

Topical Group on Magnetism and its Applications

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

Note From the Chair

The Newsletter contains several items that may be important to you. I encourage you to vote for the Vice Chair and Members at Large of the executive committee. Also, join me in congratulating our 5 new GMAG fellows and the two winners of the GMAG dissertation award competition. Axel Hoffmann and his team have done a great job organizing the magnetics parts of the March Meeting. Perusal of that part of the Newsletter will be good preparation for attending the meeting.

Please encourage your colleagues to join GMAG. Continued growth of GMAG membership is important to ensuring that we are represented within APS.

At the March Meeting, Axel will assume the responsibilities of chair and I will retire to the exalted status of "Past Chair." In anticipation of this departure, I would like to thank all GMAG members and particularly the Executive Committee for their support during my 3 years as Vice Chair, Chair Elect and Chair.

—Bill Butler

Election of GMAG Officers for 2009-2010

The GMAG nominating committee, chaired by David Lederman, has prepared a slate of candidates for the 2009-2010 GMAG election. This year, the committee has presented nominations for a new Vice Chair (who will become Chair-Elect, Chair and Past Chair) and two new members at large. The nominees are:

Vice-Chair:

Yves Idzerda (Montana State University)
Andrew Kent (New York University)

Member-at-Large:

Jian Shen (Oak Ridge National Laboratory),
Peter Fischer (Lawrence Berkeley National Laboratory)
Hariharan Srikanth (University of South Florida)
Hendrik Ohldag (Stanford Synchrotron Radiation)
Eric Fullerton (University of California San Diego)

The election is underway. Please vote for your choice of candidates for Vice Chair and for the at-large members of the Executive Committee before the deadline of February 23, 2009. In order to vote you will need to find the email sent to you by Maria Varela (GMAG Secretary) on January 7 (with a follow-up on January 21). The email contains a link with an ID specific to each GMAG member. Candidate statements and biographical information are on the website.

GMAG Sponsored APS Fellows

In 2008, GMAG nominated five of its members for fellowship in the APS. We were very pleased that all five were approved by the APS General Fellowship Committee. We thank GMAG

Vice Chairman, Berry Jonker, for managing the nomination process. The new GMAG APS fellows and their citations are listed below. Congratulations!

Paul Crowell, University of Minnesota

Citation: For the application of elegant optical and transport techniques to the study of spin dynamics and transport in metals and semiconductors and experiments probing the excitation spectra of inhomogeneously magnetized systems, particularly magnetic vortices.

Pengcheng Dai, University of Tennessee

Citation: For his contribution to understand fundamental properties of magnetic excitations in high-transition temperature superconductors, f-electron heavy Fermions, and colossal magneto-resistance manganites.

Jacobo Santamaria, University Complutense

Citation: For seminal contributions to the understanding the interplay of superconductivity and magnetism in oxide films and superlattices.

Sung-Chul Shin, KAIST

Citation: For his pioneering contributions to understanding of magnetization reversal dynamics, in particular critical scaling behavior of Barkhausen avalanches of 2D ferromagnets, and discovery of novel magnetic thin films and multilayers for high-density data storage.

Evgeny Tsymbal, University of Nebraska

Citation: For significant contributions to the understanding of spin-dependent transport in magnetic nanostructures.

Dissertation Award Winners

Each year at the March meeting GMAG presents dissertation awards that recognize students who have conducted outstanding research leading to their dissertation. The awards consist of an invited talk in an appropriate session at the March APS Meeting, a \$500 prize for the student and an award of up to \$250 toward his or her travel expenses to the meeting. This year's winners selected from among many excellent nominations are Thomas (Zac) Ward of the University of Tennessee and ORNL for his dissertation on "Simplifying Complexity in Electronic Phase Separated Manganites" and Li Gao of Stanford University and IBM Almaden for his dissertation on "Spin-dependent tunneling effects in magnetic tunnel junctions: tunneling magnetoresistance and spin-transfer torque"

Conferences of Interest to the Magnetism Community

A list of meetings of interest to the magnetism community can be found at <http://www.aps.org/units/gmag/meetings/index.cfm>. Please send notices of meetings that should be publicized to our membership to: Maria Varela at m Varela@ornl.gov.

2009 March Meeting Magnetism Sessions

The 2009 APS March Meeting will be held March 16-20 at the David L. Lawrence Convention Center in Pittsburgh. Additional sessions and meetings are also held in the adjacent Westin Hotel. For more details see the announcement at the following APS website: <http://www.aps.org/meetings/march/index.cfm>. Axel Hoffmann and his team have done a great job of organizing symposia and focus topics and sorting abstracts. If you enjoy the magnetism part of the meeting you should thank Axel.

Please remember the **GMAG business meeting** on Tuesday Evening (3/17) at 5:45 pm in Room 335 of the David L. Lawrence Convention Center. This is an opportunity to provide your input into what GMAG should be doing.

Sorting Category #6 (Magnetism) similar to past years is among the largest for the 2009 Meeting with 678 contributed abstracts submitted. GMAG is sponsoring and co-sponsoring nine Focus Topics as well as four and a half invited symposia at the March Meeting in Pittsburgh. The Focus Topics have generated a total of 59 sessions, which include 58 invited speakers and the remainder are contributed talks. Included in these invited presentations are two GMAG Dissertation award presentations (see above) as well as the Beller Lecturship Talk by Michel I. Dyakonov (Université de Montpellier, France). There are an additional 10 general magnetism-related sessions of contributed talks. With few exceptions, all GMAG sponsored sessions will be in rooms 324, 333, 334, 335, and 336 on the third floor of the David L. Lawrence Convention Center.

Student Lunches with the Experts

GMAG will sponsor four topics at the Graduate Students Lunch with the Experts, Wednesday, March 18, 1:00 pm – 2:30 pm. The lunches are free, but advanced registration at the APS Registration Desk (starting at 1:00 pm Monday, March 16) is required. Space is limited and will be filled on a first-come, first-served basis.

Unraveling Strongly Correlated Materials with X-rays/ John Freeland, *Argonne National Laboratory*

Understanding Magnetic Anisotropy with Ferromagnetic Resonance/ Michael Pechan, *Miami University*

Seeing Magnetic Atoms with Electrons/ Amanda Petford-Long, *Argonne National Laboratory*

Molecular Magnets/ Myriam Sarachik, *City College of New York, CUNY*

Sunday Afternoon Tutorials

There are three tutorial sessions of interest to GMAG members. These are given Sunday (March 15) afternoon (1:30 – 5:30 pm) in the Westin Hotel. Prior registration is required with a tutorial fee of \$100 (\$40 for students).

Tutorial #5 Spintronics: Physics and Device Applications
Organized by Jian-Gang Zhu

Tutorial #6 Emergent Phenomena in Complex Oxides
Organized by Chris Leighton

Tutorial #7 Nanomagnetism *Organized by Suzanne te Velthuis*

GMAG Invited Symposia

Unconventional Spin Torques *Organized by Shufeng Zhang*

Quantum Spin Dynamics & Relaxation in Molecular Magnets
Organized by Andrew Kent

Applications of Magnetic Thin Films with Tilted Anisotropy
Organized by Johan Åkerman

Recent Progress in Spin-Spiral Ferroelectricity *Organized by Sang-Wook Cheong*

New Insight into Exchange Bias from Advanced Scattering Techniques *Organized by Meigan Aronson*

Focus Topics *(Sponsoring units are in parentheses)*

Theory and Simulation of Magnetism and Spin-Dependent Properties (DCOMP/DMP/GMAG) *Organized by Kirill Belashchenko, Aldo Romero, & Dieter Suess*

Magnetic Nanostructures: Materials and Phenomena (DMP/GMAG) *Organized by Matthias Bode and Yumi Ijiri*

Bulk Properties of Complex Oxides (DMP/GMAG)
Organized by Jaime Fernandez-Baca and Karin Rabe

Complex Oxide Thin Films (DMP/GMAG) *Organized by Dimitri Basov, Marc Ulrich, and Maria Varela*

Spin Transport & Magnetization Dynamics in Metal-Based Systems (GMAG/DMP/FIAP) *Organized by Yaroslav Bazaliy and Casey Miller*

Spin Dependent Phenomena in Semiconductors (GMAG/DMP/FIAP) *Organized by Ian Applebaum, Scott Crooker, and Lu Sham*

Frustrated and Low Dimensional Magnetism (GMAG)
Organized by Art Ramirez and Matthew Stone

Spin Dependent Physics in Organic Materials (GMAG/DMP) *Organized by Joaquin Fernandez-Rossier, Andrew Kent, and Jagadeesh Moodera*

Hybrid Magnetic-Superconducting Systems (DMP/GMAG) *Organized by Jose Martin, Charles Reichhardt, and Jacobo Santamaria*

GMAG Executive Committee

Chair: William Butler (04/08–03/09) Univ of Alabama - Tuscaloosa

Chair-Elect: Axel Hoffmann (04/08–03/09) Argonne National Lab

Vice Chair: Berend Jonker (04/08–03/09) Naval Research Lab

Past Chair: Daniel Reich (04/08–03/09) Johns Hopkins University

Secretary/Treasurer: Maria Varela (04/08–03/11) Oak Ridge Natl Lab

Member-at-Large: Stephen Hill (04/06–03/09) Florida State University

Member-at-Large: David Lederman (04/06–03/09) West Virginia Univ

Member-at-Large: Michael Fitzsimmons (04/07–03/10) Los Alamos Natl Lab

Member-at-Large: Michael Pechan (04/07–03/10) Miami University

Member-at-Large: John Freeland (04/08–03/11) Argonne National Lab

Member-at-Large: Evgeny Tsymbal (04/08–03/11) Univ of Nebraska - Lincoln