

GMAG NEWSLETTER – February 2015

<http://units.aps.org/units/gmag/>

Note from the Chair

All of us in the GMAG Executive Committee are looking forward to a very exciting March Meeting in San Antonio (March 2 – 6). Jonathan Sun and his team of GMAG focus topic leaders and sorters have assembled a full week of interesting sessions. Among the activities at the March Meeting, I would like to call your attention to the GMAG Business Meeting on Tuesday March 3rd, 2015, (5:45pm-6:45pm Session K28, Room 205 at the San Antonio 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.

This year the GMAG Executive Committee selected two outreach proposals for support in the coming year:

Dr. Axel Enders (Univ. of Nebraska) - “A Student Video Blog (vlog): Nanoscience and Magnetism” – Approved outreach proposal amount \$5,000.

Dr. Ravi Hadimani (Iowa State Univ.) - “Stimulation of Human Brain Using Magnetic Fields” – Approved outreach proposal amount \$4,900.

We hope that GMAG continues to receive outstanding outreach proposals in the future. If you are interested in submitting an outreach proposal, please see the instructions below.

Finally, please note the various deadlines below for APS Fellowship nominations as well as prizes and awards. Please consider nominating an individual for one of these distinct honor. In particular, over the next month consider nominating someone for the APS Fellowship and remember that the **deadline for Fellowship nominations sponsored by GMAG is June 1.**

-Yves Idzerda, GMAG Chair

March Meeting 2015 GMAG Program

GMAG is sponsoring or co-sponsoring 75 scientific sessions, including 7 symposia and 63 Focus Topic Sessions.

The 7 GMAG sponsored/cosponsored symposia are:

- D53. Skyrmions in Thin Magnetic Films
- F53. Physics at Magnetic Interfaces, Both Engineered and Unexpected (with DCMP)
- G53. Microscopic Understanding of Dynamics of Localized Spin Wave Modes (with DCMP)
- J19. Solutions to the Challenge of Post-CMOS Technology (with FIAP)
- M53. Iridium-Based Kitaev Materials
- S46. Hybrid Spin-Strained Systems in Diamond (with GQI)
- Y20. Spin Accumulation: Experiment and Theory Behind the Controversy

Election of GMAG Officers for 2014-2015

This year the GMAG election will take place after the March Meeting and GMAG is still soliciting nominations for Vice-chair and Members-at-Large for the Executive Committee. If you have suggestions for nominees, please contact the chair of the Nominating, John Cumings, [cumings@umd.edu](mailto:cummings@umd.edu). This is also when we thank outgoing Executive Committee members, including Past Chair Mark Stiles and Members-at-Large Chris Hammel and Yumi Ijiri.

GMAG Sponsored APS Fellows

In 2014, from nominations from the magnetism community, GMAG identified five APS members for nomination to be Fellows of 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.

Peter Fischer, *Lawrence Berkeley National Laboratory*

For contributions to imaging spin structures and their dynamics with high resolution magnetic soft x-ray microscopy.

Olle Heinonen, *Argonne National Laboratory*

For contributions to understand the behavior of nanomagnets, including magnetization dynamics, and applications of nanomagnets to magnetic recording.

Stephen Hill, *National High Magnetic Field Lab*

For the development of high-frequency (GHz to THz) electron magnetic resonance techniques that have advanced fundamental understanding of quantum phenomena in molecular nanomagnets and correlated electron systems.

Stephen Russek, *National Institute of Standards and Technology*

Pioneering efforts in high frequency spintronics devices, novel magnetic resonance measurements, and quantitative magnetic resonance imaging.

Hariharan Srikanth, *University of South Florida*

For important contributions to the experimental studies of magnetization dynamics and novel physics in complex nano-composites.

GMAG Fellowship Selection in 2015

Please nominate deserving candidates for APS Fellowship. The deadline for nominations through GMAG is **June 1, 2015**. The link for submitting nominations is provided at the end of this newsletter.

GMAG Dissertation Awardees 2015

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 winner this year is listed below, along with the invited talk title and session.

Michelle E. Jamer, Northeastern University

GMAG Dissertation Award Talk: Zero-moment Half-Metallic Ferrimagnetic Semiconductors (D31.00001)

The deadline for nominations for Dissertation Awards to be made at the 2016 March Meeting is **October 18, 2015**. See the GMAG website in the upcoming months for instructions.

GMAG Student Travel Awardees 2015

To increase student participation and involvement in activities essential to GMAG and APS as a whole, GMAG sponsors 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:

Hamid Almasi, University of Arizona

James H. Atkinson, University of Central Florida

Jason M. Bartell, Cornell University

Ayan Kumar Biswas, Virginia Commonwealth University

Nina C. Bordeaux, Northeastern University

Brian W. Casas, University of South Florida

Bhaskar Das, University of Nebraska-Lincoln

Yue Jia, University of California, Davis

YongXi Ou, Cornell University

Daniel Reeves, Dartmouth College

GMAG Business Meeting

The GMAG annual business meeting (Session K28 in the program) will be held on Tuesday, March 3rd, at 5:45 PM in Room 205 at the San Antonio Convention Center. Please join us for the introduction of new GMAG fellows and student award winners!

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*

Jayasimha Atulasimha, Virginia Commonwealth Univ.

Kai He, Brookhaven Natl. Lab.

Dan Ralph, Cornell Univ.

10.1.2 *Emergent Properties in Bulk Complex Oxides*

Robert Klie, Univ. Illinois at Chicago.

Dennis Meier, ETH Zurich, Switzerland.

James Rondinelli, Drexel University.

10.1.3 *Magnetic Oxide Thin Films and Heterostructures*

J. D. Burton, University of Nebraska – Lincoln.

Steve May, Drexel University.

Jacobo Santamaria, Universidad Complutense, Madrid, Spain

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

Olof Karis, Uppsala University, Sweden

Hans Nembach, NIST Boulder.

Taku Suzuki, National Institute for Materials Science (NIMS), Japan

10.1.5 *Spin Dependent Phenomena in Semiconductors*

Hanan Dery, Univ. Rochester.

Jason Petta, Princeton Univ.

Georg J. Schmit, Martin-Luther-Univ, Halle-Wittenberg, Germany.

10.1.6 *Frustrated Magnetism*

Leon Balents, UC Santa Barbara.

Oleg Tchernyshyov, Johns Hopkins.

Chris Wiebe, Univ. Winnipeg, Canada

10.1.7 *Spin Dependent Physics in Carbon Based Materials*

Mairbek Chshiev, UJF/SPINTEC/CEA /CNRS Grenoble, France.

Berry Jonker, Naval Research Lab.

Barbaros Özyilmaz, Natl. Univ. of Singapore, Singapore.

10.1.8 *Low-Dimensional and Molecular Magnetism*

Michael Baker, CCNY.CUNY.

Thierry Giamarchi, Univ. Geneva, Switzerland

Chris Landee, Clark Univ.

Thanks to GMAG sorters:

Thanks to Ichiro Applebaum, Jayasimha Atulasimha, J.D. Burton, Enrique Cobas, Hanan Dery, Adam Friedman, Wesley Fuhrman, Aubrey Hanbicki, Robert Klie, Christopher Landee, Pengke Li, Steven May, Hans Nembach, Mark Stiles, Jonathan Sun, Oleg Tchernyshyov, and Suzanne te Velthuis for helping at the abstract sorting meeting at the American Center for Physics on December 4, 2015.

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>. If the nominee is a member of the GMAG Executive Committee, please make the nomination to another Unit of the APS or defer the nomination until his or her term has finished.

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, 2015 – given every other year)

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

The topical group on Magnetism (GMAG) invites proposals directed towards educating nonscientists and the general public about the role of magnetism. Funds (up to \$5000 per project, although larger proposals may be considered) are available to cover supplies and expenses associated with activities that aim to educate non-scientists about magnetism and its applications. These grants are to foster new activities and not meant to support ongoing programs. Examples of outreach activities include (but are NOT limited to) the development of magnetism kits that may be used at elementary schools and / or at museums and other public places, the development of a high school lab on magnetism, or the production of a video on magnetism that would appeal to the general public. Preference will be given to innovative activities that will be documented so that they can be reproduced elsewhere. GMAG will disseminate the outcome of the activities to the GMAG membership through the GMAG Newsletter and to the broader magnetism community through the GMAG website; the proposers are encouraged to consider alternate avenues for dissemination, this should include presentation of the results at an APS meeting.

The GMAG Executive Board will review proposals on an ongoing basis. Although partnership with a GMAG member is encouraged, all applications for projects related to outreach in magnetism will be considered. The GMAG executive board can assist in identifying potential partners for outreach proposals submitted by non-members.

Application Process

To apply for these funds, please submit the following information as one PDF file to the GMAG Chair (gmagchair@aps.org):

- Cover sheet clearly stating the name, address, phone number, and email of the main contact person for your application. Please include the name of your program, and, if affiliated with an institution, the department and institution you represent.
- One page CV for main contact person.
- Narrative description (no more than two pages) of your program. Please include a description of the proposed activity or activities, the anticipated impact and the process of documentation to enable reproduction of the activity, details of other financial support (if any), and description of personnel working on the program (instructional lab technicians, students, professors, etc).
- Rough budget detailing your plans for utilizing the funds.
- Letter of support from your department chair or similar administrative official (this can be sent separately, as long as it clearly identifies the main contact person and institution).
- Tax ID number or Employee ID number if part of an organization, Social Security Number if an individual. For Universities, the organizational tax ID number can be obtained from the grants and contracts department.

Important Information

These funds cannot be used for salaries, stipends, etc. of the main participants, but can be used to hire a student, an intern, or professional services if that is essential for the project. An APS statement on indirect costs is available at

<http://www.aps.org/programs/outreach/upload/rfp-indirectcosts15.pdf>.

This past winter GMAG has funded the proposal

Title: Magnetism Outreach: A Transportable Magnetic Induction Levitating Apparatus

Roxanne Hughes, Ph.D., National High Magnetic Field Laboratory

Brief Description: To build a magnetic induction levitating coil that could be easily transported to various outreach efforts to demonstrate the concepts of magnetism to local populations.

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

Date	Reason	Contact
June 1	GMAG Fellowship Nominations http://www.aps.org/units/gmag/fellowship/index.cfm	APS website
Early September	Invited talk nominations for March Meeting 2015	Suzanne te Velthuis tevelthuis@anl.gov
October 18	GMAG Dissertation Award Nominations	Jonathan Sun jonsun@us.ibm.com
December 4	March Meeting Student Travel Grants	GMAG Vice Chair
ongoing	Outreach Proposals	Jonathan Sun jonsun@us.ibm.com

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

The GMAG Executive Committee:

Chair: Yves Idzerda (idzerda@physics.montana.edu)
Chair-Elect: Jonathan Sun (jonsun@us.ibm.com)
Vice-Chair: Suzanne te Velthuis (tevelthuis@anl.gov)
Past Chair: Mark Stiles (mark.stiles@nist.gov)
Secretary-Treasurer: Tiffany Santos (Tiffany.Santos@hgst.com)
Members-at-Large: Yuri Suzuki, Stanford University
William Ratcliff, Nat. Inst. Std. and Tech.
P. Chris Hammel, Ohio State University
Yumi Ijiri, Oberlin College
John Cumings, University of Maryland
Jonathan Friedman, Amherst College

Upcoming Conferences

APS March Meeting 2015
March 2-6, 2015
San Antonio, TX

2015 Intermag Conference
May 11–15, 2015,
Beijing, China

13th Joint MMM-Intermag Conference
January 11-15, 2016,
San Diego, California

APS March Meeting 2016
March 14-18, 2016
Baltimore, MD

61st Conference on Magnetism and Magnetic Materials
October 31-November 4, 2016,
New Orleans, Louisiana

APS March Meeting 2017
March 13-17, 2017
New Orleans, LA

62nd Conference on Magnetism and Magnetic Materials
November 6-10, 2017,
Pittsburgh, Pennsylvania

APS March Meeting 2018
March 5-9, 2018
Los Angeles, CA

The 21st International Conference on Magnetism (ICM 2018)
July 16–20, 2018,
San Francisco, California