{20})_{80}\text{B}_{20}$ amorphous thin films with a thickness modulation of the magnetic anisotropy.** J. Prieto², M. González-Guerrero¹, D. Ciudad¹, P. Sánchez¹ and C. Aroca¹. *Física Aplicada, ETSI Telecomunicación UPM, Madrid, Madrid, Spain; 2. ISOM, Universidad Politécnica de Madrid, Madrid, Madrid, Spain*

5:00

- HG-11. Fine structure observation near critical temperature in $\text{Gd}_5\text{Si}_{1.95}\text{Ge}_{2.05}$** R.L. Hadimani¹, Y. Melikhov¹, J.E. Snyder¹ and D.C. Jiles¹. *Wolfson Centre for Magnetism, Cardiff University, Cardiff, Wales, United Kingdom*

5:15

- HG-12. On the nature of the Griffiths-like phase behaviour in Gd_5Ge_4 giant magnetocaloric alloy.** N. Pérez^{1,2}, F. Casanova^{2,3}, F. Bartolomé^{4,5}, L.M. García^{4,5}, S. DeBrion⁶, A. Labarta^{1,2} and X. Batlle^{1,2}. *1. Física Fonamental, Universitat de Barcelona, Barcelona, Catalonia, Spain; 2. Institut de Nanociència i Nanotecnologia IN2UB, Universitat de Barcelona, Barcelona, Catalonia, Spain; 3. Physics Department, University of California (UCSD), San Diego, CA; 4. Instituto de Ciencia de Materiales de Aragón, CSIC, Zaragoza, Aragón, Spain; 5. Física de la Materia Condensada, Universidad de Zaragoza, Zaragoza, Aragón, Spain; 6. Institut Néel, CNRS-UJF, Grenoble, France*

THURSDAY
AFTERNOON
2:30

CARACAS

Session HH
CURRENT INDUCED DW MOTION

Joo-Von Kim, Chair

2:30

- HH-01. Spin Dynamics and Gilbert damping of a nanomagnet connected to leads.** *A. Núñez¹ and R. Duine²*. *1. Departamento de Física, Facultad de Ciencias Físicas y Matemáticas, Universidad de Chile, Santiago, Chile; 2. Institute for Theoretical Physics, Utrecht University, Utrecht, Netherlands*

2:45

- HH-02. Race track memories seen from an ab-initio point of view.** *P. Weinberger^{1,2}*. *1. Center for Computational Nanoscience, Vienna, Austria; 2. Department of Physics, New York University, New York, NY*

3:00

- HH-03. DETECTION OF CURRENT-INDUCED OSCILLATIONS OF PINNED DOMAIN WALLS.** *M. Kläui¹, D. Bedau¹, S. Krzyk¹, G. Faini², L. Vila² and U. Rüdiger¹*. *1. Physics, University of Konstanz, Konstanz, Germany; 2. LPN-CNRS, Marcoussis, France*

3:15

- HH-04. Current-induced switching of the magnetic vortex core in a ferromagnetic circular dot.** *K. Yamada¹, S. Kasai¹, Y. Nakatani², K. Kobayashi¹, H. Kohno³, A. Thiaville⁴ and T. Ono¹*. *1. Institute for Chemical Research, Kyoto University, Uji, Kyoto, Japan; 2. Department of Computer Science, University of Electro-Communications, Chofu, Tokyo, Japan; 3. Graduate School of Engineering Science, Osaka University, Toyonaka, Osaka, Japan; 4. Laboratoire de Physique des Solides, CNRS and Univ. Paris-Sud, Orsay, France*

3:30

HH-05. Magnetization reversal control using a current pulse in Permalloy nanowires. *Y. Togawa*¹, *T. Kimura*^{1,2}, *K. Harada*^{1,3}, *T. Akashi*⁴, *T. Matsuda*^{1,3}, *A. Tonomura*^{1,3} and *Y. Otani*^{1,2}. *1. Frontier Research System, Institute of Physical and Chemical Research (RIKEN), Wako, Saitama, Japan; 2. Institute for Solid State Physics, University of Tokyo, Kashiwa, Chiba, Japan; 3. Advanced Research Laboratory, Hitachi, Ltd., Hatoyama, Saitama, Japan; 4. Hitachi High-Technologies Co., Hitachinaka, Ibaraki, Japan*

3:45

HH-06. Stochastic magnetic field driven domain wall motion in a spin-valve nanowire. *X. Jiang*¹, *L. Thomas*¹, *R. Moriya*¹, *M. Hayashi*¹, *B. Bergman*¹, *C. Rettner*¹ and *S. Parkin*¹. *1. IBM Almaden Research Center, San Jose, CA*

4:00

HH-07. Stochastic domain wall motion under a polarized current in wires with perpendicularly magnetized layers. *C. Burrowes*¹, *D. Ravelosona*¹, *D. Stanescu*¹, *N. Vernier*¹, *C. Chappert*¹, *B. Terris*², *J. Katine*² and *E. Fullerton*³. *1. Institut d'Electronique Fondamentale, Orsay, France; 2. HitachiGST, San Jose, CA; 3. UC San Diego, San Diego, CA*

4:15

HH-08. Effect of anisotropy distribution on domain wall motion in nanowires with perpendicular anisotropy. *Y. Nakatani*¹ and *T. Ono*². *1. Department of Computer Science, University of Electro-Communications, Tokyo, Japan; 2. Kyoto University, Uji, Japan*

4:30

HH-09. Current-driven domain wall motion, nucleation, and propagation in a Co/Pt multi-layer strip with a stepped structure. *T. Suzuki*¹, *S. Fukami*¹, *K. Nagahara*¹, *N. Oshima*¹ and *N. Ishiwata*¹. *1. Device Platforms Res. Labs., NEC, Sagamihara, Kanagawa, Japan*

4:45

HH-10. Current-Driven Domain Wall Motion in CoCrPt Wires with Perpendicular Magnetic Anisotropy.

H. Tanigawa¹, K. Kondou¹, T. Koyama¹, K. Nakano¹, S. Kasai¹, N. Ohshima², S. Fukami², N. Ishiwata² and T. Ono¹. *1. Institute for Chemical Research, Kyoto University, Uji, Japan; 2. Device Platforms Research Laboratories, NEC Corporation, Sagamihara, Japan*

5:00

HH-11. Intrinsic threshold current density of domain wall motion in nano-strips with perpendicular magnetic anisotropy for use in low-write-current MRAMs.

S. Fukami¹, T. Suzuki¹, N. Ohshima¹, K. Nagahara¹ and N. Ishiwata¹. *1. Device Platforms Research Laboratories, NEC Corporation, Sagamihara, Japan*

5:15

HH-12. Current domain wall dragging in GaMnAs.

N. VERNIER^{1,3}, L. Thevenard², A. Lemaitre², A. Miard², G. Faini², L. Vila², J. Ferré³ and J. Adam³. *1. IEF, Université Paris-Sud, Orsay, France; 2. LPN, CNRS, Marcoussis, France; 3. LPS, Université Paris-sud, Orsay, France*

THURSDAY
AFTERNOON
2:30

POLIVALENTE

Session HL**RECORDING SYSTEMS AND SERVO II
(POSTER SESSION)**

Mark Bedillion, Chair

HL-01. Aerodynamic damping on vibration of rotating disks and effects of shroud and top cover. *T. Eguchi¹.*

Central Research Laboratory, Hitachi, Ltd., Fujisawa, Ibaraki, Japan

- HL-02. Adaptive frequency identification method for multiple unknown disturbances in HDDs.** *Q. Jia*¹ and *Z. Wang*²*1. Storage Mechanics Lab, Hitachi Asia Ltd, Singapore, Singapore; 2. School of Electrical Engineering and Computer Science, Oregon State University, Corvallis, OR*
- HL-03. A disturbance observer design for SPM-based data storage system.** *J. Moon*¹, *C. Chung*¹, *C. Lee*¹ and *Y. Kim*²*1. Electrical Engineering, Hanyang University, Seoul, South Korea; 2. Devices & Materials Lab., LG Elite, Seoul, South Korea*
- HL-04. A discrete-time modified sliding mode proximate time optimal servomechanism for SPM-based data storage systems.** *J. Jeong*¹, *C. Lee*¹, *C. Chung*¹ and *Y. Kim*²*1. Electrical Engineering, Hanyang University, Seoul, South Korea; 2. Devices & Materials Lab., LG Elite, Seoul, South Korea*
- HL-05. Magnetic recording performance of 'Bit Printing method' on PMR media and its extendability to the higher areal density.** *A. Morooka*¹, *M. Nagao*¹, *T. Yasunaga*¹ and *K. Nishimaki*²*1. Recording Media Research Laboratories, FUJI FILM co.,LTD., Odawara, Japan; 2. Production Engineering & Development Center, FUJI FILM co.,LTD., Odawara, Japan*
- HL-06. Using steady solutions of Reynolds-Averaged Navier Stokes (RANS) equations to estimate flow induced vibrations (FIV) of hard disk drive carriage arms.** *T. Yip*¹, *E. Ong*¹, *A. Yudhanto*¹, *Z. He*¹ and *Q. Zhang*¹*1. Data Storage Institute, Singapore, Singapore*
- HL-07. A Novel Settling Controller for Dual-stage Servo Systems.** *J. Zhang*¹, *C. Du*¹ and *S. Ge*²*1. Data Storage Institute, Singapore, Singapore; 2. Department of Electrical & Computer Engineering, National University of Singapore, Singapore, Singapore*
- HL-08. PES Generation and Evaluation for Bit Patterned Servo.** *S. Zhang*¹ and *W. Wong*¹*1. Data Storage Institute, Singapore, Singapore*

THURSDAY
AFTERNOON
2:30

POLIVALENTE

Session HM
RECORDING SYSTEMS, CODING AND
CHANNELS - I
(POSTER SESSION)

Roger Wood, Chair

- HM-01. Mean-Adjusted PDNP Detector for Perpendicular Recording Channels With NLTS.** *Z. Wu¹, P.H. Siegel¹, J.K. Wolf¹ and N. Bertram^{1,2}*. *1. Center for Magnetic Recording Research, University of California, San Diego, La Jolla, CA; 2. Hitachi Global Storage Technologies, San Jose, CA*
- HM-02. Ordered statistics soft decoding of Reed-Solomon codes over intersymbol interference channels.** *F.Y. Lim¹, A. Kavčić¹ and M. Fossorier¹*. *1. University of Hawaii, Manoa, Honolulu, HI*
- HM-03. Enhanced Message Passing in Turbo Product Code.** *N. Yeh¹, P. Steiner¹ and Y. Li^{1,2}*. *1. Seagate Technology, Fremont, CA; 2. Presently with AMD, Yardley, PA*
- HM-04. A New Burst Detection Method Using Parity Check Matrix of LDPC Code for Bit Flipping Burst-like Signal Degradation.** *Y. Nakamura¹, M. Nishimura¹, Y. Okamoto¹, H. Osawa¹ and H. Muraoka²*. *1. Graduate School of Science and Engineering, Ehime University, Matsuyama, Japan; 2. RIEC, Tohoku University, Sendai, Japan*
- HM-05. Low-Complexity LDPC Decoder Architecture for High-Speed Magnetic Recording.** *C. Zhang^{1,2}, Z. Wang³, L. Li^{1,2}, J. Lin^{1,2} and M. Gao^{1,2}*. *1. Institute of VLSI Design, Physics Department, Nanjing University, Nanjing, Jiangsu, China; 2. Key Laboratory of Advanced Photonic and Electronic Materials, Nanjing University, Nanjing, Jiangsu, China; 3. School of Electrical Engineering and Computer Science, Oregon State University, Corvallis, OR*
- HM-06. Message-Passing Detector with Serial Concatenated Codes for PMR Channel.** *D. Park¹, J. Lee¹ and J. Lee²*. *1. School of Electronic Engineering, Soongsil University, Seoul, South Korea; 2. Storage System Division, Samsung Electronics, Suwon, South Korea*

HM-07. Hardware-Efficient LDPC Decoding for Magnetic Recording. Z. Cui¹, Z. Wang¹, X. Zhang² and Q. Jia³ 1. Oregon State University, Corvallis, OR; 2. Case Western Reserve University, Cleveland, OH; 3. Hitachi Asia Ltd, Singapore, Singapore

HM-08. Perpendicular Magnetic Recording Channel Equalization Based on Gaussian Sum Approximation. S. Choi¹, G. Kong¹, H. Cho¹, D. Lee¹, J. Lee³ and J. Lee² 1. School of Electrical and Electronic Engineering, Yonsei University, Seoul, South Korea; 2. School of Electronic Engineering, Soongsil University, Seoul, South Korea; 3. Storage System Division, Samsung Electronics, Suwon, South Korea

HM-09. Simplified Neural Network Equalizer with Noise Whitening Function for GPRML System. H. Osawa¹, M. Hino¹, N. Shinohara¹, Y. Okamoto¹, Y. Nakamura¹ and H. Muraoka² 1. Graduate School of Science and Engineering, Ehime University, Matsuyama, Japan; 2. RIEC, Tohoku University, Sendai, Japan

HM-10. Digital Storage Channel Equalization Using A Bilinear Recursive Polynomial System. S. Choi¹, H. Cho¹, G. Kong¹, J. Lee³ and J. Lee² 1. School of Electrical and Electronic Engineering, Yonsei University, Seoul, South Korea; 2. School of Electronic Engineering, Soongsil University, Seoul, South Korea; 3. Storage System Division, Samsung Electronics, Suwon, South Korea

HM-11. Interleaved Modified Array Codes (IMAC) Hardware Design and Performance for High-Rate Perpendicular Magnetic Recording Systems. P. Leekul^{1,3}, W. Singhaudom¹ and P. Supnithi^{1,2} 1. Faculty of Engineering, King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand; 2. Data Storage Technology and Applications Research Center (D*STAR), King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand; 3. Research Center for Communications and Information Technology (ReCCIT), King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand

HM-12. Nonbinary LDPC codes for 4K-byte sectors. W. Chang¹ and J. CRUZ¹ 1. The University of Oklahoma, Norman, OK

THURSDAY
AFTERNOON
2:30

POLIVALENTE

Session HN
MAGNETIC NANOCCLUSERS AND
NANOPARTICLES III
(POSTER SESSION)
Leonard Spinu, Chair

- HN-01. Magnetic properties of self-assembled cobalt nanoparticles crystal superlattices.** M. Varon¹, L. Peña², L. Balcells², V.F. Puentes¹ and B. Martinez^{2,1}. *Institut Català de Nanotecnologia, Bellaterra, Barcelona, Spain; 2. Magnetic Materials, ICMAB-CSIC, Bellaterra, Barcelona, Spain*
- HN-02. One-Dimensional Hierarchical Nanostructure Generated by Coating SiOX Nanowires with L10 CoPt Nanoparticles.** J. Kim¹, J. Kim¹, J. Park¹, K. Baek¹, H. Woo¹, S. Kim¹, C. Kim¹ and C. Yoon¹. *Materials Science and Engineering, Hanyang University, Seoul, South Korea*
- HN-03. Effects of oxidation and particle size on saturation magnetization of iron nanoparticles.** H. Matsuura¹, K. Seto², K. Kawano¹, M. Takahashi³ and T. Ogawa⁴. *TAIYO YUDEN Co.,Ltd., Takasaki-shi, Japan; 2. Dept. of Elec. Eng., Tohoku Univ., Sendai, Japan; 3. NICHe, Tohoku Univ., Sendai, Japan; 4. CRESS, Tohoku Univ., Sendai, Japan*
- HN-04. Phase transition of the escape rate for ferromagnetic nanoparticles: A magnetic quantum tunneling study.** J. Florez¹ and P. Vargas¹. *Phys. Dept. USM, Valparaiso, Chile*
- HN-05. Magnetic characterization of nanowire arrays using first order reversal curves.** R. Lavín¹, J.C. Denardin¹, J. Escrig¹, D. Altbir¹, A. Cortés² and H. Gómez². *Física, USACH, Santiago, Chile; 2. Química, UCV, Valparaíso, Chile*
- HN-06. AC susceptibility study of spin dynamics in Fe-doped $\text{La}_{0.7}\text{Pb}_{0.3}\text{Mn}_{0.8}\text{Fe}_{0.2}\text{O}_3$** L. Fernandez Barquin¹, J. Gutiérrez², J. Barandiaran², J. Bermejo² and S. Kaul³. *CITIMAC, Facultad de Ciencias, Universidad de Cantabria, Santander, Cantabria, Spain; 2. Electricidad y Electrónica, UPV/EHU, Fac. Ciencia y Tecnología, Bilbao, Bizkaia, Spain; 3. School of Physics, University of Hyderabad, Hyderabad, India*

- HN-07. Exchange coupling in core(ferromagnet)-shell(antiferromagnet) structured nano-particles.** N.N. Phuoc¹, T. Suzuki¹, R.W. Chantrell² and U. Nowak². *1. Information Storage Materials Laboratory, Toyota Technological Institute, Nagoya, Aichi, Japan; 2. Department of Physics, University of York, York, United Kingdom*
- HN-08. Single cobalt clusters embedded in isolating matrix.** C. Raufast¹, A. Tamion¹, V. Dupuis¹, T. Fournier², T. Crozes², E. Bernstein¹, E. Bonet² and W. Wernsdorfer². *1. Laboratoire de Physique de la Matière Condensée et Nanostructures, Lyon, France; 2. Institut Néel, CNRS, Grenoble, France*
- HN-09. Thermal relaxation phenomena probed by transverse susceptibility measurements performed at different frequencies.** J. Calleja¹, C. Radu², L. Spinu², R. Matarranz¹, B. Presa¹ and M. Contreras¹. *1. Física, Universidad de Oviedo, Oviedo, Spain; 2. AMRI, University of New Orleans, New Orleans, LA*
- HN-10. Self-ordered growth of ferrite nanopyrramids.** F. Rigato¹, B.B. Nelson-Cheeseman², J. Caicedo Roque¹, D. Hrabovský¹, F. Sánchez¹ and J. Fontcuberta¹. *1. Magnetic Materials, ICMAB, Bellaterra, Barcelona, Spain; 2. Materials Science and Engineering, University of California, Berkeley, CA*
- HN-11. On the low-temperature dependence of the nanoparticle interactions in the $Mn_xZn_{1-x}Fe_2O_4$ system.** A. Mendoza¹, O. Marín², D. Reyes³, A. Ovidio¹ and P. Prieto³. *1. Physics Department, Universidad Nacional de Colombia, Bogotá, Colombia; 2. Magnetic Materials and Nanostructures, Universidad del Quindío, Armenia, Colombia; 3. Thin Films Group, Universidad del Valle, Cali, Colombia*
- HN-12. Magnetostatic interactions between magnetic nanotubes.** J. Escrig¹, S. Allende¹, D. Altbir¹, P. Landeros² and M. Bahiana³. *1. Departamento de Física, Universidad de Santiago de Chile, Santiago, Chile; 2. Departamento de Física, Universidad Técnica Federico Santa María, Valparaíso, Chile; 3. Instituto de Física, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil*
- HN-13. Magnetic nanowires: from synthesis to permanent magnet applications.** G. Viau¹, Y. Soumare², T. Maurer³, J. Piquemal², F. Ott³ and G. Chaboussant³. *1. LPCNO, INSA Toulouse, TOULOUSE, France; 2. ITODYS, Université Paris7, PARIS, France; 3. LLB, CEA Saclay, ORSAY, France*

- HN-14. Numerical simulation of magnetic cluster in transition region.** *H. Endo*¹, *Y. Uesaka*¹, *Y. Nakatani*², *N. Hayashi*³ and *H. Fukushima*⁴. *1. Nihon University, Koriyama, Fukushima, Japan; 2. University of Electro-Communications, Chofu, Japan; 3. Individual capacity, Tokyo, Japan; 4. Individual capacity, Chiba, Japan*
- HN-15. Ligand exchange in gold-coated FePt nanoparticles.** *P. de la Presa*¹, *T. Rueda*¹, *M. Morales*² and *A. Hernando*¹. *1. Instituto de Magnetismo Aplicado, UCM, Las Rozas, Madrid, Spain; 2. ICMM-CSIC, Madrid, Madrid, Spain*
- HN-16. Magnetic behavior of oleate-capped monodisperse iron oxide nanoparticles prepared in polyol solutions.** *G. Caruntu*^{1,2}, *D. Caruntu*^{1,2} and *C.J. O'Connor*^{1,2}. *1. Advanced Materials Research Institute, New Orleans, LA; 2. Chemistry Department, University of New Orleans, New Orleans, LA*
- HN-17. Interplay Between Magnetic Coupling of Magnetic Nanoparticles and Magnetic/Superconducting Proximity Effect.** *E. Navarro*¹, *Y. Huttel*², *A. Cebollada*³, *A. Perez-Junquera*⁴, *M. Velez*⁴, *J.I. Martin*⁴, *J.M. Alameda*⁴ and *J.L. Vicent*¹. *1. Fisica Materiales, Univ. Complutense, Madrid, Spain; 2. Instituto Ciencia de Materiales, CSIC, Madrid, Spain; 3. Instituto Microelectronica de Madrid, CSIC, Madrid, Spain; 4. Fisica, Universidad de Oviedo, Oviedo, Spain*

**THURSDAY
AFTERNOON
2:30**

POLIVALENTE

**Session HO
HEAD-MEDIA INTERFACE AND
TRIBOLOGY - III
(POSTER SESSION)
Bernhard Knigge, Chair**

- HO-01. Lube depletion caused by thermal-desorption in heat assisted magnetic recording.** *Y. Ma*¹ and *B. Liu*¹. *Data Storage Insitute, Singapore, Singapore*
- HO-02. Study of slider's flying behavior under by various temperature and humidity conditions.** *T. Watanabe*¹ and *K. Kusakawa*¹. *Fuji Electric Device Technology Co.,Ltd, Matsumoto, Japan*

- HO-03. A novel simulation of air/liquid bearing based on lattice Boltzmann method.** *D. Kim¹, M.S. Jhon¹ and H. Kim¹*. *1. Depart of Chemical Engineering and Data Storage Systems Center, Carnegie Mellon University, Pittsburgh, PA*
- HO-04. Numerical Simulation of Touchdown/Takeoff of Sphere-Pad Slider.** *H. Li¹, J. Li², J. Xu², Y. Shimizu², K. Ono² and S. Yoshida¹*. *1. Storage Mechanics Laboratory, Hitachi Asia Ltd., Singapore, Singapore; 2. Central Research Laboratory, Hitachi Ltd., Kanagawa, Japan*
- HO-05. Dynamically controlled thermal flying-height control slider.** *T. Shiramatsu¹, T. Atsumi¹, M. Kurita¹, Y. Shimizu¹ and H. Tanaka²*. *1. Central Research Laboratory, HITACHI, Ltd, Fujisawa-shi, Kanagawa-ken, Japan; 2. Hitachi Global Storage Technologies Japan, Ltd., Odawara-shi, Kanagawa-ken, Japan*
- HO-06. Transient analysis of micro thermal actuator for flying height control.** *J. Liu¹, J. Li², H. Li¹, J. Xu² and S. Yoshida¹*. *1. Storage Mechanics Laboratory, R&D Center, Hitachi Asia Ltd, Singapore, Singapore; 2. Storage Technology Research Center, Hitachi Ltd, Fujisawa, Japan*
- HO-07. Origin of Heater Induced Voltage in Magnetic Recording Heads.** *D. Song¹ and M.T. Johnson¹*. *Seagate Technologies, Bloomington, MN*
- HO-08. Signal modulation study of TuMR reader near head/disk contact.** *N. Kim¹, Y. Tang¹ and X. Che¹*. *Samsung Information Systems America, San jose, CA*
- HO-09. Nano-mechanics of Perfluoropolyether Films: Compression vs. Tension.** *Q. Guo^{1,2}, P. Chung¹ and M.S. Jhon¹*. *1. Depart of Chemical Engineering and Data Storage Systems Center, Carnegie Mellon University, Pittsburgh, PA; 2. Seagate Technology, Fremont, CA*
- HO-10. Ultraviolet Bonding of PFPE with Carbon Overcoat: Surface Energy and Spreading.** *H. Chen², P. Chung¹ and M.S. Jhon¹*. *1. Depart of Chemical Engineering and Data Storage Systems Center, Carnegie Mellon University, Pittsburgh, PA; 2. Hewlett-Packard Company, San Diego, CA*

- HO-11. Binary Mixture Lubricant Film of PFPE Lubricants.** *P. Chung*¹, *H. Chen*² and *M.S. Jhon*¹. *1. Dept of Chemical Engineering and Data Storage Systems Center, Carnegie Mellon University, Pittsburgh, PA; 2. Hewlett-Packard Company, San Diego, CA*
- HO-12. A Study on Design and Analysis of New Lubricant for Near Contact Recording.** *D. Shirakawa*¹ and *K. Ohnishi*¹. *1. Asahi Glass Co., Ichihara-shi, Chiba, Japan*
- HO-13. A new contact model for head disk interface (HDI) with ultrathin liquid film and ultrasmall spacing.** *H. Matsuoka*¹, *H. Kokumai*¹ and *S. Fukui*¹. *1. Department of Applied Mathematics and Physics, Faculty of Engineering, Tottori University, Tottori, Japan*
- HO-14. Density Dependence of Carbon/Magnetic layer for Corrosion/Scratch Resistance on Head-Disk-Interface.** *H. Tani*¹ and *M. Shoda*¹. *1. Head media interface technology, Hitachi Global Storage Technologies Japan, Fujisawa-shi, Kanagawa-ken, Japan*

**THURSDAY
AFTERNOON
2:30**

POLIVALENTE

**Session HP
SOFT FILMS
(POSTER SESSION)**

Alfredo Garcia-Arribas, Chair

- HP-01. Crystal structure as an origin of high anisotropy field of FeCoB films with Ru underlayer.** *A. Hashimoto*¹, *K. Hirata*¹, *T. Matsuu*¹, *S. Saito*² and *S. Nakagawa*¹. *1. Dept. of Physical Electronics, Tokyo Institute of Technology, Tokyo, Japan; 2. Electronic Engineering, Tohoku University, Sendai, Japan*
- HP-02. Magnetic properties and crystallographic structure of Fe₃Pt thin films on glass substrate.** *S. Hsiao*¹, *S. Chen*¹, *Y. Hsu*¹, *H. Lee*², *W. Chang*³ and *F. Yuan*⁴. *1. Materials science and engineering, Feng Chia University, Taichung, Taiwan; 2. National Synchrotron Radiation Research Center, Hsinchu, Taiwan; 3. Physics, National Chung Cheng University, Chiayi, Taiwan; 4. Physics, Academia sinica, Taipei, Taiwan*

- HP-03. Suppression Of Sm Segregation And Improvement In Thermal Stability By Introducing Ru Underlayer In Co-Sm Amorphous Films.** *K. Ikeda^{1,2}, T. Suzuki¹ and T. Sato²*. *1. R&D center, Taiyo Yuden Co., Ltd., Gunma, Japan; 2. Spin device technology center, Shinshu University, Nagano, Japan*
- HP-04. Magnetic properties of FeCo films prepared by hydrogenous gas reactive sputtering.** *X. Liu¹ and A. Morisako²*. *1. Department of Information Engineering, Shinshu University, Nagano, Naganoken, Japan; 2. Spin device technology center, Shinshu University, Nagano, Nagano, Japan*
- HP-05. Nanocrystalline permalloy thin films obtained by nitrogen IBAD.** *P. Prieto¹, J. Camarero², J.F. Marco³, E. Jimenez², J.M. Benayas¹ and J.M. Sanz¹*. *1. Física Aplicada, Universidad Autónoma de Madrid, Madrid, Spain; 2. Física de la Materia Condensada, Universidad Autónoma de Madrid, Madrid, Spain; 3. Instituto de Química Física Rocasolano, CSIC, Madrid, Spain*
- HP-06. Ultra-Soft and High Magnetic Moment CoFe Films Directly Electrodeposited from a B-Reducer Contained Solution.** *B. Zong¹, G. Han¹, L. Wang¹, G. Leonard¹, J. Sze¹, L. Shen², H. Tan², Y. Loh¹, B. Lim¹ and B. Liu¹*. *1. SMI, Data Storage Institute, A-Star, Singapore, Singapore; 2. Institute of Materials Research & Engineering, A-Star, Singapore, Singapore*
- HP-07. Soft-magnetic CoNiFeP alloy films for high frequency applications.** *F.M. Rhen¹ and S. Roy¹*. *1. Microsystems Center, Tyndall National Institute, Cork, Ireland*
- HP-08. Spin re-orientation transition in amorphous FeBSi thin-films submitted to thermal treatments.** *P. Tiberto¹, F. Celegato¹, M. Coisson¹ and F. Vinai¹*. *1. INRIM, Torino, Italy*
- HP-09. Electroplated Ni_xFe_{100-x}/FeCo Multi-layer Films for Perpendicular Write Heads.** *Y. Miyake¹, M. Matsuoka¹, M. Kato¹, H. Kanai¹ and Y. Uehara¹*. *1. Fujitsu ltd, Nagano, Japan*
- HP-10. High temperature electrodeposited multilayer amorphous alloy suitable for integrated inductors.** *P. McCloskey¹, B. Jamieson¹, T. O'Donnell¹, D. Gardner², M. Morris³ and S. Roy¹*. *1. Microsystems Center, Tyndall National Institute, Cork, Ireland; 2. Circuit Research lab, INTEL Corporation, Santa Clara, CA; 3. Chemistry department, University College Cork, Cork, Ireland*

- HP-11. Magnetic properties of sputtered permalloy/molibdenum multilayers.** *M. Romera*¹, *M. Maicas*¹, *R. Ranchal*², *D. Ciudad*¹, *E. López*² and *P. Sánchez*¹. *1. ISOM, Universidad Politécnica de Madrid, Madrid, Madrid, Spain; 2. Física de Materiales, Universidad Complutense de Madrid, Madrid, Madrid, Spain*
- HP-12. Effects of capping layers on damping constants and magnetic properties of CoFeB.** *J. Song*¹, *C. Wang*¹, *S. Huang*¹, *C. Lai*¹, *W. Chen*², *S. Yang*² and *K. Shen*². *1. Department of Materials Science and Engineering, National Tsing Hua University, Hsinchu, Taiwan; 2. ERSO, Industrial Technology Research Institute, Hsinchu, Taiwan*
- HP-13. Direct Observation of Barkhausen Avalanches during Nucleation-Mediated Magnetization Reversal on a nanoscale.** *M. Im*¹, *P. Fischer*¹, *D. Kim*² and *S. Shin*³. *1. CXRO, LBNL, Berkeley, CA; 2. Department of Physics, Chungbuk National University, Cheongju 361-763, South Korea; 3. Department of Physics and Center for Nanospinics of Spintronic Materials, Korea Advanced Institute of Science and Technology, Daejeon 305-701, South Korea*
- HP-14. Magnetotransport and exchange-bias in CoCu electrodeposited granular alloys.** *M. Plaza*¹, *L. Perez*¹, *M. Sánchez*¹, *A. Fernández-Pacheco*^{2,3} and *J. de Teresa*². *1. Dpt. Física de Materiales, Universidad Complutense de Madrid, Madrid, Spain; 2. Instituto de Ciencia de Materiales de Aragón, CSIC-Universidad de Zaragoza, Zaragoza, Spain; 3. Instituto de Nanociencia de Aragón, Universidad de Zaragoza, Zaragoza, Spain*
- HP-15. High magnetic moment soft thin films for flux concentrators.** *I.G. Trindade*^{1,2}, *J. Oliveira*^{1,3}, *J. Teixeira*¹, *R. Fermento*¹, *J.B. Sousa*^{1,2}, *S. Cardoso*⁴, *P.P. Freitas*⁴, *J.E. Snyder*⁵ and *A. Raghunathan*⁵. *1. IFIMUP-IN, Porto, Portugal; 2. Physics, Faculdade de Ciências da Universidade do Porto, Porto, Portugal; 3. Faculdade de Ciências da Universidade do Minho, Braga, Portugal; 4. INESC-MN-IN, Lisboa, Portugal; 5. Wolfson Centre for Magnetism, School of Engineering, Cardiff University, Cardiff, United Kingdom*

THURSDAY
AFTERNOON
2:30

POLIVALENTE

Session HQ
DOMAIN WALLS IN NANOWIRES AND
THIN FILMS
(POSTER SESSION)

Dorothee Petit, Chair

- HQ-01. Controlling Domain Wall Pinning in Planar Nanowires with Transverse Field and its Application in a Magnetic Memory Cell.** *D. Atkinson*¹, D.S. Eastwood¹ and L.K. Bogart¹. *Physics, Durham University, Durham, United Kingdom*
- HQ-02. Bi-stable memory element based on pinned domain walls in pairs of notches.** *E. Martinez*¹, L. Lopez-Diaz², O. Alejos³ and L. Torres². *1. Ingenieria Electromecanica, University of Burgos, Burgos, Burgos, Spain; 2. Fisica Aplicada, University of Salamanca, Salamanca, Spain; 3. Electricidad y Electronica, University of Valladolid, Valladolid, Spain*
- HQ-03. Shingle shot detection of the magnetic domain wall motion by using the TMR effect.** *K. Kondou*¹, N. Ohshima², S. Kasai¹, Y. Nakatani³ and T. Ono¹. *1. Institute for Chemical Research, Kyoto University, Uji, Kyoto, Japan; 2. Device Platforms Research Laboratories, NEC Corp., Sagamihara, Kanagawa, Japan; 3. Department of Computer Science, University of Electro-communications, Chofu, Tokyo, Japan*
- HQ-04. Domain wall injection study in spin valve system with different geometry reservoirs.** *K. Cheng*^{1,2}, C. Yu¹, S. Lee¹, Y. Liou¹, Y. Yao³, J. Wu³ and J. Huang². *1. Institute of Physics., Academia Sinica., Taipei, Taiwan; 2. Department of Materials Science and Engineering, National Tsing-Hua University, Hsinchu, Taiwan; 3. Department of Materials Engineering, Tatung University, Taipei, Taiwan*
- HQ-05. Magnetization reversal with domain wall motion in NiFe nanodevices with different pinning sites.** *Y. Zhou*¹, D. Stickler², Y. Du¹, E. Ahmad¹, Z. Lu¹, H.P. Oepen², D. Wilton¹ and G. Pan¹. *1. Faculty of Technology, University of Plymouth, Plymouth, Devon, United Kingdom; 2. Institut für Angewandte Physik, Universität Hamburg, Jungiusstr, Hamburg, Germany*

- HQ-06. Magnetoresistance of transverse and vortex domain walls in permalloy submicron wires.** C. Yu¹, S. Lee¹, K. Cheng¹, D. Chen², E. Haug³ and Y. Liou¹.
1. physics, academia sinica, Taipei, Taiwan; 2. Materials Science & Engineering, Chiao Tung University, Hsinchu, Taiwan; 3. Materials Science & Engineering, University of Tennessee, Knoxville, TN
- HQ-07. Domain wall magnetoresistance effect in nanobridges.** Y. Chen¹, J. Hsu¹, C. Yu², K. Cheng², S. Lee², Y. Liou² and Y. Yao².
1. Physics, National Taiwan University, Taipei, Taiwan; 2. Physics, Academia Sinica, Taipei, Taiwan
- HQ-08. Effect of period and linewidth on the magnetization reversal of thin film wire arrays.** S. Moralejo¹, C. Redondo¹, F.J. Castano², C.A. Ross² and F. Castano¹.
1. Depart. Química Física, Univ. País Vasco, Lejona, Vizcaya, Spain; 2. Depart. of Material Science and Engineering, MIT, Cambridge, MA
- HQ-09. Edge Roughness effect on the magnetization reversal process of spin valve submicron wires.** T. Chiang^{1,2}, C. Yu¹, Y. Chen¹, S. Lee¹ and G. Guo².
1. Institute of physics, Academia sinica, Taipei, Taiwan; 2. Physics, National Taiwan University, Taipei, Taiwan
- HQ-10. Study on domain wall moving in a permalloy ring structure.** D. Chen¹, C. Yu² and Y. Yao³.
1. Department of Material Science and Engineering, National Chiao Tung University, Hsinchu, Taiwan; 2. Institute of Physics, Academia Sinica, Taipei, Taiwan; 3. The Department of Materials Engineering, Tatung University, Taipei, Taiwan
- HQ-11. Magnetic domain wall pinning by the stray field of a ferromagnetic dot array.** P.J. Metaxas^{1,3}, J. Jamet¹, J. Ferré¹, P. Zermatten², G. Gaudin², B. Rodmacq², A. Schuhl² and R.L. Stamps³.
1. Laboratoire de Physique des Solides (UMR CNRS 8502), Université Paris-Sud, Orsay, France; 2. SPINTEC (URA 2512 CNRS/CEA), CEA, Grenoble, France; 3. School of Physics, University of Western Australia, Perth, WA, Australia

- HQ-12. Ratchet effects on domain wall motion in 2D magnetic amorphous thin film with arrays of asymmetric holes.** *J.I. Martín*¹, *A. Pérez-Junquera*¹, *V.I. Marconi*², *A.B. Kolton*², *L.M. Álvarez-Prado*¹, *Y. Souche*³, *A. Alija*¹, *M. Vélez*¹, *J.V. Anguita*⁴, *J.M. Alameda*¹ and *J.R. Parrondo*². *1. Departamento de Física, Universidad de Oviedo - CINN, Oviedo, Asturias, Spain; 2. Física Atómica, Molecular y Nuclear, and GISC, Universidad Complutense de Madrid, Madrid, Comunidad de Madrid, Spain; 3. NANO, Institut Néel, CNRS and Université Joseph Fourier, Grenoble, Grenoble, France; 4. Dispositivos, Sensores y Biosensores, Instituto de Microelectrónica de Madrid (CNM-CSIC), Madrid, Comunidad de Madrid, Spain*

**THURSDAY
AFTERNOON
2:30**

POLIVALENTE

Session HR

MgO MAGNETIC TUNNEL JUNCTIONS

II

(POSTER SESSION)

Coriolan Tiusan, Chair

- HR-01. Annealing temperature dependence of tunnel magnetoresistance in MgO-barrier magnetic tunnel junctions with CoFeB electrodes.** *(Invited) S. Ikeda*¹, *J. Hayakawa*², *Y. Lee*¹, *K. Miura*^{2,1}, *H. Hasegawa*^{1,2}, *F. Matsukura*¹ and *H. Ohno*¹. *1. Laboratory for Nanoelectronics and Spintronics, RIEC, Tohoku Univ., Sendai, Japan; 2. Advanced Research Laboratory, Hitachi, Ltd., Tokyo, Japan*
- HR-02. Effects of MgO barrier thickness on magnetic anisotropy energy constant in perpendicularly magnetic tunnel junctions of (Co/Pd)_n/MgO/(Co/Pt)_n.** *J. Lee*^{1,3}, *C. Lee*^{1,2}, *L. Ye*¹, *S. Wang*^{1,2}, *Y. Wang*¹, *K. Lin*⁴, *Y. Chang*⁴ and *T. Wu*^{1,2}. *1. Taiwan SPIN Research Center and Graduate School of Engineering Science and Technology, National Yunlin University of Science and Technology, Douliou, Taiwan; 2. Graduate school of materials science, National Yunlin University of Science and Technology, Douliou, Taiwan; 3. Graduate school of Engineering Science and Technology, National Yunlin University of Science and Technology, Douliou, Taiwan; 4. Laser Application Technology Center, Industrial Technology Research Institute, Tainan, Taiwan*

- HR-03. Magnetoresistance Behavior of Bottom Exchange Biased Perpendicular Magnetic Tunnel Junction Based on Pd/Co Multilayers.** D. Lim¹, K. Kim¹, S. Lee¹, S. Kim² and W. Jeung³. *1. Materials Science and Engineering, Korea University, Seoul, South Korea; 2. Mechanical Design and Automation Engineering, Seoul National University of Technology, Seoul, South Korea; 3. Korea Institute of Science and Technology, P.O.Box 131, Seoul, South Korea*
- HR-04. Improvement of (100) orientation of MgO films deposited at room temperature for perpendicular MTJ.** H. Ohmori¹ and S. Nakagawa¹. *Dept. of Physical Electronics, Tokyo Institute of Technology, Tokyo, Japan*
- HR-05. Magnetic tunnel junctions formed by oxidation of Mg.** W. Raberg¹, T. Bever¹, M. Hawranek^{1,2}, S. Koss^{1,3}, S. Schmitt¹ and J. Zimmer¹. *1. Technology development Sense & Control, Infineon Technologies AG, Neubiberg, Germany; 2. Institut für Materialwissenschaften, Technische Universität Darmstadt, Darmstadt, Germany; 3. Institut für Festkörperphysik, Universität Hannover, Hannover, Germany*
- HR-06. Influence of boron concentration on tunnel magnetoresistance in CoFeB/MgO/CoFeB magnetic tunnel junctions.** K. Tsunekawa¹, Y. Nagamine¹, Y. Choi¹, F. Ernult¹, D.D. Djayaprawira¹ and Y. Kitamoto². *1. Electronic Devices Engineering Headquarters, Canon ANELVA Corp., Kawasaki-shi, Kanagawa, Japan; 2. Tokyo Institute of Technology, Yokohama-shi, Kanagawa, Japan*
- HR-07. Temperature dependence of magnetoresistance in epitaxial Fe/MgO/Fe/IrMn magnetic tunnel junctions.** S. Wang^{1,2}, R. Ward¹, G. Du², X. Han², C. Wang³ and A. Kohn³. *1. Department of Physics, University of Oxford, Oxford, United Kingdom; 2. Institute of Physics, Chinese Academy of Sciences, Beijing, China; 3. Department of Materials, University of Oxford, Oxford, United Kingdom*
- HR-08. The XRD analysis of pseudo and exchange bias spin valve of MgO based magnetic tunnel junctions.** J. Kanak¹, P. Wisniowski², A. Zaleski¹, S. Cardoso², P.P. Freitas² and T. Stobiecki¹. *1. AGH University of Science and Technology, Krakow, Poland; 2. INESC Microsystems and Nanotechnologies, Lisbon, Portugal*

- HR-09. The electrical properties of the radically oxidized MgO prepared in different oxidation condition.** C. Shen¹, S. Yang¹, C. Yen¹, W. Chen¹, Y. Lee¹, D. Wang¹, C. Tsai¹, C. Hung¹, K. Shen¹ and M. Kao¹. *Electronics and Optoelectronics Research Lab (EOL), Industrial Technology Research Institute (ITRI), Hsinchu, Taiwan*
- HR-10. Effect of Thermal Treatment on Chemical States of CoFeB/MgO/CoFeB Tunnel Junctions.** Y. Han¹, S. Lee¹, J. Hong¹, M. Jung² and H. Shin². *1. Materials Science and Engineering, Yonsei University, Seoul, South Korea; 2. Pohang Accelerator Laboratory, POSTECH, Pohang, Kyungbuk, South Korea*
- HR-11. Ab initio calculations of the TMR in magnetic tunnel junctions (MTJ): application to Fe/MgO/Fe.** I. Arias¹, J.I. Cerdá¹ and M. Muñoz¹. *1. Intercaras y crecimiento, Instituto de Ciencia de Materiales de Madrid, Madrid, Madrid, Spain*
- HR-12. Substrate biasing effect on the MgO (001) growth in CoFeB/MgO/CoFeB TMR junctions.** G. Choi¹, W. Lim¹ and T. Lee¹. *1. Department of Materials Science and Engineering, KAIST, Daejeon, South Korea*
- HR-13. The bias voltage dependence of inverted magnetoresistance on the annealing temperature in MgO-based magnetic tunnel junctions.** J. Feng¹, G. Feng¹ and J. Coey¹. *1. CRANN and school of physics, Trinity College, Dublin, Ireland*
- HR-14. Detection of an infra red magnetorefractive effect from a layered Fe/MgO/Fe magnetic tunnel junction.** R.T. Mennicke¹, R. Berryman¹, F. Ernult², H. Wang², Y. Nogi², J.A. Matthew¹, S.M. Thompson¹, S. Mitani² and K. Takanashi². *1. Physics, University of York, York, North Yorkshire, United Kingdom; 2. Institute for Materials Research, Tohoku University, Sendai, Miyagi, Japan*
- HR-15. Low Frequency Noise in MgO Magnetic Tunnel Junctions: Hooge's Parameter Dependence on Bias Current Density.** J.M. Almeida^{1,2} and P.P. Freitas^{1,2}. *1. INESC - MN, Lisbon, Portugal; 2. Physics, IST, Lisbon, Portugal*

- HR-16. Magnetization reversal processes of nanostructured magnetic tunnel junction rings.** C. Chen¹, C. Chao¹, C. Kuo¹, J. Ou¹, L. Horng¹, J. Wu¹, T. Wu², J. Yang³, S. Isogami⁴, M. Tsunoda⁴ and M. Takahashi⁴. *1. Taiwan SPIN Research Center, National Changhua University of Education, Changhua, Taiwan; 2. Taiwan SPIN Research Center, National Yunlin University of Science & Technology, Yunlin, Taiwan; 3. Institute of Optoelectronic Sciences, National Taiwan Ocean University, Keelung, Taiwan; 4. Graduate school of Electronic Engineering, Tohoku University, Sendai, Japan*

**THURSDAY
AFTERNOON
2:30**

POLIVALENTE

**Session HS
AB INITIO CALCULATIONS
(POSTER SESSION)**

Oleg Mryasov, Chair
Laszlo Szunyogh, Chair

- HS-01. First-principles calculations of structural and magnetic properties of Fe/MgO/Fe with interfacial Mg vacancy.** C. Kim¹, G. Yoon¹ and Y. Chung¹. *Materials Science and Engineering, Hanyang University, Seoul, South Korea*
- HS-02. Ab-initio spin-dependent electronic transport calculations of MTJ with low band-gap insulating oxides with rock salt structure.** A. Furuya¹, A. Fujisaki¹, H. Kanai², K. Noma², K. Kobayashi² and Y. Uehara². *1. Simulation Technology Development Division, FUJITSU Advanced Technologies Ltd, Kawasaki, Kanagawa, Japan; 2. Head Division, Storage Products Group, Fujitsu Ltd, Nagano, Nagano, Japan*
- HS-03. Inhomogeneity and magnetism in diluted magnetic semiconductors.** B. Sanyal¹, R. Knut¹, O. Granas¹, D.M. Iusan¹, O. Karis¹ and O. Eriksson¹. *Department of Physics, Uppsala University, Uppsala, Sweden*
- HS-04. Interface magnetism in Fe₂O₃-FeTiO₃ heterostructures.** S. Sadat Nabi¹ and R. Pentcheva¹. *department of earth and environmental sciences, section crystallography, Ludwig Maximilian University of Munich, Munich, Germany*

- HS-05. Charge, magnetic and orbital order at perovskite interfaces.** *R. Pentcheva*¹ and *W.E. Pickett*².
Department of Earth and Environmental Sciences, Section Crystallography, University of Munich, Munich, Germany; 2. Department of Physics, University of California, Davis, CA
- HS-06. Magnetism of conduction band, exchange interactions and magneto-caloric effects in pure hcp Gd: a first-principles calculations.** *S. Khmelevskyi*¹, *A.V. Ruban*², *I. Turek*³ and *P. Mohn*¹.
1. Center for Computational Materials Science, Vienna Technical University, Vienna, Austria; 2. Royal University of Technology, Stockholm, Sweden; 3. Charles University, Prague, Czech Republic
- HS-07. Ab-initio magneto-optical properties of bcc Ni/Ni(100).** *C. Etz*¹, *A. Vernes*¹, *L. Szunyogh*^{1,2} and *P. Weinberger*¹.
1. Center for Computational Materials Science, Vienna University of Technology, Vienna, Austria; 2. Department of Theoretical Physics, Budapest University of Technology and Economics, Budapest, Hungary
- HS-08. Influence of external magnetic field on the resistivity of a one-dimensional Neel type magnetic domain wall in presence of Rashba spin-orbit coupling.** *M. Ghanaatshoar*¹, *V. Fallahi*¹, *M.M. Tehranchi*¹ and *A. Phirouznia*².
1. Laser and Plasma research institute, Shahid Beheshti University, Tehran, Tehran, Iran; 2. Department of physics, Azarbaijan University of Tarbiat Moallem, Tabriz, Eastern Azarbaijan, Iran
- HS-09. Ab-initio study on the magnetic structures in the ordered Mn₃Pt alloy.** *Y. Kota*¹, *H. Tsuchiura*¹ and *A. Sakuma*¹.
1. Applied Physics, Tohoku University, Sendai, Japan
- HS-10. Half-metallicity of the bulk and the (001) surface for full Heusler alloy Co₂HfSi: a first-principles study.** *Y. Jin*¹ and *J. Lee*¹.
1. Physics, Inha University, Incheon, South Korea
- HS-11. Magnetic properties of the antiperovskite Co₄N(001) surfaces: a first-principles study.** *I. Kim*¹, *B. Bialek*² and *J. Lee*².
1. Grad. Inst. Ferrous Tech. (GIFT), POSTECH, Pohang, South Korea; 2. Physics, Inha University, Incheon, South Korea
- HS-12. A first principles study of Thiol-Capped Au Nanoparticles.** *R. Cuadrado*¹ and *J. Cerdá*¹.
1. Intercaras y Crecimiento, Instituto de Ciencia de Materiales de Madrid, Madrid, Madrid, Spain

- HS-13. The Study of Magnetic Properties of Fe₂Sm Using Ab- Initio Calculation.** M. Imaizumi¹, L.C. Varanda² and M. Jafelicci Jr³. *1. Física, Universidade Estadual Júlio de Mesquita Filho, Bauru, S.Paulo, Brazil; 2. Química, Universidade de São Paulo, São Carlos, São Paulo, Brazil; 3. Química, Universidade Estadual Paulista Júlio de Mesquita Filho, Araraquara, São Paulo, Brazil*
- HS-14. Energy spectrum of S=1/2 Heisenberg systems via a recursive diagonalization method.** F.C. Souza¹ and V.L. Libero¹. *1. Departamento de Física e Informática, Instituto de Física de São Carlos, Universidade de São Paulo, São Carlos, São Paulo, Brazil*
- HS-15. Density Functional Theory for Heisenberg Spin-1/2 Chains With Bond Defects.** V.L. Libero¹ and P.H. Penteado¹. *1. Departamento de Física e Informática, Instituto de Física de São Carlos, Universidade de São Paulo, São Carlos, São Paulo, Brazil*
- HS-16. Ab initio DFT study of half-metallic character in Sr₂CoReO₆ complex perovskite.** J. Roa-Rojas¹, M. Bonilla¹, J.A. Rodriguez¹, F. Fajardo¹ and D.A. Landinez-Tellez¹. *1. Dept. of Physics, Universidad Nacional de Colombia, Bogotá, D. C., Colombia*

**THURSDAY
AFTERNOON
2:30**

POLIVALENTE

**Session HT
RECORDING SYSTEMS, CODING AND
CHANNELS-II
(POSTER SESSION)**

Jae Moon, Chair

- HT-01. Combinations of decoding algorithm for LDPC codes by tensor product decoding.** H. Kamabe¹. *Information Science, Gifu University, Gifu, Gifu, Japan*
- HT-02. Performance Evaluation of Combined Post-processor Based on Likely Error Pattern and Parity Check Targeting under Write Pre-compensation in PMR Channel with NLTS.** Y. Okamoto¹, T. Bushisue¹, Y. Nakanura¹, H. Osawa¹ and H. Muraoka². *1. Graduate School of Science and Engineering, Ehime University, Matsuyama, Ehime, Japan; 2. RIEC, Tohoku University, Sendai, Japan*

- HT-03. Performance comparison of various error correcting strategies using perpendicular magnetic recording data series.** *S. Mita*¹ and *H. Matsui*¹. *Toyota Technological Institute, Nagoya, Japan*
- HT-04. EPCC-based Channel-Optimized LDPC coding.** *H.S. Alhussien*¹ and *J. Moon*¹. *CDSLAB, Electrical and Computer Engineering, University of Minnesota Twin Cities, Minneapolis, MN*
- HT-05. On Imposing an RLL Constraint without Explicit RLL Coding.** *J. Park*¹ and *J. Moon*¹. *Electrical and Computer Engineering, University of Minnesota, Minneapolis, MN*
- HT-06. On the use of averaging to estimate the dibit response.** *M. Ting*¹. *Seagate Technology, Pittsburgh, PA*
- HT-07. Two-Dimensional Pulse Response and Media Noise Modeling for Bit-Patterned Media Channels.** *S. Nabavi*^{1,2}, *V. Bhagavatula*^{1,2} and *J.A. Bain*^{1,2}. *Data Storage Systems Center (DSSC), Pittsburgh, PA; 2. ECE, Carnegie Mellon University, Pittsburgh, PA*
- HT-08. Soft Feedback Equalization for Patterned Media Storage.** *M. Keskinöz*¹. *Electronics Engineering, Sabanci University, Istanbul, Turkey*
- HT-09. Signal Modeling for Ultra-high Density Bit Patterned Media and Performance Evaluation.** *S. Zhang*¹, *Z. Qin*¹ and *X. Zou*¹. *Data Storage Institute, Singapore, Singapore*
- HT-10. Equalization and detection for patterned media recording.** *S. Karakulak*¹, *P.H. Siegel*¹, *J.K. Wolf*¹ and *H. Bertram*^{1,2}. *Electrical and Computer Engineering Dept., Center for Magnetic Recording Research, UCSD, La Jolla, CA; 2. Hitachi Global Storage Technologies, San Jose, CA*
- HT-11. Understanding sources of errors in bit patterned media to improve read channel performance.** *Y. Shi*¹, *P.W. Nutter*¹ and *J.J. Miles*¹. *School of Computer Science, The University of Manchester, Manchester, United Kingdom*
- HT-12. Global timing control for tape storage channels.** *S. Ölçer*¹, *J. Jelitto*¹ and *R.A. Hutchins*². *IBM Zurich Research Laboratory, Rüschlikon, Zürich, Switzerland; 2. IBM STG, Tucson, AZ*

THURSDAY
AFTERNOON
2:30

POLIVALENTE

Session HU
MULTILAYER FILMS AND
SUPERLATTICES III
(POSTER SESSION)

Hong-Sik Jung, Chair

- HU-01. Multilayered thin film structure for negative permeability.** *S. Cho*¹, *J. Kim*¹ and *K. Kim*². *Metallurgy and materials engineering, Hanyang University, Ansan, South Korea; 2. Physics, Yeungnam University, Gyeongsan, South Korea*
- HU-02. Interlayer exchange coupling in $\text{Co}_2\text{FeAl}_{0.5}\text{Si}_{0.5}/\text{Cr}/\text{Co}_2\text{FeAl}_{0.5}\text{Si}_{0.5}$ trilayers.** *T. Furubayashi*¹, *K. Kodama*², *K. Inomata*¹ and *K. Hono*¹. *Magnetic Materials Center, National Institute for Materials Science, Tsukuba, Japan; 2. Graduate School of Pure and Applied Sciences, University of Tsukuba, Tsukuba, Japan*
- HU-03. Thickness and Temperature Dependence of Extraordinary Hall Effect in Interlayer Coupled [Pt/Co]₅/Ru/[Co/Pt]₅ Multilayers with Perpendicular Anisotropy.** *J. Zhao*¹, *Y. Wang*¹, *S. Zhang*² and *X. Han*¹. *State Key Laboratory of Magnetism, Institute of Physics, Chinese Academy of Science, Beijing, Beijing, China; 2. Department of Physics and Astronomy, University of Missouri–Columbia, Columbia, MO*
- HU-04. Effect of antiferromagnetic interlayer coupling on domain wall creep in a system with perpendicular anisotropy.** *P.J. Metaxas*^{1,2}, *J. Jamet*¹, *J. Ferré*¹, *B. Rodmacq*³, *B. Dieny*³ and *R.L. Stamps*². *Laboratoire de Physique des Solides (UMR CNRS 8502), Université Paris-Sud, Orsay, France; 2. School of Physics, University of Western Australia, Crawley, WA, Australia; 3. SPINTEC (URA 2512 CNRS/CEA), CEA, Grenoble, France*

- HU-05. Spin-glass-like magnetic behaviour of Tb/Si and Tb/Ti nanoscale multilayers.** *A. V. Svalov*^{1,2}, *V.O. Vas'kovskiy*¹, *J.M. Barandiarán*², *I. Orue*³, *R. Lopez Anton*^{4,5} and *G.V. Kurlyandskaya*². *1. Ural State University, Ekaterinburg, Russian Federation; 2. Electricidad y Electrónica, Universidad del País Vasco (UPV/EHU), Bilbao, Spain; 3. SGiker, Universidad del País Vasco (UPV/EHU), Bilbao, Spain; 4. Instituto de Ciencia de Materiales de Aragón, CSIC-Universidad de Zaragoza, Zaragoza, Spain; 5. ISIS Facility, Science and Technology Facilities Council, Rutherford Appleton Laboratory, Harwell Science and Innovation Campus, Didcot, United Kingdom*
- HU-06. Magnetoimpedance in permalloy-based multilayers: effect of Ag and Cu spacers.** *A. de Andrade*¹, *A. Viegas*², *R. da Silva*³, *M. Corrêa*⁴ and *R. Sommer*⁵. *1. Universidade Federal de Santa Maria, Frederico Westphalen, Rio Grande do Sul, Brazil; 2. Universidade Federal de Santa Catarina, Florianópolis, Santa Catarina, Brazil; 3. Universidade Federal do Rio Grande do Sul, Porto Alegre, Rio Grande do Sul, Brazil; 4. Universidade Federal do Pampa, Caçapava do Sul, Rio Grande do Sul, Brazil; 5. Centro Brasileiro de Pesquisas Físicas, Rio de Janeiro, Rio de Janeiro, Brazil*
- HU-07. Structural Characterization of Ferromagnetic Mn/ZnO Multilayers.** *E. Céspedes*¹, *A. Espinosa*¹, *M. García-Hernández*¹, *A. de Andrés*¹ and *C. Prieto*¹. *Instituto de Ciencia de Materiales de Madrid, Consejo Superior de Investigaciones Científicas (CSIC), Madrid, Spain*
- HU-08. Structural control of magnetic properties in Co/Pd multilayer for heat assisted perpendicular MRAM application.** *B. Purnama*¹, *K. Waseda*¹, *S. Yoshimura*¹, *Y. Nozaki*¹ and *K. Matsuyama*¹. *1. Electronics, Kyushu University, Fukuoka, Japan*
- HU-09. Antiferromagnetic Exchange Coupling at Interface between Fe₃O₄(001) and Fe(001) Epitaxial Films.** *H. Yanagihara*¹, *A. Ohnishi*¹, *J. Hagiwara*¹, *Y. Toyada*¹ and *E. Kita*¹. *1. Applied Physics, Univ. Tsukuba, Tsukuba, Japan*

- HU-10. Preparation of Longitudinally Oriented CoCrPt Thin Film in GMR Head at Room Temperature.** X. Liu¹, Z. Li¹, S. Li¹, W. Shi¹, F. Wei¹, D. Wei² and J. Cao³ 1. Lanzhou University, Research Institute of Magnetic Materials, Lanzhou, Gansu, China; 2. Tsinghua University, Key Laboratory of Advanced Materials Department and Engineering, Beijing, China; 3. Lanzhou University, Research Institute of Magnetic Materials (Now working in INESC-Microsystems and Nanotechnologies (INESC-MN), R.Alves Redol 9-1, 1000-29 Lisbon, Portugal), Lanzhou, Gansu, China
- HU-11. Molecular dynamics investigation on interfacial mixing behavior in transition metals (Fe, Co, Ni)-Al multilayer system.** S. Lee¹, H. Park¹ and Y. Chung¹ 1. Department of Materials Science & Engineering, Hanyang University, Seoul, South Korea
- HU-12. Intermedium zero-magnetization state in Co/TiO₂/Co trilayer.** Y. Wu^{1,2}, J.G. Lin^{1,3} and C. Chang^{2,3} 1. Center for Condensed Matter Sciences, National Taiwan University, Taipei, Taiwan; 2. Department of Physics, National Taiwan University, Taipei, Taiwan; 3. Center for Nanostorage research, National Taiwan University, Taipei, Taiwan
- HU-13. Fe₃O₄/MgO/Fe heteroepitaxial structures for magnetic tunnel junctions.** J. Orna^{1,2}, L. Morellon^{1,2}, P.A. Algarabel², J.A. Pardo^{1,3}, S. Sangiao¹, C. Magen⁴, J.M. De Teresa² and M.R. Ibarra^{1,2} 1. Instituto de Nanociencia de Aragón (INA), Universidad de Zaragoza, Zaragoza, Spain; 2. Instituto de Ciencia de Materiales de Aragón (ICMA), Universidad de Zaragoza-CSIC, Zaragoza, Spain; 3. Departamento de Ciencia y Tecnología de Materiales y Fluidos, Universidad de Zaragoza, Zaragoza, Spain; 4. Materials Science and Technology Division, Oak Ridge National Laboratory, Oak Ridge, TN
- HU-14. Thermal stability of top-type synthetic antiferromagnetic spin-valve structure in (001) orientated MgO-based MTJs.** C. Chen¹, C. Lai¹, W. Chen², K. Shen² and H. Bor³ 1. Department of Materials Science and Engineering, National Tsing Hua University, Hsinchu, Taiwan; 2. Electronics Research and Service Organization, Industrial Technology Research Institute, Hsinchu, Taiwan; 3. Materials and Electro-Optics Research Division, Chuang-Shan institute of Science and Technology, Taoyoun, Taiwan

THURSDAY
AFTERNOON
2:30

POLIVALENTE

Session HV
MAGNETO-OPTIC, HAMR AND NOVEL
RECORDING
(POSTER SESSION)

Takao Suzuki, Chair

- HV-01. Numerical Analysis of Heat Transfer Mechanisms Induced by Laser Heating in Far- and Near- Field HAMR Systems.** *R. Ikkawi*¹, *N. Amos*¹, *A. Balandin*¹, *D. Litvinov*² and *S. Khizroev*¹. *1. Electrical Engineering, University of California, Riverside, Riverside, CA; 2. Center for Nanomagnetic Systems, University of Houston, Houston, TX*
- HV-02. Micromagnetic studies of probe recording on magnetic nanocaps.** *A. Goncharov*¹, *T. Schrefl*¹, *P. Kappenberger*², *G. Hrkac*¹, *J. Dean*¹, *S. Bance*¹ and *M. Albrecht*³. *1. Engineering Materials, The University of Sheffield, Sheffield, United Kingdom; 2. Nano-scale Materials Science, Empa-Materials Science & Technology, Dübendorf, Switzerland; 3. Surface and Interface Physics, Chemnitz University of Technology, Chemnitz, Germany*
- HV-03. Compositional dependence of g-factor and damping constant of GdFeCo amorphous alloy films.** *T. Kato*¹, *K. Nakazawa*², *R. Komiya*², *N. Nishizawa*³, *S. Tsunashima*² and *S. Iwata*¹. *1. Department of Quantum Engineering, Nagoya University, Nagoya, Aichi, Japan; 2. Department of Electrical Engineering and Computer Science, Nagoya University, Nagoya, Aichi, Japan; 3. Osaka University, Suita, Osaka, Japan*
- HV-04. Magneto-optical properties of nanometer crystal giant magneto-optical BiAlDyIG thin film materials post-treated by rapid recurrent thermal annealing (RRTA) method.** *Q. Yang*¹, *H. Zhang*¹, *Q. Wen*¹ and *Y. Liu*¹. *1. University of Electronic Science and Technology of China, Chengdu, Sichuan, China*
- HV-05. Prospect for Optically Assisted Magnetic Recording using Amorphous Film of Rare Earth-Transition Metal Alloy.** *M. Murakami*¹. *1. Electro-mechanical Components Business Unit, Panasonic Electronic Devices Co., Ltd., Kadoma, Osaka, Japan*

THURSDAY
AFTERNOON
2:30

POLIVALENTE

Session HW
RECORDING PHYSICS, MODELS AND
THEORY - II
(POSTER SESSION)
Werner Scholz, Chair

- HW-01. Feasibility of Perpendicular Magnetic Printing at 1 Tbit/inch²** *T. Komine¹, T. Murata¹, Y. Sakaguchi¹, Y. Hosoya¹, N. Suhaimi¹ and R. Sugita¹*. *Department of Media and Telecommunications Engineering, Ibaraki University, Hitachi, Ibaraki, Japan*
- HW-02. Off-Track Performance and Track-Edge Structure in Narrow Track Perpendicular Magnetic Recording.** *K. Miura¹, T. Ogawa¹, H. Muraoka¹, H. Aoi¹ and Y. Nakamura¹*. *RIEC, Tohoku University, Sendai, Miyagi, Japan*
- HW-03. Microwave assisted magnetization reversal and its thermal activation.** *S. Okamoto¹, N. Kikuchi¹ and O. Kitakami¹*. *IMRAM, Tohoku University, Sendai, Japan*
- HW-04. Prediction on the recording performance of exchange coupled composite media and discrete track media.** *Y. Tahk¹, J. Lee¹ and S. Lee¹*. *Storage System Division, Samsung Electronics, Suwon, South Korea*
- HW-05. Attempt Frequency with Respect to Field Dependence and Modified Sharrck'S Formula for Perpendicular Recording Media.** *M. Igarashi¹ and Y. Sugita²*. *1. Hitachi, Ltd., Kokubunji, Tokyo, Japan; 2. Tohoku Institute of Technology, Sendai, Miyagi, Japan*
- HW-06. Effect of demagnetizing field distribution in discrete track media recording.** *Y. Kawato¹, A. Nakamura¹, A. Yatagai², Y. Nishida², K. Ito¹, S. Nosaki¹, Y. Hirayama¹ and Y. Hosoe¹*. *1. Central Research Laboratory, Hitachi, Ltd., Kokubunji, Tokyo, Japan; 2. Advanced HDD Technology Laboratory, Hitachi Global Storage Technologies, Fujisawa, Kanagawa, Japan*

- HW-07. The effect of write head current on adjacent track erasure.** *J.S. Dean*¹, *M.A. Bashir*¹, *A. Goncharov*¹, *G. Hrkac*¹, *S. Bance*¹, *T. Schrefl*¹, *A. Cazacu*², *M. Gubbins*², *R.R. Lamberton*² and *D. Suess*³*1. Engineering materials, Univerisity of Sheffield, Sheffield, United Kingdom; 2. Seagate Technology, Derry, United Kingdom; 3. Solid State Physics, Vienna University of Technology, Vienna, Austria*
- HW-08. Study of Overwrite Generated Twisted Transition Written by Trapezoid Shape Single Pole.** *S. Hu*¹, *Z. Yuan*¹ and *B. Liu*¹*1. Data Storage Institute, Singapore, Singapore*
- HW-09. Reverse DC erase noise analysis on exchange coupled composite PMR media.** *S. Hong*¹, *Y. Tang*¹ and *X. Che*¹*1. SISA, San Jose, CA*
- HW-10. Influence of the media magnetization patterns on the domain structure in the reader stack with the asymmetric stabilization.** *E. Haftek*¹, *V. Nandakumar*² and *M. Benakli*³*1. Electrical Integration, Seagate Technology, Bloomington, MN; 2. Servo Format Engineering, Seagate Technology, Shakopee, MN; 3. Recording Sub-systems Organization, Seagate Technology, Bloomington, MN*
- HW-11. A Novel Algorithm for Unknown Periodic Disturbance Cancellation in HDD.** *L. Hui*^{2,1}, *D. Chunling*¹ and *W. Youyi*²*1. MRC, DSI, Singapore, Singapore; 2. NTU, Singapore, Singapore*

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