

Note From the Chair

Greetings from GMAG! The March Meeting is upon us and I hope that many of you will be attending the meeting. Paul Crowell is the GMAG Program Chair and has been working with Focus Topic and Symposia organizers, along with many volunteers, to put together an exciting program. Thank you Paul! The meeting will be bigger (8000+ abstracts) and, I expect, better than ever.



We have the pleasure of recognizing six new GMAG APS Fellows, a Beller Lecturership Award, two GMAG Dissertation Award winners and several GMAG Travel Award winners. Their awards will be presented next week at the APS Business Meeting (Tuesday, February 28, 2012 at 5:45 PM, Boston Convention Center, room 208). This should serve as a reminder to nominate deserving candidates for GMAG awards. This Newsletter contains:

- Election Results*
- GMAG Sponsored APS Fellows*
- Dissertation Award Awardees*
- Student Travel Awardees*
- March Meeting GMAG Program Highlights*
- Information on prizes and awards and important upcoming deadlines*

We always welcome suggestions for new activities and programs you would like to see GMAG initiate. Please feel free to contact me or any member of the GMAG executive committee with your ideas. I encourage you to actively participate in the March Meeting and in GMAG's activities.

—Andrew Kent, GMAG Chair

Election of GMAG Officers for 2011-2012

The GMAG online ballot closed on February 3 and the election results are now in. We are very pleased to announce that the newly elected GMAG officers are:

Vice Chair:

Yves Idzerda, Montana State University

Members-at-Large:

Yumi Ijiri, Oberlin College

Chris Hammel, Ohio State University

Congratulations! We greatly appreciate your willingness to serve GMAG in the coming years. We also thank the outgoing Officers and Executive Committee members for their years of service: Berry Jonker, Past Chair; Peter Fischer, member-at-large; and Evgeny Tsymbal, member-at-large.

GMAG Sponsored APS Fellows

In 2011, GMAG nominated six of its members for fellowship in the APS. We were very pleased that all six were approved by the APS General Fellowship Committee. We thank GMAG Vice Chairman, Mark Stiles, for chairing the nomination committee. The new GMAG APS fellows and their citations are listed below.

Arne Brataas, Norwegian University of Science & Technology

For contributions to the theory of spin transport and dynamics in magnetic nanostructures and mesoscopic systems.

Axel Hoffmann, Argonne National Laboratory

For contributions to the understanding of magnetic and superconducting hybrid systems, novel insights into exchange bias systems, and the investigation of pure spin currents.

Jordan Katine, Hitachi Research Center, San Jose

For contributions to the fabrication, characterization, and understanding of nanoscale magnetic devices, especially magnetic recording head sensors and spin transfer devices.

Daniel Reich, Johns Hopkins University

For opening new directions in quantum magnetism, nanomagnetism and biomagnetics through incisive experiments and analysis.

Jian Shen, Fudan University

For contributions to the understanding of dimensionality effects on magnetism and emergent phenomena in spatially confined complex magnetic oxides.

John Xiao, University of Delaware

For the discovery of giant magnetoresistance in granular solids and the exploration of spin polarized transport and spin dynamics in magnetic tunneling junctions.

GMAG Dissertation Awardees 2012

In order to encourage students working in magnetism, every year GMAG sponsors Outstanding Dissertation in Magnetism Awards. These awards recognize students who have conducted outstanding research leading to their dissertation and 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 sessions.

Wei Han, UC Riverside

Spin Injection and Relaxation in Graphene (D14.00008)

Srikant Srinivasan, Purdue University

All Spin Logic -- Multimagnet Networks interacting via Spin currents (H15.00008)

GMAG Student Travel Awardees 2012

To increase student participation and involvement in activities essential to GMAG and APS as a whole, GMAG sponsors four Student Travel Awards for the March Meeting. The award consists of \$250 in travel assistance to attend the meeting. The student will have lunch with a GMAG Executive Committee member, and 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. The award winners this year, along with their talk titles and sessions, are:

Jodi Iwata-Harms, University of California, Berkeley

Towards Room Temperature Spin Filtering in Oxide Tunnel Junctions (T9.00008)

Shawn Pollard, SUNY Stony Brook

Direct Imaging of Non-Adiabatic Spin Torque Effects on Vortex Core Orbits (A13.00014)

Azure Avery, University of Denver

Spin Seebeck Effect Measurements on Ferromagnetic Thin Films Using Micromachined Thermal Isolation Platforms (A15.00002)

Jennifer Misuraca, Florida State University

Non-local spin transport and accumulation measurements in Si:AlGaAs with tunable carrier density (H14.00002)

March Meeting GMAG Program

GMAG is sponsoring or co-sponsoring approximately 70 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 7 symposia, including:

Harnessing local atomic structure to control magnetic interactions in complex oxides

Session D2; Monday, February 26th, 2:30 PM, Room 204AB

Manipulating spin waves

Session Q2; Wednesday, February 29th, 11:15 AM, Room 204AB

Spin Caloritronics

Session V2; Thursday, March 1st, 8:00 AM, Room 204AB

Adler Lectureship, McGroddy Prize, and Pake Prize Symposium: Spin Transport and Superconductivity (with DMP and FIAP)

Session H27; Tuesday, February 28th, 8:00 AM, Room 258AB

David Adler Lectureship Award: Stuart Parkin

James C. McGroddy Prize for New Materials: Robert Cava

George E. Pake Prize: Thirumalai Venkatesan

Magnetic Materials and Magnetism Research for Energy Applications (with FIAP)

Session Y2, Friday, March 2nd, 8:00 AM, Room 204AB

Current-driven spin textures (with DCMP)

Session H19, Tuesday, February 28th, 8:00 AM, Room 253AB

Spin liquids with disorder (with DCMP)

Session L19, Tuesday, February 28th, 2:30 PM, Room 253AB

Beller Lectureship

GMAG is delighted to announce that Professor Roberta Sessoli of the University of Florence is one of the recipients of the APS Beller Lectureship for 2012. The Beller Lectureship was endowed by Esther Hoffman Beller for the purpose of bringing distinguished physicists from abroad as invited speakers at APS meetings.

Professor Sessoli will speak in the GMAG/DMP Focus Session on Low Dimensional and Molecular Magnetism in Session H13 on Tuesday, February 28th. The title of her talk is Single Molecular Magnets on Conductive Surfaces.

GMAG Business Meeting

The GMAG annual business meeting (Session M8 in the program) will be held on Tuesday, February 28th, at 5:45 PM in Room 208. Please join us for the introduction of new GMAG fellows and student award winners! We will also report on the meeting and discuss revision of the GMAG Bylaws that were emailed to GMAG members at the beginning of February.

Lunch with the Experts (Tuesday, February 28)

We thank the following GMAG members who have volunteered their time for the APS "Lunch with the Experts" on Tuesday, February 28th. 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.

Kristen Buchanan

Colorado State University

Topic: Dynamics in Patterned Magnetic Structures

Peter Fischer Lawrence

Berkeley National Laboratory

Topic: Magnetic imaging with X-rays

Olle Heinonen

Argonne National Laboratory

Topic: Academia vs. industry vs. national lab - what is a good choice for me?

Giovanni Vignale

University of Missouri

Topic: Semiconductor Spintronics

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

Axel Enders, University of Nebraska

Sam Jiang, Argonne National Lab

Hao Zeng, University of Buffalo

10.1.2 Emergent Properties in Bulk Complex Oxides

Despina Louca, University of Virginia

Tanusri Saha-Dasgupta, S.N. Bose National Centre,
Calcutta

Patrick Woodward, Ohio State University

10.1.3 Magnetic Oxide Thin Films and Heterostructures

Alex de Lozanne, University of Texas

Susanne Stemmer, UCSB

Suzanne te Velthuis, Argonne National Lab

10.1.4 Spin Transport & Magnetization Dynamics in Metal Based Systems

Dafine Ravelosona, IEF, Orsay, France

Jonathan Sun, IBM Research

Shufeng Zhang, University of Arizona

10.1.5 Spin Dependent Phenomena in Semiconductors

Jean Heremans, Virginia Tech

Paul Koenraad, Technical University of Eindhoven

Giovanni Vignale, University of Missouri

10.1.6 Frustrated Magnetism

Bruce Gaulin, McMaster

Art Ramirez, UC Santa Cruz

Oleg Tchernyshyov, Johns Hopkins

10.1.7 Spin Dependent Physics in Carbon Based Materials

Roland Kawakami, UC Riverside

Bert Koopmans, Technical University of Eindhoven

Jagadeesh Moodera, MIT

10.1.8 Low-Dimensional and Molecular Magnetism

Enrique del Barco, University of Central Florida

Jürgen Schnack, Bielefeld University

Vivien Zapf, Los Alamos National Lab

Thanks to GMAG sorters

Thanks to everyone who participated in the abstract sorting meeting at the American Center for Physics on December 2: Tanusri Dasgupta, Enrique del Barco, Jason Gardner, Aubrey Hanbicki, Jean Heremans, Despina Louca, Dafine Ravelosona, Suzanne Stemmer, Mark Stiles, Jonathan Sun, Oleg Tchernyshyov, Giovanni Vignale, Yuan Wan, Vivien Zapf, and Hao Zeng.

Nominations for Prizes/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 Fellows (June 1)

GMAG nominates 3–6 people (0.5% of our membership) for APS Fellowship each year. We encourage members to nominate outstanding candidates. A list of present APS fellow is available at: www.aps.org/programs/honors/fellowships

Oliver E. Buckley Condensed Matter Prize (July 1)

To recognize and encourage outstanding theoretical or experimental contributions to condensed matter physics. The prize consists of \$10,000 and a certificate citing the contributions made by the recipient or recipients.

Lars Onsager Prize (July 1)

To recognize outstanding research in theoretical statistical physics including the quantum fluids. The prize consists of \$10,000 as well as a certificate citing the contribution made by the recipient.

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. The prize consists of \$10,000 plus a certificate citing the contribution of the recipient and an allowance for travel to the meeting of the Society at which the award is presented.

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. The prize consists of a \$5,000 stipend to the prize recipient and a separate \$5,000 unrestricted grant for the research to the prize recipient's institution. An additional allowance will be provided for travel expenses to the APS meeting at which the prize ceremony will take place. The prize is presented annually.

Request for Magnetism Outreach Proposals

For several years GMAG has made funds available to its members to support outreach activities. Limited funds (up to \$2500 per project) 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 (see also the following article) 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 GMAG Chair. The GMAG Executive Board will review proposals on an ongoing basis.

Upcoming Conferences

APS March Meeting 2012
February 27-March 2, 2012

APS March Meeting 2013
March 18-22, 2013

An up-to-date list of magnetism related conferences can be found on the GMAG website: www.aps.org/units/gmag/meetings/index.cfm

Important Deadlines

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

June 1, 2012

APS Fellowship Nominations

aps.org/programs/honors/fellowships

July 1, 2012

Buckley Prize

aps.org/praw

July 1, 2012

McGroddy Prize

aps.org/praw

July 1, 2012

Undergrad Inst. Faculty Research

aps.org/praw

ongoing

Outreach Proposals

Andrew Kent, andy.kent@nyu.edu

GMAG Executive Committee

Chair: Andrew Kent *andy.kent@nyu.edu*

Chair-Elect: Paul Crowell *crowell@physics.umn.edu*

Vice-Chair: Mark Stiles *mark.stiles@nist.gov*

Past-Chair: Berend Jonker *jonker@nrl.navy.mil*

Secy-Treas: Shireen Adenwalla *sadenwalla1@unlnotes.unl.edu*

Members-at-Large:

Peter Fischer, Lawrence Berkeley Natl Lab

Evgeny Tsymbal, Univ of Nebraska - Lincoln

Olav Hellwig, Hitachi Global Storage Tech

Shufeng Zhang, Univ of Arizona

Kristen Buchanan, Colorado State Univ.

Olle Heinonen, Argonne Natl Lab

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: www.aps.org/units/gmag. TO JOIN: Go to the APS page for "Membership Units" (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.