

# GMAG NEWSLETTER - APRIL 2006

## A Note From the Chair

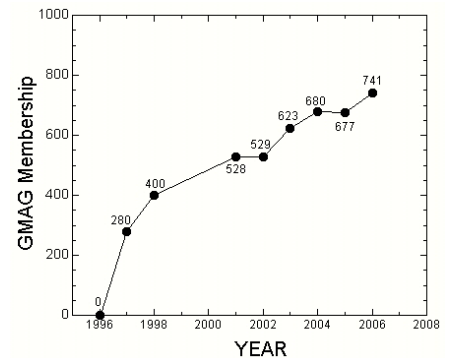
As the new Chair of GMAG, I appreciate your membership in GMAG and invite you to participate in one or more of the GMAG activities described in this newsletter. These include (1) organizing Focus Sessions and Symposia for the March Meeting in 2007 in Denver, (2) adding items to a new 'Magnetism Pictures' section of the GMAG web page, (3) nominating candidates for APS Fellowship and APS Prizes and Awards, (4) nominating candidates for GMAG PhD Dissertation Awards, and (5) proposing magnetism-related Outreach Projects. As the third largest Topical Group in the APS with 741 members, GMAG has the opportunity to effectively promote magnetism-related interests within the APS. Fulfilling this potential depends largely upon you, our members, as well as upon us, the Executive Board. We hope that you will participate actively in GMAG activities and encourage your colleagues with magnetism research interests to join GMAG and to help us to promote magnetism. The more members we have, the more we represent the magnetism community within the AP and the more effective we can be.



*Jim Rhyne, GMAG Chair*

## 2006 March Meeting in Baltimore

GMAG came into being as a Topical Group only in 1996 and has experienced significant growth over the past decade (see graph). This growth is also reflected in the number of magnetism papers submitted for the 2006 March Meeting. There were 709 abstracts submitted in sorting category 6 (magnetism). This was the second largest number submitted to any sorting category and generated a total of 68 sessions. Included were three symposia, 46 sessions related to Focus Topics, and 19 other contributed sessions.



GMAG organized the following three symposia for the March Meeting:

- *New Results in Geometrically Frustrated Magnets*, organized by Arthur Ramirez, Lucent Technologies
- *Quantum Spin Dynamics in Molecular Nanomagnets*, organized by Andy Kent and Eugene Chudnovsky
- *High TMR MgO tunneling and spin momentum transfer materials, physics, and devices*, organized by William J. Gallagher

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

- *Theory and Simulation of Magnetism and Spin Dependent Properties*, (sponsored by DCOMP, DMP, and GMAG) organized by Wei Cai, Renat Sabirianov, and Bruce Harmon
- *Nanostructured Magnetic Materials* (sponsored by DMP and GMAG) organized by Sara Majetich and Dan Dahlberg

- *Complex multifunctional oxides* (sponsored by DMP and GMAG) organized by Chris Leighton and Nicola Spaldin
- *Spin Transport and Magnetization Dynamics in Metal-Based Systems* (sponsored by DMP, GMAG, and FIAP) organized by Mark Stiles, Qiang (John) Xiao, and Allan MacDonald
- *Spin-Dependent Phenomena in Semiconductors* (sponsored by GMAG and DMP) organized by Peter Schiffer and Michael Flatte
- *Nanomagnetic Particles and Structures for Information Storage Applications* (sponsored by GMAG and FIAP) organized by Andreas Berger and David Sellmyer

These Focus Topics were all very successful and generated from three to 15 total sessions each. Thus GMAG and the co-organizing units may well continue them for the next March Meeting (perhaps with modified titles), but we also solicit suggestions for additional topics (see below).

## GMAG Election Results

William Butler (University of Alabama) is our new Vice Chair and our two new Executive Committee members are David Lederman (University of West Virginia) and Stephen Hill (University of Florida). We thank departing Past Chair Peter Schiffer and Executive Committee Members Laura Lewis and Mark Stiles for diligent and effective 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](mailto: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, 2006.*** 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 2006) sponsored by GMAG for their outstanding contributions to the field of magnetism:

**Dongqi Li**, Argonne National Laboratory

**Citation:** For outstanding experimental contributions to understanding magnetic phenomena in confined geometries, including surfaces, thin films and nanostructures.

**Shufeng Zhang**, University of Missouri-Columbia

**Citation:** For his pioneering theoretical models and analyses of spin transport in magnetically layered structures, films and heterogeneous alloys.

## Planning for the 2007 March Meeting in Denver

It is time to start organizing the magnetism part of the 2007 March Meeting in Denver. 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. ***To volunteer to help organize a Focus Session on one of the topics in the 2006 March meeting (listed above) or to propose a title for a new one, please contact the GMAG Program Chair, Dan Reich [dhr@pha.jhu.edu](mailto:dhr@pha.jhu.edu), by May 15, 2006.***

*To suggest a Symposium topic, a summary paragraph along with the suggested chair and five invited speakers should be sent to Dan no later than August 1, 2006.*

## **‘Magnetism Pictures’ section of the GMAG Web Site**

Last year the GMAG Board approved expanding the GMAG web site to include a page(s) entitled ‘Magnetism Pictures’. This page is subdivided into six sections: (a) Magnetism, Fundamental Science; (b) Magnetism on Earth and in the Universe; (c) Magnetism in Industry; (d) Magnetism Education; (e) Magnetism-related Web Sites; and (f) Magnetism-related Books. Initially, clicking on one of the first four sections will bring up a list of figure captions, and clicking on a caption will bring up a figure. The intent is to make these figures available (with proper attribution) for private use and, perhaps, for magnetism-related brochures to be prepared by GMAG. If the Web site grows as we hope, the sections will have to be subdivided, and probably revised to reflect their contents and make those contents accessible. *If you are interested in helping to organize and ‘fill’ this section, please contact Jack Bass ([bass@pa.msu.edu](mailto:bass@pa.msu.edu)).*

## **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 2008. It is not too early to start preparing a nomination for a person you think should be awarded APS Fellowship in 2008. 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, 2006.* 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 two policies begun on a trial basis two years ago:

**1) Free student membership in GMAG:** Students who are members of APS can join GMAG free for one year (\$7 after the first year, automatically billed with APS membership.) *To join, students need to send a note to membership chair, Jeff Childress ([Jeff.Childress@hitachigst.edu](mailto:Jeff.Childress@hitachigst.edu)) with their name, APS membership number, mailing address, and e-mail address (note that students can join APS free for one trial year and \$26 for each succeeding year).*

**2) 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, 2006 but before Sept. 1, 2007 to be eligible for the 2007 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 Jim Rhyne ([rhyne@lanl.gov](mailto:rhyne@lanl.gov)) by Sept. 1, 2006.* Evaluation of the nominations will be conducted by part or all of the GMAG Executive Committee.

**Outreach Funding from GMAG:** Since last year, GMAG has invited 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, Jim Rhyne, at [rhyne@lanl.gov](mailto:rhyne@lanl.gov).* The GMAG Executive Board will review proposals on an ongoing basis, beginning May 1, 2006. Further details will appear on the GMAG web site.

## Upcoming magnetism conferences and workshops

**Intermag 2006**, May 8-12 2006, San Diego, CA , <http://www.intermagconference.com/intermag2006/>

**6th International Conference on the Scientific and Clinical Applications of Magnetic Carriers**, May 17-20, 2006 , Krems (Vienna region), Austria <http://www.magneticmicrosphere.com>

**19th International Colloquium on Magnetic Films and Surfaces (ICMFS 2006)**  
August 15 - 18, 2006, Sendai, Japan , <http://icmfs2006.apph.tohoku.ac.jp/>

**10th Joint MMM/Intermag Conference**, January 7-11, 2007 , Baltimore, Maryland

**Materials Research Society (MRS) 2006 Fall Meeting**, Boston, Massachusetts, November 27 - December 1, 2006, [www.mrs.org](http://www.mrs.org)

**APS 2007 March Meeting**, March 5-9, 2007, Denver, CO, [www.aps.org](http://www.aps.org)

**52nd Conference on Magnetism and Magnetic Materials**, November 5-9, 2007, Tampa, FL, [www.magnetism.org](http://www.magnetism.org)

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

### The GMAG Executive Committee:

**Chair:** Jim Rhyne ([rhyne@lanl.gov](mailto:rhyne@lanl.gov))

**Chair-Elect:** Daniel Reich ([dmr@pha.jhu.edu](mailto:dmr@pha.jhu.edu))

**Vice-Chair:** William Butler ([wbutler@mint.ua.edu](mailto:wbutler@mint.ua.edu))

**Past Chair:** Jack Bass ([bass@pa.msu.edu](mailto:bass@pa.msu.edu))

**Secretary-Treasurer:** Caroline Ross ([caross@mit.edu](mailto:caross@mit.edu))

**Executive Committee Members-at-Large:** Jeff Childress, Andrew Kent, Chris Leighton, Sara Majetich, David Lederman, and Stephen Hill.