

Note from the Chair

Dear GMAG Member,

We are looking forward to a very exciting March Meeting in Baltimore from March 18 – 22. Mark Stiles and his team of GMAG focus topic leaders and sorters have assembled a full week of interesting sessions. This is a special year for magnetism at the March Meeting, as the APS Oliver Buckley Prize will be awarded to Luc Berger and John Slonczewski “For predicting spin-transfer torque and opening the field of current-induced control over magnetic nanostructures.” Their prize talks will be presented as part of the GMAG program, which is summarized below.

Among the activities at the March Meeting, I would like to call your attention to the GMAG Business Meeting (Session K15 in the program), which will be held on Tuesday, March 19th, at 5:45 PM in Room 317 of the Baltimore Convention Center. At this meeting we will welcome five new GMAG-sponsored APS Fellows and will also honor the student dissertation and travel award winners.

Finally, please note the various deadlines below for APS Fellowship as well as prizes and awards. In particular, the deadline for Fellowship nominations sponsored by GMAG is June 1.

-Paul Crowell, GMAG Chair

Election of GMAG Officers for 2013-2014

The GMAG election ballot closed on February 9, and we are very pleased to announce that the newly elected GMAG Executive Committee members are:

Vice Chair:

Jonathan Sun, IBM Research

Members at Large:

Yuri Suzuki, Stanford University

William Ratcliff, NIST

Congratulations! We are grateful for their willingness to serve the magnetism community in the coming years. Their terms will start after the March Meeting. We would also like to thank outgoing Executive Committee members, including Past President Andy Kent and members-at-large Olav Hellwig and Shufeng Zhang.

GMAG Sponsored APS Fellows

In 2012, GMAG nominated five of its members for fellowship in the APS. We were very pleased that all five were approved by the APS General Fellowship Committee. The new GMAG APS fellows and their citations are listed below.

Xavier Batlle, Universitat de Barcelona

Citation: For his major, original contributions to the fundamental understanding of the magnetic properties of nanostructured materials and particle-like systems, and of the interplay among finite-size, surface, interface, interaction and proximity effects.

Chris Leighton, University of Minnesota

Citation: For his creative contributions to the fundamental understanding of the physics of magnetic materials including complex oxides, highly spin-polarized ferromagnets, magnetic nanostructures, and interfacial magnetism.

Kai Liu, University of California - Davis

Citation: For contributions to the understanding of magnetoresistance effects, exchange bias, and magnetization reversal in magnetic nanostructures.

Jing Shi, University of California - Riverside

Citation: For his pioneering work in spin transport in organic semiconductors and organic molecules.

Shan Wang, Stanford University

Citation: For seminal contributions to biomagnetics, nanomagnetics, and magnetic recording emphasizing fundamental physics and innovative applications of magnetic nanoparticles, spintronic sensors, and materials

GMAG Fellowship Selection in 2013

Please nominate deserving candidates for APS Fellowship. The deadline for nominations through GMAG is June 1, 2013. The link for submitting nominations is provided at the end of this newsletter.

GMAG Dissertation Awardees 2013

In order to encourage students working in magnetism, every year GMAG sponsors Outstanding Dissertation in Magnetism Awards. These awards will recognize students who have conducted outstanding research leading to their dissertation and will consist of an invited talk in an appropriate session at the APS March Meeting, a \$500 prize to the student, and up to \$250 toward his/her travel expenses to the APS March Meeting. The award winners this year are listed below, along with their invited talk titles and session.

Azure Avery, University of Denver
The Planar Nernst and Seebeck Effects in Ferromagnetic Metal Films with In-Plane Thermal Gradients (Y14.00001)

Aaron Chen, Ohio State University
Dynamic Magnetic Traps for Particle Self-Assembly and Lab-on-Chip Applications (W16.00001)

Michael Quinsat, CEA Leti/Spintec
Experimental Characterization of Non-isochronous Properties of Spin Torque Nano-oscillators (F14.00008)

The deadline for nominations for Dissertation Awards to be made at the 2014 March Meeting is October 18, 2013. See the GMAG website in the upcoming months for instructions.

GMAG Student Travel Awardees 2013

To increase student participation and involvement in activities essential to GMAG and APS as a whole, GMAG sponsors up to ten Student Travel Awards for the March Meeting. The award consists of \$250 in travel assistance to attend the meeting. The student is expected to attend the GMAG business meeting and serve one shift at the “Contact Congress” booth to support the APS outreach for congressional support for scientific research. This year’s award winners are:

Samuel Ducatman, University of Wisconsin - Madison
Yan Ni, Iowa State University
Shi Cao, University of Nebraska - Lincoln
Kelly Reidy, Kent State University
Pavel (Pasha) Lapa, Texas A&M University
Spencer Adams, Amherst College
Steven Spurgeon, Drexel University
Jagannath Devkota, University of South Florida
Noel D’Souza, Virginia Commonwealth University
Steven Disseler, Boston College

March Meeting GMAG Program

GMAG is sponsoring or co-sponsoring approximately 66 contributed sessions covering 8 different focus topics (see the summer GMAG newsletter at www.aps.org/units/gmag/newsletters for details on the focus topics). We are also sponsoring or co-sponsoring 8 symposia, including:

- *Spin Caloritronics* (with DCMP)/Session A1; Monday, March 18th, 8:00 AM, Ballroom I
- *Stabilization and Dynamics of Magnetic Skyrmions* (with DCMP)/Session C10; Monday, March 18th, 2:30 PM, Room 309
- *Spin-Orbit Transfer Torques in Magnetic Bilayers*/Session F10; Tuesday, March 19th, 8:00 AM, Room 309
- *Buckley Prize Session* (with DCMP) *Buckley Prize: John Slonczewski and Luc Berger*/Session J1; Tuesday, March 19th, 2:30 PM, Ballroom 1
- *Smart Magnetic Particles: On-Chip Transport, As-*

sembly and Biomedical Applications (with DCMP)/Session N10, Wednesday, March 20th, 11:15 AM, Room 309

- *Controlling Magnetism Without Magnetic Fields* (with DCMP)/Session R1, Wednesday, March 20th, 2:30 PM, Ballroom 1
- *The Effect of Electric Fields on Magnetism*/Session T47, Thursday, March 21st, 8:00 AM, Ballroom 6
- *Spin Mechanics*/Session Y9, Friday, March 22nd, 8:00 AM, Room 308

Beller Lectureship

GMAG is delighted to announce that Professor Naoto Nagaosa of The University of Tokyo is one of the recipients of the APS Beller Lectureship for 2013. The Beller Lectureship was endowed by Esther Hoffman Beller for the purpose of bringing distinguished physicists from abroad to give invited talks at APS meetings. The title of Professor Nagaosa’s talk is *Dynamics of skyrmions under electric current*, and it will be presented as part of the Invited Session C10: Stabilization and Dynamics of Magnetic Skyrmions, which is co-sponsored by GMAG and DCMP. The talk will be on Monday, March 18 at 4:18 PM in Room 309.

GMAG Business Meeting

The GMAG annual business meeting (Session K15 in the program) will be held on Tuesday, March 19th, at 5:45 PM in Room 317. Please join us for the introduction of new GMAG fellows and student award winners!

Lunch with the Experts (Wednesday, March 30)

We thank the following GMAG members who have volunteered their time for the APS “Lunch with the Experts” on Wednesday, March 20th. Student members will have an opportunity to sign up for these or other tables, and should be on the lookout for an announcement from APS.

Yves Idzerda

Montana State University
Topic: Magnetic Nanoparticles

Chris Hammel

The Ohio State University
Topic: Nanoscale Magnetic Imaging

Paul Crowell

The University of Minnesota
Topic: Semiconductor Spintronics

Olle Heinonen

Argonne National Laboratory
Topic: Academia vs. Industry vs. National Lab - What is a Good Choice for Me?

Thanks to GMAG Focus Topic Organizers:

We also thank all of the focus topic organizers who contributed to the success of the March Meeting Program:

10.1.1 *Magnetic Nanostructures: Materials and Phenomena*

Kristen Buchanan, Colorado State University
Z. Q. Qiu, University of California at Berkeley

10.1.2 *Emergent Properties in Bulk Complex Oxides*

Laurent Chapon, Rutherford Appleton Laboratory
Tsuyoshi Kimura, Osaka University
Jeff Lynn, National Institute of Standards and Technology

10.1.3 *Magnetic Oxide Thin Films and Heterostructures*

Anand Bhattacharya, Argonne National Laboratory
Chris Leighton, University of Minnesota
Yayoi Takamura, University of California at Davis

10.1.4 *Spin Transport & Magnetization Dynamics in Metal Based Systems*

Jordan Katine, HGST
Jonathan Sun, IBM Research
Joo-Von Kim, CNRS

10.1.5 *Spin Dependent Phenomena in Semiconductors*

Jean Heremans, Virginia Tech
Hideo Ohno, Tohoku University
Jairo Sinova, Texas A&M University

10.1.6 *Frustrated Magnetism*

Collin Broholm, Johns Hopkins University,
Andreas Läuchli, Universität Innsbruck
Ashvin Vishwanath, University of California at Berkeley

10.1.7 *Spin Dependent Physics in Carbon Based Materials*

Christoph Boehme, University of Utah
Gernot Guntherodt, RWTH Aachen
Minn-Tsong Lin, National Taiwan University

10.1.8 *Low-Dimensional and Molecular Magnetism*

Stephen Hill, Florida State University
Stefano Carretta, University of Parma
Sebastian Loth, Max-Planck Institute for Solid State Research

Thanks to GMAG sorters:

Thanks to everyone who participated in the abstract sorting meeting at the American Center for Physics on December 2: Collin Broholm, Aubrey Hanbicki, Jean Heremans, Yves Idzerra, Stephen Hill, Chris Leighton, Kai Liu, Jeff Lynn, Hans Malissa, Mark Stiles, and Jonathan Sun.

Nominations for APS Prizes and Awards

APS prize descriptions and nomination deadlines appear at <http://www.aps.org/praw/>. Several prizes of interest to the GMAG membership and the corresponding deadlines are:

APS Fellowship (GMAG Deadline is June 1)

See <http://www.aps.org/units/gmag/fellowship/index.cfm>

Oliver E. Buckley Condensed Matter Prize (July 1)

To recognize and encourage outstanding theoretical or experimental contributions to condensed matter physics.

Lars Onsager Prize (July 1)

To recognize outstanding research in theoretical statistical physics, including the quantum fluids.

James C. McGroddy Prize for New Materials (July 1)

To recognize and encourage outstanding achievement in the science and application of new materials. This shall include the discovery of new classes of materials, the observation of novel phenomena in known materials leading to both fundamentally new applications and scientific insights, and shall also include theoretical and experimental work contributing significantly to the understanding of such phenomena.

Frank Isakson Prize for Optical Effects in Solids (July 1)

To recognize outstanding optical research that leads to breakthroughs in the condensed matter sciences.

Prize for a Faculty Member for Research in an Undergraduate Institution (July 1)

To honor a physicist whose research in an undergraduate setting has achieved wide recognition and contributed significantly to physics and who has contributed substantially to the professional development of undergraduate physics students.

Request for Magnetism Outreach Proposals

For several years GMAG has made funds available to its members to support outreach activities. Funds (up to \$5000 per project, although larger proposals may be considered) are available to cover supplies and expenses associated with activities, which aim to educate non-scientists about magnetism and its applications. Preference will be given to innovative activities that will be documented so that they can be reproduced elsewhere. The outcome of the activities will be disseminated to the GMAG membership through the GMAG Newsletter and to the broader magnetism community through the GMAG website. Interested GMAG members should prepare a 1-2 page summary of the proposed activity (including expected duration and outcome) along with a 1 page CV and a list of anticipated expenses. These should be mailed as a single file in PDF format to the new GMAG Chair, Mark Stiles (Mark.Stiles@nist.gov). The GMAG Executive Board will review proposals on an ongoing basis.

Ask your Colleagues to Join GMAG

For only \$8 additional dues APS members can become GMAG Members with these benefits (students are free for one year)

- Quarterly GMAG newsletter.
- Eligibility for GMAG graduate student awards and sponsorship.

- Potential to increase the number of APS Fellows sponsored by GMAG.
- Potential to increase the number of invited talks on Magnetism at the March Meeting.
- Opportunity to help shape the voice and future of the Magnetism community (your community) in the US.

See the GMAG website: <http://www.aps.org/units/gmag>. TO JOIN: Go to the APS page for “Membership Units” (<http://www.aps.org/membership/units/join-unit.cfm>) and follow instructions for adding a unit to your membership. Or call the APS at 301-209-3280 and tell a Membership Representative that you want to join topical group GMAG.

Important Deadlines

Thanks for being involved with GMAG and please do not hesitate to get actively involved in the many activities described below.

Date	Reason	Contact
June 1	GMAG Fellowship Nominations http://www.aps.org/units/gmag/fellowship/index.cfm	Jonathan Sun jonsun@us.ibm.com
Early September	Invited talk nominations for March Meeting 2014	Yves Idzerda idzerda@physics.montana.edu
October 18	GMAG Dissertation Award Nominations	Mark Stiles Mark.Stiles@nist.gov
December	March Meeting Student Travel Grants	Jonathan Sun jonsun@us.ibm.com
Ongoing	Outreach Proposals	Mark Stiles Mark.Stiles@nist.gov

The GMAG Executive Committee:

Chair: Paul Crowell (crowell@physics.umn.edu)
Chair-Elect: Mark Stiles (mark.stiles@nist.gov)
Vice-Chair: Yves Idzerda (idzerda@physics.montana.edu)
Past Chair: Andrew Kent (andy.kent@nyu.edu)
Secretary-Treasurer: Shireen Adenwalla (sadenwalla1@unlnotes.unl.edu)

Members-at-Large:

Olav Hellwig, HGST, a Western Digital Company
 Shufeng Zhang, Univ of Arizona
 Kristen Buchanan, Colorado State Univ.
 Olle Heinonen, Argonne Natl Lab
 P. Chris Hammel, Ohio State University
 Yumi Ijiri, Oberlin College

Upcoming Conferences

APS March Meeting 2013
 March 18-22, 2013
 Baltimore, MD

58th Conference on Magnetism and Magnetic Materials
 November 4-8, 2013
 Denver, CO

APS March Meeting 2014
 March 3-7, 2014
 Denver, CO

2014 Intermag Conference
 May 4-8, 2014
 Dresden, Germany

59th Conference on Magnetism and Magnetic Materials
 November 3-7, 2014
 Honolulu, HI

Send inquiries about APS endorsement of magnetism-related meetings to Mark Stiles (mark.stiles@nist.gov)