

Topical Group on Magnetism and its Applications

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

A Note From the Chair

As the new Chair of GMAG, I appreciate your membership in and support of GMAG. Among GMAG's goals is the promotion of magnetism-related interests both within the APS, and in the larger scientific community. Magnetism research continues to grow: at the 2007 APS March Meeting, magnetism generated more contributed abstracts (865) than any other area. We on the GMAG Executive Board hope that you will participate actively in GMAG activities and that you will encourage your colleagues with magnetism research interests to join GMAG and to help us promote magnetism. We encourage you to get involved by:



- *Proposing Symposia and Focus Session speakers for the 2008 March Meeting in New Orleans.*
- *Nominating candidates for APS Fellowship and APS Prizes and Awards.*
- *Nominating candidates for GMAG PhD Dissertation Awards.*
- *Applying for GMAG funding for magnetism-related outreach.*
- *Adding items to the 'Magnetism Pictures' section of the GMAG web page.*

The goal of this newsletter is to keep you posted on GMAG activities and upcoming magnetism-related events. This year we are inaugurating a "Briefly Noted" section (with apologies to the New Yorker) where we will try to highlight new books, review articles, and other large-scale publications that may be of interest to GMAG members. If you wish to submit an entry for inclusion here, please contact me via email.

—Dan Reich, GMAG Chair

2007 March Meeting in Denver – Post Mortem

GMAG has responsibility for organizing the magnetism sessions at the March Meeting. In 2007, there were 865 contributed abstracts submitted in Sorting Category 6 (Magnetism). This was the largest number submitted to any sorting category and generated 69 sessions. Included were three symposia, 57 sessions related to Focus Topics, and 6 other contributed sessions.

GMAG organized the following three symposia for the March Meeting:

- *Spin Transfer-Driven Excitations*, proposed by Daniel Ralph, Cornell University
- *Magnetic Bose-Einstein Condensation*, proposed by Stephen Hill, University of Florida
- *Symposium on Exchange Bias*, proposed by Dan Dahlberg, University of Minnesota

GMAG also sponsored (or co-sponsored with DMP, DCOMP, or FIAP) seven Focus Topics:

- *Theory and Simulation of Magnetism and Spin Dependent Properties*, (sponsored by DCOMP, DMP, and GMAG) organized by Oleg Myrsov and Qian Niu
- *Magnetic Nanostructures, Materials and Phenomena* (sponsored by DMP and GMAG) organized by Hariharan Srikanth and Andrew Kent
- *Complex Oxides* (sponsored by DMP and GMAG) organized by Valery Kiryukhin, Warren Pickett, and Tsuyoshi Kimura
- *Spin Transport and Magnetization Dynamics in Metal-Based Systems* (sponsored by DMP, GMAG, and FIAP) organized by Axel Hoffmann and Jonathan Sun
- *Spin-Dependent Phenomena in Semiconductors* (sponsored by GMAG and DMP) organized by Igor Zutic, Nitin Samarth, and Tomasz Dietl
- *Nanomagnetic Particles and Structures for Information Storage Applications* (sponsored by GMAG and FIAP) organized by Eric Fullerton and Shouheng Sun
- *Frustrated and Low-Dimensional Systems* (Sponsored by GMAG – New this year) organized by Collin Broholm and Shivaji Sondhi

These Focus Topics were all very successful and generated from three to 15 total sessions each. Thus GMAG and the co-organizing APS units will continue them for the next March Meeting (perhaps with modified titles).

GMAG Election Results

Axel Hoffmann (Argonne National Laboratory) is our new Vice Chair and our two new Executive Committee members are Michael Pechan (Miami University - Ohio) and Michael Fitzsimmons (Los Alamos National Laboratory). We thank departing Past Chair Jim Rhyne and Executive Committee Members Andrew Kent and Jeff Childress for valiant service to GMAG. Thanks also to everyone who participated in the election. Lastly, it is time to begin considering nominations for the next GMAG election. Sara Majetich (sm70@andrew.cmu.edu) is Chair of the Nominating Committee. Please send suggested nominees for Vice Chair and Members at Large to her, no later than Sept. 1, 2007. The Bylaws of GMAG (See the APS-GMAG web site) also specify a mechanism for nominations by petition.

New GMAG-Sponsored APS Fellows

We congratulate the most recent Fellows (class of 2007) sponsored by GMAG for their outstanding contributions to the field of magnetism:

Michael Fitzsimmons, Los Alamos National Laboratory

Citation: For his work elucidating the magnetization reversal processes in exchange bias systems using polarized neutron reflectometry.

Chi-Chang Kao, Brookhaven National Laboratory

Citation: For his many contributions to resonant elastic and inelastic x-ray scattering techniques and their applications to materials physics.

Andrew Kent, New York University

Citation: For seminal contributions to quantum tunneling through experimental studies of the tunneling of the magnetization in molecular magnets.

Gang Xiao, Brown University

Citation: For his significant contributions to spintronics research, especially on half-metallic ferromagnets, magneto-tunneling, colossal magnetoresistance, nanoscale structures and devices.

Nominations for APS Fellowship and for APS Prizes and Awards

GMAG can recommend up to three of its members for Fellowship in the APS. The deadline for GMAG nominations is April 1, thus nominations received now will be for 2009. It is not too early to start preparing a nomination for a person you think should be awarded APS Fellowship in 2009. All information on the requirements for all of these nominations can be found on the APS web site (<http://www.aps.org/fellowship/index.cfm>).

The nomination deadline for most of the APS prizes and awards is July 1, 2007. Please be sure to nominate worthy people from the magnetism community for the various awards, which are listed on the APS web site (<http://www.aps.org/praw/>).

Student Awards and Student Membership Support

To encourage graduate students working in magnetism, GMAG will continue to sponsor:

Outstanding Dissertation in Magnetism Awards

GMAG will present up to three dissertation awards at the next 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 March APS 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; the student's CV and publication list; and contact information for the student, all 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 after Sept. 1, 2007 but before Sept. 1, 2008 to be eligible for the 2008 March Meeting);
- assessment of the student's future potential as a research scientist.

Nominations should be sent by email as a single pdf file to Dan Reich (reich@jhu.edu) by August 31, 2007. Evaluation of the nominations will be conducted by the GMAG Executive Committee.

Outreach Funding from GMAG

GMAG invites applications from its members to support outreach activities involving magnetism. Limited funds (up to \$2500 per project) are available to cover supplies and expenses associated with activities that 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 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 GMAG Chair, Dan Reich, at reich@jhu.edu. The GMAG Executive Board will review proposals on an ongoing basis, beginning June 1, 2007. Further details will appear on the GMAG web site.

Planning for the 2008 March Meeting in New Orleans

It is time to start organizing the magnetism part of the 2008 March Meeting in New Orleans. GMAG is permitted to sponsor three Invited Symposia and an unlimited number of Focus Topics as long as they attract sufficient contributed papers to generate more than one (preferably several) sessions. Symposia and Focus Sessions are the cornerstones of the magnetism emphasis in the March Meeting, so your help in organizing and making these sessions effective is very important. Each Symposium consists of all invited talks (typically 5) relating to a specific topic. Focus Topics are made up of multiple sessions related to a general theme and have one invited talk per session with the remainder contributed talks. The call for nominations for Focus Topic speakers will go out this summer.

To suggest a Symposium topic, a summary paragraph along with the suggested chair and five invited speakers should be sent to Bill Butler (wbutler@mint.ua.edu) no later than August 31, 2007.

Briefly Noted

In this space, we will try to list new books or other publications outside the usual journals that may be of interest to the GMAG membership. This is for information purposes only. No endorsement is expressed or implied. If you have something that you would like listed here, contact Dan Reich.

Lectures on Magnetism, E. Chudnovsky and J. Tejada, Rinton Press (2007).

This is a textbook for graduate students and upper-level undergraduates that is designed as a self-contained one-semester course in modern magnetism. For more information, see <http://www.rintonpress.com/books/magnetism.html>.

Upcoming Magnetism Conferences and Workshops

IEEE Magnetism in Nanotechnology and Electronics Conference (IEEE IMAGINE 2007), June 25-26, 2007, Gaithersburg, MD, http://ewh.ieee.org/r2/wash_nova/mags/ieeemagine

SpinOS 2007 –Workshop on Spintronic Effects in Organic Semiconductors, September 9-11, 2007, Bologna, Italy <http://www.spinoss.org>

6th International Conference on Fine Particle Magnetism, October 9-12, 2007 Rome, Italy <http://www.icfpm.mlib.cnr.it>

52nd MMM Conference, November 5-9, 2007, Tampa, FL <http://www.magnetism.org>

2007 MRS Fall Meeting, November 26-30, 2007, Boston, MA http://www.mrs.org/s_mrs/sec.asp?CID=4749&DID=164574

Intermag 2008, May 4-8, 2008, Madrid, Spain <http://www.intermagconference.com/intermag2008/index.htm>

7th International Conference on the Scientific and Clinical Applications of Magnetic Carriers, May 21-24, 2008, Vancouver, Canada, <http://www.magneticmicrosphere.com/meetings/meet2008>

53rd MMM Conference, November 10-14, 2008, Austin, TX

Again, we invite and encourage you to participate in the GMAG activities described above.

The GMAG Executive Committee

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Chair-Elect

William Butler
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Vice-Chair

Axel Hoffmann
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Executive Committee Members-at-Large

Chris Leighton, Sara Majetich, David Lederman, Stephen Hill, Michael Pechan, and Michael Fitzsimmons