No. 45

# GMAG NEWSLETTER

August 2016

Topical Group on Magnetism and its Applications

units.aps.org/units/gmag/

## Note from the Chair

*Dear GMAG Member:*

*I am pleased to bring to your attention that the 2017 March Meeting will be held March 13-17 in New Orleans, Louisiana, and planning for the meeting has commenced. We encourage your active involvement and look forward to your valuable input during the coming months. Your involvement will enable an exciting magnetism program and help ensure that magnetism and GMAG are a vibrant part of the upcoming APS March Meeting. This GMAG Summer Newsletter contains important program and timeline information including:*

- *Planning for the 2017 March Meeting, including symposium and invited-speaker nominations.* **Please note that nominations for invited speakers are due on September 2, 2016.**
- *GMAG Officers nomination for the 2016-17 election*
- *The student dissertation award nomination*
- *March Meeting student travel award application*
- *Proposals for GMAG-funding of outreach activities*

*Thank you for your valuable time and contribution.*

*~ Suzanne te Velthuis, GMAG Chair*
*email: tevelthuis@anl.gov*

## GMAG Bylaws

In May 2016, the GMAG membership voted to approve proposed revisions to the GMAG Bylaws. We thank all of you who participated in the voting.

The APS implemented a new governance structure in 2015, which led to a revision to the bylaws of the units. With the guidance of the APS Governance Committee, the GMAG Bylaws were revised to be in accordance with the new APS governing documents and policies. These revisions do not make any significant change to our unit practices.

You can find the revised bylaws on the GMAG website.

## March Meeting Program

Chair-Elect, Chris Leighton (leighton@umn.edu) is the GMAG Program Chair for the 2017 March Meeting in New Orleans, Louisiana. He and his team are coordinating the organization of both GMAG sponsored or co-sponsored Focus Topics, and the GMAG invited symposia. Invited speaker nominations for focus topics and symposia are welcomed before the deadline of September 2, 2016. The deadline for submission of meeting abstracts is November 11, 2016.

Please note that APS regulations do not allow speakers to give invited talks at consecutive March meetings; there is a searchable index of invited talks at the 2016 meeting available at: http://meetings.aps.org/Meeting/MAR16/APS_Invited.

## Focus Topics-Nominations for invited speakers

For the 2017 meeting, GMAG is co-sponsoring eight focus topics. Each focus topic consists of multiple sessions of contributed talks based on a common theme. Each session can also include one invited talk. Suggestions for invited speakers are welcome and should be sent by email to one of the organizers of the focus topic (see below), or submitted through the APS website before September 2nd, 2016. The APS website for nominations is:

http://meetings.aps.org/aps_invited/Invited/LoginForm.cfm?MT=MAR17&UNIT=GMAG

Contributed talks relating to a focus topic should be submitted under the focus topic sorting category. The GMAG focus topics for 2017 are listed below (the co-sponsoring units are shown in parentheses). Detailed descriptions appear on the following pages.

**10.1.1 Magnetic Nanostructures: Materials and Phenomena (GMAG/DMP)**

**10.1.2 Emergent Properties of Bulk Complex Oxides (GMAG/DMP/DCOMP)**

**10.1.3 Magnetic Oxide Thin Films and Heterostructures (GMAG/DMP/DCOMP)**

**10.1.4 Spin Transport and Magnetization Dynamics in Metals-Based Systems (GMAG/DMP/FIAP)**

**10.1.5 Spin-Dependent Phenomena in Semiconductors (GMAG/DMP/FIAP/DCOMP)**

**10.1.6 Frustrated Magnetism (GMAG/DMP)**

**10.1.7 Spin-Orbit Mediated Chiral Spin Textures (GMAG/DMP)**

**10.1.8 Low-Dimensional and Molecular Magnetism (GMAG/DMP)**

Note that Focus Topic organizers need to avoid conflicts of interest in selecting invited speakers, and that the selections will be monitored by the GMAG Program Chair.

## Nominations for GMAG Symposia

GMAG sponsored five and co-sponsored eight invited symposia at the 2016 March Meeting. GMAG members are encouraged to recommend topics for these symposia, each of which includes up to five speakers. Please upload your symposium nomination at the APS nominations website, or send your nominations to the GMAG Program Chair, Chris Leighton before September 2nd, 2016. A nomination should consist of a single file and should include: (1) Nominator's name and contact information; (2) Suggested title of the symposium; (3) A paragraph describing the theme of the symposium and its justification; (4) A list of 5 speakers with the following for each: (a) full contact information, (b) a tentative title, (c) a brief description and justification, including references where available; (5) names and contacts of one or two potential back-up speakers.

Submission of a complete nomination package is essential for the review process. This process is quite competitive: every year there are 10-15 nominations for the five GMAG symposia. Compelling justification and breadth-of-interest statements are important for a successful proposal.

## Nominations for GMAG Officers and Members of the Executive Committee

GMAG requests nominations for Vice-Chair (who succeeds sequentially to Chair-Elect, Chair, and Past Chair) and for two new members-at-large of the Executive Committee. Nominations for these positions should be sent to Ilya Krivorotov (ilya.krivorotov@uci.edu) chair of the GMAG Nominating Committee, before September 30, 2016.

## Nomination for GMAG Student Dissertation Awards

In order to encourage students working in magnetism, every year GMAG sponsors Outstanding Dissertation in Magnetism Awards. GMAG will present up to three dissertation awards at the next APS March Meeting. 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 March Meeting. The student must be in the final year before graduating with a Ph.D, and both the student and the advisor must be current members of GMAG. Nominations will consist of: a nominating letter, an extended abstract of the research (maximum of 3 pages, including figures and references), the student's CV and publication list, and contact information for the student. These nomination documents must be submitted by the student's advisor or another senior researcher who knows the student's work well. The nominating letter must address the following issues:

- Quality and independence of the student's work
- Student's speaking ability
- Year the student began graduate school
- Student's expected completion date (must be afte September 1, 2016, but before September 1, 2017 to be eligible for the 2017 APS March Meeting award).
- Assessment of the student's future potential as a research scientist

Nominations should be sent by email as a single PDF file to Suzanne te Velthuis (tevelthuis@anl.gov) by October 1, 2016. Evaluation of the nominations will be conducted by the GMAG Executive Committee. Conflict of interest situations will be handled in accordance with APS guidelines.

***Congratulations to the 2016 recipient of the GMAG Dissertation Award -***

**Joseph Sklenar, Northwestern University/Argonne National Laboratory**

*Spin-torque ferromagnetic resonance in arbitrarily magnetized thin films*

## Nomination for GMAG Student Travel Awards

To increase student participation and involvement in activities essential to GMAG and the APS as a whole, GMAG will sponsor ten Student Travel Awards for the March Meeting. The awards will consist of $250 in travel assistance to attend the meeting. The selected students will have lunch with a GMAG Executive Committee member, and are expected to attend the GMAG business meeting. We also ask selected students to help out at the GMAG membership table and/or serve one shift at the "Contact Congress" booth to support APS outreach for congressional support for scientific research. To be eligible, students must present at the March Meeting, and should submit an application which can be downloaded from the GMAG website (http://www.aps.org/units/gmag/upload/student-travel.docx) after September 1, by email to Stephen Hill (shill@magnet.fsu.edu) by December 1, 2016. Evaluation of the applications will be conducted by the GMAG Executive Committee. Conflict of interest situations will be handled in accordance with APS guidelines.

## GMAG Focus Topic Descriptions and Organizers:

Focus Topics and Focus Sessions bring new areas of interest and new people to the March Meeting and are an opportunity to explore recent developments in a sub-area of the magnetism sorting categories. The GMAG Focus Topics are co-sponsored with the Division of Materials Physics (DMP), Division of Computational Physics (DCOMP), and the Forum on Industrial and Applied Physics (FIAP). Note there is some overlap within the focus topic areas as well as with other DMP and GMAG sessions. The organizers of related focus sessions and general sorting categories will share information in order to appropriately sort each submitted abstract and thus optimize the meeting program.

### 10.1.1 Magnetic Nanostructures: Materials and phenomena (GMAG/DMP)

**DESCRIPTION:** Reduced dimensionality and confinement often lead to magnetic structures and spin behavior markedly different from that of bulk materials. This Focus Topic explores the advances in magnetic nanostructures, the novel properties that arise in magnetic materials at the nanoscale, and the advanced characterization tools required for understanding and designing these properties. Magnetic nanostructures of interest include thin films, multilayers, superlattices, nanoparticles, nanowires, nanorings, 3D nanostructures, nanocomposite materials, hybrid nanostructures, magnetic point contacts, and self-assembled, as well as patterned, magnetic arrays. Sessions will include talks on the methods used to synthesize such nanostructures, the variety of materials used, and the latest original theoretical, experimental, and technological advances. Synthesis and characterization techniques that demonstrate nano- or atomic-scale control of properties will be featured, such as: novel deposition and lithography methods (including focused electron/ion beam induced deposition); Lorentz electron microscopy; advances in synchrotron and neutron scattering techniques; novel imaging techniques (including holographic imaging of domain states); and NV center-based imaging. Phenomena and properties of interest include magnetization dynamics and reversal, magnonics, magnetic interactions, magnetic quantum confinement, spin tunneling and spin crossover, proximity and structural disorder effects, strain effects, microwave resonance and microwave assisted reversal, magnetic anisotropy, and thermal and quantum fluctuations.

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### 10.1.2 Emergent Properties of Bulk Complex Oxides (GMAG/DMP/DCOMP)

**DESCRIPTION:** The emergence of novel states of matter, arising from the intricate coupling of electronic and lattice degrees of freedom, is a unique feature in strongly correlated electron systems. This Focus Topic explores the nature of such ordered states observed in bulk compounds of transition metal oxides; it will provide a forum to discuss recent developments in theory, simulation, synthesis, and characterization, with the aim of covering basic aspects and identifying future key directions in bulk oxides. Of special interest are the ways in which the spin, lattice, charge, and orbital degrees of freedom cooperate, compete, and/or reconstruct in complex transition metal oxides to produce novel phenomena as well as novel magnetic states, often with exotic topological properties that can arise from the interplay of spin-orbit coupling and Coulomb interactions. Associated with this complexity is a tendency for new forms of order, such as the formation of stripes, ferroic states, spin-orbit entangled states or phase separation. An additional focus of this session is on how competing interactions result in spatial correlations over multiple length scales, giving rise to enhanced electronic and magnetic susceptibilities and responses to external stimuli.

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### 10.1.3 Magnetic Oxide Thin Films and Heterostructures (GMAG/DMP/DCOMP)

**DESCRIPTION:** The intricate interactions between the electronic and structural degrees of freedom make the magnetism in complex oxides an intriguing field of research. Additional phenomena can arise in thin films and heterostructures of magnetic oxides due to the design flexibility through factors such as strain, lattice symmetry, orientation, size, and interfaces with other oxides. Thus, a wide variety of interfacial phenomena such as charge transfer, orbital reconstruction, proximity effects, and modifications to local atomic structure come into play. Emergent electronic and magnetic ground states at oxide interfaces generate exciting new prospects both for discovery of fundamental physics and the development of technological applications. This Focus Topic is dedicated to the progress in the knowledge, methodologies, and tools required to advance the field of magnetism in oxide thin films, heterostructures, superlattices, and nanostructures. Synthesis, characterization, theory, and novel device physics are emphasized. Specific areas of interest include, but are not limited to, growth of oxide thin films and heterostructures, control of their magnetic properties and ordering, magnetotransport, magnetic behavior in strongly correlated systems, strong spin-orbit coupling effects, dilute magnetism, magnetoelectric phenomena, coupling of atomic and magnetic structures, and recent developments in theoretical prediction and materials-by-design approaches. Advances in techniques to probe and image magnetic order and transitions in complex oxide thin films (including scanning probes, optical, electron, neutron, and synchrotron-based techniques) are also emphasized. Note that overlap exists with other DMP and GMAG focus sessions. As a rule of thumb, if magnetism plays a key role in the investigation, then the talk is appropriate for this focus topic.

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### 10.1.4 Spin transport and Magnetization Dynamics in Metals-Based Systems (GMAG/DMP/FIAP)

**DESCRIPTION:** The generation, manipulation, and detection of spin currents in metals and magnetic heterostructures are of great interest for fundamental science and applications . Understanding of fundamental spin-dependent transport physics, accompanied by progress in materials and nanoscale engineering, has already had a dramatic impact on technology. Discoveries like giant and tunneling magnetoresistance have moved to applications, and uses of more recent discoveries, including magneto-thermal effects, spin-transfer torque, spin-Hall effect, and chiral domain walls, are imminent. This Focus Topic aims to capture experimental and theoretical developments in spin transport and magnetization dynamics in mostly metal-based systems, such as ultrathin films, heterostructures, lateral nanostructures, perpendicular nanopillars, and tunnel junctions. In particular, contributions describing new results in the following areas are solicited: (i) Interplay between spin currents and magnetization dynamics in magnetic nanostructures; spin-transfer, spin-pumping and related phenomena, including current-induced magnetization dynamics in heterostructures and domain wall motion in magnetic wires; (ii) Theoretical predictions and/or experimental discovery of half-metallic band structures, both in bulk solids and at the surfaces of thin films. Spin transport and magnetization dynamics in magnetic nanostructures (e.g., TMR, CPP-GMR and lateral spin valve structures) based on half-metallic materials; (iii) Manifestations of spin-orbit interactions including, but not limited to field-like and damping-like torques on magnetic films and nanostructures, the spin-Hall, inverse spin-Hall, and anomalous Hall effects; microscopic mechanisms of magnetization damping; (iv) Electric field control of magnetic properties (e.g., anisotropy, phase transitions, etc.), including but not limited to: hybrid metal/oxide structures, piezoelectric layers coupled to ferromagnetic films, and electrolyte/ferromagnetic systems; (v) Ultrafast magnetization response to (and reversal by) intense laser pulses; magnetization dynamics at elevated temperatures, and thermally-assisted magnetization reversal; (vi) Thermoelectric spin phenomena such as giant magneto-thermopower and Peltier effects, spin-Seebeck effects, spin and anomalous Nernst and Ettingshausen effects (spin caloritronics); (vii) Thermal gradient and/or RF-driven magnonic magnetization dynamics in nanostructures, including spin wave excitation, propagation, and detection. Interactions between electronic spin current and magnon propagations in thin-film and device structures; (viii) General considerations of spin angular momentum, energy, and entropy flow, conservation laws, and Onsager reciprocity relations.

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### 10.1.5 Spin-Dependent Phenomena in Semiconductors (GMAG/DMP/FIAP/DCOMP)

**DESCRIPTION:** The field of spin-dependent phenomena in semiconductors addresses a wide range of new effects and materials systems [e.g., III-V and II-VI heterostructures, group-IV materials including Si, Ge, diamond and graphene, transition-metal dichalcogenides (TMDs) and other 2D semiconductors, and oxide semiconductors] and new structures (e.g., quantum dots and nanocrystals, nanowires and carbon nanotubes, hybrid ferromagnetic/semiconductor structures, and van der Waals heterojunctions). This Focus Topic solicits contributions aimed at understanding spin-dependent processes in magnetic and non-magnetic structures incorporating semiconducting materials. Topics include: (i) electrical and optical spin injection and detection, spin pumping, spin Hall effects, spin-dependent topological effects, spin filtering, spin dynamics and scattering; (ii) growth, characterization, electrical, optical and magnetic properties of magnetic semiconductors, nanocomposites, and hybrid ferromagnet-semiconductor structures, including quantum dots, nanocrystals, and nanowires; (iii) spin and valley dynamics in TMDs and other monolayer semiconductors, including magnetic field effects; (iv) spin-dependent transport, spin-dependent thermal effects, and dynamical effects in semiconductors with or without spin-orbit interactions, including proximity effects in heterostructures; (v) manipulation, detection, and entanglement of electronic and nuclear spins in quantum systems , including dots, impurities and point defects (e.g., NV centers in diamond); (vi) magneto-resistance and magneto-electroluminescence effects in organic semiconductors; (vii) spin-dependent devices and device proposals involving semiconductors; and (viii) quantum anomalous Hall effects in magnetically doped topological insulators and topological insulator/ferromagnetic insulator heterostructures.

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### 10.1.6 Frustrated Magnetism (GMAG/DMP)

**DESCRIPTION:** Simple antiferromagnets on bipartite lattices have well-understood ground states, elementary excitations, thermodynamic phases and phase transitions. At the forefront of current research are frustrated magnets where competing interactions suppress magnetic order and may lead to qualitatively new behavior. Frustrated magnets may realize novel quantum-disordered ground states with fractionalized excitations akin to those found in one-dimensional antiferromagnets, but with a number of novel features. They are often characterized by significant spin-orbit and crystal-field interactions as well as by varying degrees of spatial anisotropy. This Focus Topic solicits abstracts for presentations that explore both theoretical and experimental aspects of the field. The themes to be represented are united by geometrical frustration: valence-

bond solids, spin nematics, and other exotic ordered states; spin ice, quantum spin liquids, order-from-disorder, magnetoelastic coupling, and novel field-induced behavior; synthesis and modeling of new materials with magnetic frustration. Also of interest are the effects of strongly fluctuating spins on properties beyond magnetism, including charge, spin, and energy transport, and ferroelectricity.

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### 10.1.7 Spin-Orbit Mediated Chiral Spin Textures (GMAG/DMP)

**DESCRIPTION:** A strong spin-orbit interaction combined with inversion symmetry breaking gives rise to a finite Dzyaloshinskii-Moriya interaction, which manifests itself as the formation of chiral spin textures. The novel properties of these textures offer many exciting opportunities in the fields of nanomagnetism and spintronics. This Focus Session will address the most recent developments in the field of chiral spin textures in strongly spin-orbit coupled systems. It will cover (bulk/thin-film) material synthesis and characterization, numerical and analytical modeling, and device design and measurement, combining experimental and theoretical aspects of the field. Specific areas of interest include, but are not limited to: vortex-like magnetic skyrmions in bulk systems – B20 compounds and beyond, Néel skyrmions in interfacially asymmetric thin-film heterostructures, chiral magnetic domain walls, chiral magnetization dynamics, spin Hall effects, spin-orbit torques, physics and control of Dzyaloshinskii-Moriya interactions, interfacial magnetism, topological transport phenomena, emergent electrodynamics, and novel logic and memory architectures based on non-trivial topological spin textures. Advanced techniques to study the chiral spin textures, such as spin-polarized scanning tunneling microscopy, magneto-optical Kerr effect microscopy, Brillouin light scattering spectroscopy, spin-polarized low energy electron microscopy, NV center microscopy, Lorentz transmission electron microscopy, and synchrotron-based techniques will also be included. The key future directions of the field will be identified. It is expected that this Focus Session will not only promote the fundamental understanding of chiral spin textures and their dynamics, but also facilitate progress towards potential technological applications.

**ORGANIZERS:** Geoff Beach, MIT
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Amanda Petford-Long, Argonne National Lab.
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Andre Thiaville, Paris-Sud University
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### 10.1.8 Low-Dimensional and Molecular Magnetism (GMAG/DMP)

**DESCRIPTION:** The possibility of reduction to zero-dimensionality allows exploration of novel size and quantum effects in magnetic systems. While single spins can be isolated in semiconducting devices or by scanning probe techniques, the molecular approach introduces synthetic flexibility, providing the possibility of engineering the magnetic quantum response of a spin system. The development and study of molecular and low-dimensional magnetic systems continues to provide a fertile testing ground to explore complex magnetic behavior and new challenges for the development of experimental techniques and theoretical models. New frontiers are also represented by the possibility of combining low-dimensional magnetic systems in hybrid architectures and to study the interplay between spins and functional nanostructures. This Focus Topic solicits abstracts that explore inorganic and organic molecule-based, as well as solid state, systems, and both theoretical and experimental aspects of the field. Topics of interest include: magnetism in zero, one, and two dimensions (e.g., quantum dots, single molecule magnets, spin chains, interfaces between molecular spins and functional surfaces), spin-orbit and super-exchange couplings, quantum critical low dimensional spin systems, topological excitations, quantum tunneling of magnetization, coherent spin dynamics and quantum correlation (entanglement), and novel field-induced behavior.

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## Nominations for APS Prizes and Awards

The APS gives several prizes, awards, and lectureships each year that are relevant to the research interests of the GMAG membership. You are encouraged to nominate your colleagues for these awards. A list of awards and instructions may be found at http://www.aps.org/programs/honors/

## Request for Magnetism Outreach Proposals

GMAG invites proposals directed towards educating non-scientists and the general public about the role of magnetism. Funds up to $5000 per project (larger proposals may be considered) are available to cover supplies and expenses. These grants should foster new activities and are 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, and the production of videos on magnetism that would appeal to the general public. Preference will be given to innovative activities that are 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. For these purposes, proposers will be required to provide GMAG with appropriate material when requested. Proposers are encouraged to consider alternate avenues for dissemination. This should include presentation of the results at an APS meeting. The GMAG Executive Committee 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 Committee 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 (tevelthuis@anl.gov):

• Cover sheet clearly stating the name, address, phone number, and email of the main contact person for your application. 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. 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 typically 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

**Recently funded proposal are**

• *Magnetic fields and the Brain*, Dr. Ravi L. Hadimani, Dept. of Electrical and Computer Engineering, Iowa State University

For supporting a workshop on Magnetic Stimulation of the Brain, in which 70 middle school students participated. The workshop consisted of demonstrations, presentations and 3D animations. Coverage of the event can be found at: http://amestrib.com/news/event-isu-inspires-local-kids-pursue-stem-disciplines

• *A Student Video Blog (vlog),* Nanoscience and Magnetism, Dr. Axel Enders, Dept. of Physics and Astronomy, University of Nebraska – Lincoln

For funding the hardware and software required to establish a science vlog about topics in nanoscience and nanomagnetism, produced by participating middle and high school students from Lincoln Public Schools, coordinated through the Nebraska Center for Materials and Nanoscience. - http://mediahub.unl.edu/channels/313

• *Physics Youth Scholastic and Instructing Camp for Orlando Scientists,* Dr. Enrique Del Barco, Department of Physics, University of Central Florida.

A week long camp to be offered to high school students starting in Summer 2017

## Ask your colleagues to join GMAG

For only $8 additional dues, APS members can become GMAG Members with the following benefits (students can join for free):

• 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 the GMAG topical group.

## Other Recent Magnetism-related news

**The 2016 IEEE Magnetics Distinguished Lecturers are announced:**

http://www.ieeemagnetics.org/index.php?option=com_content&view=category&layout=blog&id=80&Itemid=172

**GMAG will sponsor a best student presentation award at the upcoming 2016 MMM meeting in New Orleans.**

For details, please refer to the 2016 MMM link shown here: http://www.magnetism.org/?page=student_presentation_awards

The IUPAP Commission on Magnetism (C9) was established by the International Union of Pure and Applied Physics in 1957 to promote the exchange of information and views among the members of the international scientific community in the general field of Magnetism. See http://iupap.org/commissions/c9-magnetism/c9-news-2/ for details of this and other IUPAP C9 awards.

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

## The GMAG Executive Committee (email):

**Chair:** Suzanne G.E. te Velthuis (tevelthuis@anl.gov)
**Chair-Elect:** Chris Leighton (leighton@umn.edu)
**Vice-Chair:** Stephen Hill (shill@magnet.fsu.edu)
**Past Chair:** Jonathan Sun (jonsun@us.ibm.com)
**Secretary-Treasurer:** Tiffany Santos (tiffany.santos@hgst.com)

**Members-At-Large:**
John Cumings, *University of Maryland*
Jonathan Friedman, *Amherst College*
Ilya Krivorotov, *University of California, Irvine*
David Lederman, *University of California, Santa Cruz*
Christian Binek, *University of Nebraska, Lincoln*
Peter Fischer, *Lawrence Berkeley National Laboratory*, *University of California, Santa Cruz*

## Important Deadlines

| Date (2016) | Reason | Contact |
|---|---|---|
| September 2 | Symposia nominations for March Meeting | Chris Leighton - email: leighton@umn.edu |
| September 2 | Invited speaker nominations for Focus Topics for March Meeting | Focus Topic Organizers |
| September 30 | Officer and Executive Committee nominations | Ilya Krivorotov - email: ilya.krivorotov@uci.edu |
| October 1 | GMAG Dissertation Award Nomination | Suzanne te Velthuis - email: tevelthuis@anl.gov |
| November 11 | March Meeting Abstracts | http://www.aps.org/meetings/march/ |
| December 1 | March Meeting Student Travel Grants | Stephen Hill - email: shill@magnet.fsu.edu |
| Ongoing | Outreach Proposals | Suzanne te Velthuis - email: tevelthuis@anl.gov |

## Upcoming Conferences

**Gordon Research Conference on Conductivity & Magnetism in Molecular Materials**
August 14-19, 2016 • South Hadley, MA

**The Magnetic Recording Conference (TMRC 2016)**
August 17-19, 2016
Stanford University • Stanford, CA

**Joint European Magnetic Symposia (JEMS)**
August 21-26, 2016
Glasgow, United Kingdom

**International Conference on Highly Frustrated Magnetism** 2016 (HFM 2016)
September 7-11, 2016 • Taipei, Taiwan

**61st Annual Conference on Magnetism and Magnetic Materials (MMM 2016)**
October 31-November 4, 2016 • New Orleans, LA

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

**Intermag Conference – Dublin, Ireland**
April 24-28, 2017 • Dublin, Ireland

**62nd Annual Conference on Magnetism and Magnetic Materials (MMM 2017)**
November 6-10, 2017 • Pittsburgh, PA

**21st International Conference on Magnetism (ICM 2018)**
**July 16-20, 2018**
San Francisco, CA

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

An additional list of magnetism-related meetings can be found at this link: http://magnetism.eu/TPL_CODE/TPL_AGENDALISTE/6-agenda.htm