Note from the Chair

Dear GMAG Members,

The 2023 March Meeting in Las Vegas marked an electrifying start to the condensed matter physics year with a record 12,565 in-person attendees and plenty more in the two-day virtual sessions held a week and a half after the in-person event.

Plans are already in place for the American Physical Society's March Meeting 2024 to be held in Minneapolis, Minnesota, from March 3–8, 2024. This is a special March Meeting as we will be celebrating 125 years of APS! We hope to continue the growth and excitement that magnetism science and GMAG brings to the meeting program. We need your engagement as active GMAG members from the meeting planning process all the way to the March meeting 2024.

We encourage nominations of students for the GMAG Dissertation Awards by **August 18, 2023**.

Also, applications for the March Meeting Student Travel Awards will be considered if submitted by **November 23, 2023**. In the sections that follow, this newsletter provides detailed information on each of these March Meeting activities.

Other important opportunities for GMAG members include:

- Nominations for new GMAG officers for the 2023-2024 election (**September 30, 2023** deadline).
- Proposals for GMAG-funded Outreach activities (Submit by **December 31, 2023** for strongest consideration).

Your participation in these activities will help us to maintain GMAG as one of the strongest Topical Groups of the APS.

Clarina dela Cruz, GMAG Chair, delacruzcr@ornl.gov

March Meeting Program

Chair-Elect, **Cristian Batista** (cbatist2@utk.edu) is the **GMAG Program Chair** for the 2024 APS March Meeting. Cristian and his team are coordinating the organization of both GMAG sponsored and co-sponsored Focus Topics listed below, as well as the GMAG invited symposia. Abstract submissions open on August 31 and will close on October 20, 2023.

GMAG-Led Focus topics:

10.1.1 **Magnetic Nanostructures: Materials and Phenomena** (GMAG/DMP)
10.1.2 **Emergent Properties of Complex Oxides: Bulk, Thin Films and Heterostructures** (GMAG/DMP/DCOMP)
10.1.3 **Spin Transport and Magnetization Dynamics in Metal Based Systems** (GMAG/DMP/FIAP)
10.1.4 **Chiral Spin Textures and Dynamics, Including Skyrmions** (GMAG/DMP)
10.1.5 **Quantum Spin Liquids, Candidate Materials, Models, and Predictions** (GMAG/DMP/DCMP)
10.1.6 **Spin-Dependent Phenomena in Semiconductors, Including 2D Materials and Topological Systems** (GMAG/DMP/FIAP/DCOMP)
10.1.7 **Frustrated Magnetism** (GMAG/DMP)
10.1.8 **Low-Dimensional and Molecular Magnetism** (GMAG/DMP)

GMAG Co-sponsored Focus Topics :
10.1.9 **Magnetic Topological Materials** (DMP/GMAG)
10.1.10 **Magnetism in Biomedicine** (GMED/GMAG/DBIO)
10.1.11 **2D Materials: Advanced Characterization** (DMP/GMAG)
08.01.03 **Multiferroics, Magnetoelectrics, Spin-electric Coupling, and Ferroelectrics** (DMP, DCOMP, FIAP, GMAG)

Nominations for GMAG Student Dissertation Awards

Every year GMAG sponsors Outstanding Dissertation in Magnetism Awards (https://engage.aps.org/gmag/honors/prizes-awards/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 and a **$1,500** prize to the student for their travel to the APS 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.

Student Dissertation Award Nominations should consist of:

- *Nominating letter*
- *Extended abstract on the research* (maximum of 3 pages, including figures and references)
- *The student's CV and publication list*
- *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.

Additionally, a compelling nominating letter will certainly include information on:

- *Quality and independence of the student's work*
- *Student's presentation skills*
- *Year the student began graduate school*
- *Student's expected completion date* (must be after September 1, 2023, but before September 1, 2024 to be eligible for the 2024 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 Clarina dela Cruz (delacruzcr@ornl.gov) **by August 18, 2023**. The subject line for the email should be "GMAG Student Dissertation Award." 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 2023 recipient of the GMAG Dissertation Award.

Zhuoliang Ni, Department of Physics and Astronomy, University of Pennsylvania

"Ultrafast optics: Novel optical system design"

Nominations 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 up to ten Student Travel Awards for the March Meeting 2024. The awards will consist of a **$500** prize for travel assistance to attend the meeting. An additional **$200** is available for those students at institutions outside the United States. 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 assist 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 (https://engage.aps.org/gmag/honors/prizes-awards/student-travel-award).

Applications should be submitted by email to William Ratcliff (william.ratcliff@nist.gov) **by November 23, 2023**. Please put "GMAG Student Travel Award" in the subject line of the email.

Evaluation of the applications will be conducted by the GMAG Executive Committee. Conflict of interest situations will be handled in accordance with APS guidelines

Congratulations GMAG Student Travel Award winners for the 2023 March Meeting.

Alexandria Will-Cole	Northeastern University
MD Afzalur	Norfolk State University
Noah Schulz	University of South Florida
Prakash Sharma	Florida State University
Wei-Cheng Liao	University of California (Riverside)
Liyan Jacob	University of Memphis
Rakshit Jain	Cornell University
Xinyao Pei	University of California (Irvine)
Dinesh Wagle	University of Delaware
Emily Lindgren	Stanford University
Haozhe Wang	Michigan State University
Rawana Yagan	Koç University, Turkey
Rachel Nickel	University of Manitoba, Canada
Nupur Khatu	Ca'Foscari University of Venice, Italy

GMAG sponsored two awards to support travel for invited speakers from international institutions

For the APS March Meeting 2023 in Las Vegas, two named lectureship awards were given to invited speakers from international institutions, as selected by the GMAG Executive committee:

Beller Lectureship: **Roberta Sessoli**, University of Florence, Italy

Marshak Lectureship: **Andrej Zorko**,University of Ljubljana, Slovenia

GMAG Focus Topic Descriptions and Organizers

Focus Topic 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-led Focus Topics are co-sponsored with the Division of Materials Physics (DMP), Division of Computational Physics (DCOMP), Division of Condensed Matter Physics (DCMP) 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 Topic sessions and the general magnetism sorting categories will share information in order to appropriately sort each submitted abstract and thus optimize the

meeting program. The following are detailed descriptions of each Focus Topic along with a list of the associated organizers for the 2024 March Meeting.

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

Reduced dimensionality and confinement lead to magnetic states and spin behaviors that are markedly different from those observed in bulk materials. This Focus Topic explores advances in magnetic nanostructures, the novel properties that arise in magnetic materials at the nanoscale, and the advanced characterization tools required for understanding these properties. Magnetic nanostructures of interest include thin films, multilayers, graded layer structures, superlattices, nanoparticles, nanowires, nano-rings, nanotubes, 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; electron microscopy (Lorentz and holographic imaging, in-situ techniques, time / frequency resolution); advances in synchrotron methods and neutron scattering techniques; and novel near field imaging techniques including NV center-based imaging. Phenomena and properties of interest include magnetization reversal and dynamics (including ultrafast and THz dynamics), topology in nanoscale spin textures, spintronics, magnonics, magnetic interactions including anti-symmetric and antiferromagnetic exchange, magnetic quantum confinement, spin tunneling and spin crossover, proximity and structural disorder effects, strain effects, and thermal and quantum fluctuations.

Organizers:

1) Shireen Adenwalla (U Nebraska Lincon) sadenwalla@unl.edu (Lead organizer)
2) Tim Charlton (Oak Ridge National Lab) charltontr@ornl.gov
3) Alex Baker (Lawrence Livermore National Lab) baker97@llnl.gov
4) Luis Aviles-Felix (CNEA – CONICET) luis.aviles@ib.edu.ar

10.1.2 Emergent Properties of Complex Oxides: Bulk, thin films and heterostructures (GMAG/DMP/DCOMP)

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. Of special interest are the ways in which the spin, lattice, charge, and orbital degrees of freedom cooperate, compete, and/or reconstruct in complex 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. This is further enhanced in thin films and heterostructures, where these competitions might lead to a wide variety of interfacial

phenomena such as charge transfer, orbital reconstruction, quantum confinement, proximity effects, and modifications to local atomic structure. Novel magnetic interactions and ground states thus can emerge, generating exciting new prospects both for the discovery of fundamental physics and the development of technological applications.

This Focus Topic explores the nature of such ordered states observed in bulk compounds, thin films, heterostructures, superlattices, and nanostructures of these complex metal oxides. It will provide a forum for discussion of recent developments in theory, simulation, synthesis, characterization, and devices, with the aim of covering basic aspects and identifying future key directions in complex oxides. Associated with this complexity is a tendency for new forms of order, such as the formation of spin stripes, ferroic states, exotic spin-liquid phases with topological order and fractionalized excitations, 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. Advances in experimental techniques to probe and image magnetic order and transitions in complex oxide bulk materials and 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 topic sessions. As a rule of thumb, if magnetism plays a key role in the investigation, then the talk is appropriate for this Focus Topic.

Organizers:

1) Feng Ye (Oak Ridge National Laboratory) yef1@ornl.gov (Lead organizer)
2) Purnima Balakirshnan (NIST) purnima.balakrishnan@nist.gov
3) Divine Kumah (North Carolina State University) dpkumah@ncsu.edu
4) Kirrily Rule (ANSTO) kirrily@ansto.gov.au

10.1.3 Spin Transport & Magnetization Dynamics (GMAG/DMP/FIAP)

The generation, manipulation, and detection of spin currents in metals and magnetic heterostructures are of great interest for fundamental science and applications. Understanding fundamental spin-dependent transport physics, accompanied by progress in materials and nanoscale engineering, has already dramatically impacted technology. Discoveries like the giant and tunneling magnetoresistance have moved to applications, and concrete implementations of more recent discoveries, including magneto-thermal effects, spin-transfer torque, spin-Hall effects, and chiral domain walls, are imminent. This Focus Topic aims to capture experimental and theoretical developments in spin transport and magnetization dynamics in metallic and semiconducting systems, such as ultra-thin 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)Spin dependent thermoelectric phenomena such as giant magneto-thermopower and Peltier effects, spin-Seebeck and Peltier effects, spin and anomalous Nernst and Ettingshausen effects, spin entropy in hopping systems, dilute Kondo systems due to the resonant interaction of the magnetic impurities with free electrons, magnon electron drag in magnetically ordered systems, paramagnon carrier drag, and paramagnetic spin fluctuation systems; (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; and (viii)General considerations concerning spin angular momentum, energy, and entropy flow, conservation laws, and Onsager reciprocity relations.

Organizers:

1) Felix Casanova (CIC nanoGUNE) f.casanova@nanogune.eu (Lead organizer)
2) Joseph Sklenar (Wayne State) jnsklenar@wayne.edu
3) Vivek Amin (IUPUI) vpamin@iupui.edu
4) Marcus Guimaraes (Gronigen), m.h.guimaraes@rug.nl
5) Johanna Palmstrom (LANL), jpalmstrom@lanl.gov

10.1.4 Chiral Spin Textures & Dynamics, Including Skyrmions (GMAG/DMP)

Materials that display non-collinear or other complex magnetic textures are known to develop novel charge, heat, or spin transport characteristics. These properties are intrinsically related to the topology of the global magnetic spin arrangement. Understanding and mastering these phenomena may help reveal hidden order/dynamics in novel materials and offer exciting opportunities towards next-generation device applications. At large, the study of these topological spin textures is also relevant to fields as diverse as spintronics, nanomagnetism, neuromorphic and quantum computing, strong correlation, and thermal management. This Focus Topic will address the most relevant and recent developments, from materials to physical modeling and device technology, in the field of chiral magnetism. Specific areas include but are

not limited to: magnetic skyrmions (and more complex solitons) in various material architectures (bulk/thin-films/2D), chiral magnetization dynamics, spin-orbit torques, the physics and control of Dzyaloshinskii-Moriya interaction (DMI), DMI-induced non-reciprocity in spin waves, interfacial magnetism, topological transport phenomena, emergent electrodynamics, and novel devices based on non-trivial topological spin textures and dynamics. Advanced techniques to study chiral magnetism, 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, Transmission electron microscopy (e.g. Lorentz, off-axis holography), neutron scattering, and synchrotron-based techniques will also be included. The aim of this Focused Topic is not only to promote fundamental understanding of chiral magnetism but also facilitate innovative technology.

Organizers:

1) Joshua J Turner (SLAC) joshuat@slac.stanford.edu (Lead Organizer)
2) Alpha N'Diaye (LBNL) atndiaye@lbl.gov
3) Sujoy Roy (LBNL) sroy@lbl.gov
4) Chunjing Jia, (University of Florida)chunjing@phys.ufl.edu
5) Gong Chen (George Washington University) gc869@georgetown.edu

10.1.5 Quantum Spin Liquids, Candidate Materials, Models, and Predictions (GMAG/DMP/DCMP)

Quantum spin liquids (QSLs) are systems built from magnetic spins or pseudospins displaying long-range entanglement, quantized topological numbers, and other phenomena with no classical counterpart. This sorting category includes real candidate materials that exhibit proximate spin liquid behavior, as well as prototypical models manifesting different forms of ground states, including topologically ordered states with anyonic excitations. Also included are theoretical and experimental efforts towards the unambiguous characterization of QSL phases, such as theoretical classifications of possible QSLs, focused material searches, standard and novel experimental probes, and interpretation of experimental results aided by numerical simulations and first principles derivations of minimal models. Traditional candidate structures for QSL materials are frustrated networks of quantum pseudospins with particular interest in two-dimensional honeycomb, Kagome, and triangular lattices of heavy d- and f-block elements, for which strong spin-orbit coupling can induce highly anisotropic effective exchange interactions. The rare-earth pyrochlores and various Kitaev QSL candidates featuring enhanced fluctuations driven by competition between interactions on different bonds are prominent examples. The role of disorder and the development of many-body techniques that do not rely on semi-classical approximations, such as novel variational approaches, new numerical methods, and large-N expansions oriented to model the static and dynamical properties of QSLs are also part of this

category. Finally, machine learning assisted efforts oriented to discover new candidate materials and to characterize QSL states are also included under this focus topic.

Organizers:

1) Martin Mourigal mourigal@gatech.edu (Lead organizer)
2) Joe Paddison paddisonja@ornl.gov
3) Natalia Drichko drichko@jhu.edu
4) Goddard, Paul P.Goddard@warwick.ac.uk

10.1.6 Spin-Dependent Phenomena in Semiconductors, Including 2D Materials and Topological Systems (GMAG/DMP/FIAP/ DCOMP)

The field of spin-dependent phenomena in semiconductors addresses a wide range of new effects, materials systems [e.g., III-V and II-VI heterostructures, group-IV materials including Si, Ge, SiC, 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 and electrical, optical and magnetic properties of magnetic semiconductors, nanocomposites, and hybrid ferromagnet-semiconductor structures, including quantum dots, and nanowires; (iii) spin and valley dynamics in bulk (e.g. Si, Ge) and monolayer semiconductors (e.g. TMDs); (iv) spin-dependent electronic and thermal transport 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, magneto-electroluminescence, and resonance-driven spin pumping in organic semiconductors; (vii) spin-dependent devices and device proposals involving semiconductors; and (viii) spin-dependent properties (e.g. quantum anomalous Hall effects) in topological insulators and topological insulator/ferromagnet hybrid structures.

Organizers:

1) Kelly Luo yunqiuke@usc.edu (Lead organizer)
2) Carlos Rojas-Sanchez juan-carlos.rojas-sanchez@univ-lorraine.fr
3) Dali Sun dsun4@ncsu.edu
4) Igor Zutic zigor@buffalo.edu

10.1.7 Frustrated Magnetism (GMAG/DMP)

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. 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 magnetic frustration: valence-bond solids; spin singlets; Shastry-Sutherland systems; spin pyrochlores; spin nematics; topological magnons and other exotic ordered states; spin ices; classical spin liquids; order-from-disorder; the interplay of spin, lattice, and orbital degrees of freedom; and design, 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, as well as ferroelectricity. Note that quantum spin liquids (QSL) are now called in FT 10.01.05

Organizers:

1) Jeffrey Rau jrau@uwindsor.ca (Lead organizer)
2) Ludovic Jaubert, ludovic.jaubert@cnrs.fr
3) Andriy Nevidomskyy nevidomskyy@rice.edu
4) Judit Romhanyi jromhany@uci.edu

10.1.8 Low Dimensional and Molecular Magnetism (GMAG/DMP)

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 continue 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 (e.g. entanglement), and novel field-induced behavior.

Organizers:

1) Thirunavukkuarasu, Komalavalli komalavalli.thirunav@famu.edu (Lead organizer)
2) Michael Shatruk: shatruk@chem.fsu.edu

3) Shalinee Chikara: schikara@magnet.fsu.edu
4) Mark Pederson: mrpederson@utep.edu
5) Frank Nippe: nippe@chem.tamu.edu

March Meeting Task Force

Former GMAG Chair Steven Hill and current Vice-Chair William Ratcliff are serving on a Task Force that is examining how the APS can continue to provide optimal experiences for all participants, better respond to the emerging needs of various communities involved, address future growth, and connect people and speakers around the world. Further details can be found here: https://www.aps.org/meetings/task-force.cfm. Input from GMAG members is welcome! Please submit comments either through the above URL, or feel free to contact Stephen Hill (shill@magnet.fsu.edu) and William Ratcliff (william.ratcliff@nist.gov) directly.

2023 GMAG Election

The 2023 GMAG Election will take place in November 2023. In this election the GMAG members will elect a new Vice-Chair and two Members-at-Large for terms that will start in March 2024. In this election the GMAG members will also vote on an amendment to the bylaws that would add early career member(s) to the Executive Committee. Stay tuned.

Nominations for Members of the GMAG Executive Committee

GMAG requests nominations for the new Vice-Chair and the two new Members-at-Large of the Executive Committee. Nominations for these positions should be sent to **Greg Fuchs** (gdf9@cornell.edu), Chair of the GMAG Nominations Committee, before September 30, 2023. Per the GMAG Bylaws, after the GMAG Nominating Committee has prepared a slate of candidates, additional candidates may be added if >5% of the GMAG membership (i.e., more than ~57 GMAG members) petition. The Member-at-Large term of Gregory D Fuchs (Cornell University) and Satoru Emori (Virginia Tech) will end in March 2024. Marcelo Jaime will rotate off the GMAG Executive Committee when his term as Past Chair ends in March 2024. We thank all of them for their service to GMAG and its members.

Request for Magnetism Outreach Proposals

GMAG invites proposals directed towards educating non-scientists and the general public about the role of magnetism (https://engage.aps.org/gmag/honors/prizes-awards/request-for-magnetism-outreach-proposals). 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 high school labs 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 properly 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 also encouraged to consider alternate avenues for dissemination; this could include presentation of the results at an APS meeting. The GMAG Executive Committee will review proposals on an ongoing basis, strong consideration will be given to proposals received by **December 31, 2023**. 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 **Clarina dela Cruz** (delacruzcr@ornl.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).

Important Information

If selected, you will be required to complete a tax form and banking information as part of the APS Financial Disbursement procedures. 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 essential for the project. An APS statement on indirect costs is available on the Physics Outreach website.

Recently funded proposals for 2023 include:

- **Development of a Robust and Deployable Magnetic Speaker Construction Kit,**
  Prof. Daniel Shoemaker, Emily Waite, and Dr. Pamela Pena Martin,
  Department of Physics, University of Illinois, Urbana, IL.
  $2,700.00
- **Magnetism Kits for 3rd Grade Classrooms**,
  Cherie Bornhorst,
  Teacher in Residence Little Shop of Physics, College of Natural Sciences, Colorado State University, Fort Collins, CO.
  $4,800

Nominations for APS Prizes and Awards

The APS awards 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/ .

Ask your Colleagues to Join GMAG

For only $10 additional dues, APS members can become GMAG Members with the following benefits (students join for free!):

•Receipt of the 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.

GMAG will waive this fee for one year for new GMAG enrollees who are currently APS members. To take advantage of this offer, log onto my.aps.org and select 'Join an APS Unit.' At checkout there will be an option to add the coupon code "GMAG-JOIN-2023" after GMAG is

selected. This coupon code is valid for a free year of membership within GMAG until the next APS membership is up for renewal. Note that GMAG membership is always free for current student members of APS (up to two Divisions or Focus Topic groups). For more information about these offers, contact GMAG at aps-gmag@aps.org .

The GMAG Executive Committee

Position	Name	email
Chair	Clarina Dela Cruz	delacruzcr@ornl.gov
Chair-Elect	Cristian Batista	cbatist2@utk.edu
Vice Chair	William Ratcliff	william.ratcliff@nist.gov
Past Chair	Marcelo Jaime	mjaime@lanl.gov
Secretary/Treasurer	Sujoy Roy	beekman@magnet.fsu.edu
Members at Large:	Satoru Emori	semori@vt.edu
	Gregory Fuchs	gdf9@cornell.edu
	Judit Romhanyi	jromhany@uci.edu
	Stephen Wilson	stephendwilson@ucsb.edu
	Luqiao Liu	luqiao@mit.edu
	Saima A Siddiqui	saima.siddiqui@intel.com
APS Council Representative	Peter Schiffer	peter.schiffer@yale.edu

Reminder of Important Deadlines

Date	Event	Contact
August 18, 2023	GMAG Dissertation Award Nominations	Clarina Dela Cruz delacruzcr@ornl.gov
September 30, 2023	GMAG Officer and Executive Committee nominations	Gregory Fuchs gdf9@cornell.edu
October 20, 2023	March Meeting 2024 Abstract Submission Deadline	
November 23, 2023	Student Travel Award applications	William Ratcliff william.ratcliff@nist.gov

December 31, 2023	Outreach proposals	Clarina Dela Cruz delacruzcr@ornl.gov

Other Recent Magnetism-Related News

IUPAP Prize Winners

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. Refer to https://iupap.org/who-we-are/internal-organization/commissions/c9-magnetism/c9-news/ for news items from IUPAP C9.

The **IUPAP Early Career Scientist Prize in the field of Magnetism** is awarded every year to an early career scientist for theoretical or experimental work in fields of fundamental or applied magnetism. This award was initially established in 2006 to separately recognize theoretical/computational work and experimental work in magnetism, and awarded every three years at the International Conference on Magnetism (ICM). In 2016 it was converted to an annual competition to recognize a single winner for either theoretical or experimental work in magnetism. The award committee consists of members of the IUPAP Commission on Magnetism, together with past recipients of the IUPAP Magnetism Award and Néel Medal. All members of the magnetism community were invited to make nominations.

This year's 2023 IUPAP (C9) award will be presented to **Dr. Alannah Hallas** (University of British Columbia at the 2024 International Conference on Magnetism (ICM2024), to be held in Bologna, Italy, during June 30-July 5, 2024.

The IUPAP Executive Council and Commission Chair meeting took place in early July. A proposal to add the GMAG Chair as Associate Member has been approved. The proposal was officially ratified at the IUPAP General Assembly on July 14, 2022. The current wording says:

Commission on Magnetism (C9):

Clarina dela Cruz, Oak Ridge National Laboratory, USA, (Chair of the Topical Group on Magnetism (GMAG) of the American Physical Society, APS) as Associate member for 2023-2024, to be replaced by Cristian Batista, University of Tennessee-Knoxville, USA, for 2024- 2025 (who would then be Chair of GMAG).

Women in Magnetism Network

The IEEE Magnetics Society manages and maintains the "*Women in Magnetism*" mailing list which provides periodic updates on professional opportunities including invited speaker nominations, conference or Society related grants and awards, job openings and other professional opportunities. For example, the group moderators coordinate the Women in

Magnetism Networking event which is regularly held at MMM and Intermag conferences. The form to subscribe to this network is available at: https://ieeemagnetics.org/membership/community/women-magnetism

Though not focused on magnetism, you may also be interested in a complementary networking website that highlights women in physics: https://1400degrees.org/ and features many APS members.

Upcoming Conferences and Schools

- Around-the-Clock Around-the-Globe Magnetics Conference
  Virtual format. September 27, 2023
  https://www.atc-atg.org/

- 2023 International Conference on Neutron Physics and Neutron Scattering ICNPNS
  Montreal, Canada
  August 3-4, 2023
  https://waset.org/conferences-in-august-2023-in-montreal/program

- ICUSM 2023: 17. International Conference on Unconventional Superconductivity and Magnetism
  Barcelona, Spain
  October 23-24, 2023

- TMRC 2023 — 34th Magnetic Recording Conference: Solid State Magnetic Memory and Recording Technologies for >3 Tbits/in^2
  July 31-August 2, 2023
  Minneapolis, MN
  https://sites.google.com/umn.edu/tmrc2023/home

- TMAG 2023 — Trends in Magnetism 2023
  04 Sep 2022 - 08 Sep 2023
  Rome, Italy
  https://www.petaspin.com/tmag2023/

- ESM2023 — The European School on Magnetism 2023: Nanomagnetism for emergeing technologies
  4 Sep 2022 - 15 Sep 2023

Madrid, Spain and ONLINE
https://magnetism.eu/224-2023-school.htm#:~:text=ESM%202023%20will%20be%20held%20from%204%20to,Subscribe%20to%20the%20mailing%20list%20to%20stay%20tuned.

- 1st Conference of Magnetic Technologies and Clinical Applications in Neuroscience
  24 August 2023 – 25 August 2023
  University of Minnesota, MN, USA
  https://ieeemagnetics.org/event/conference/1st-conference-magnetic-technologies-and-clinical-applications-neuroscience

- 2023 International Conference of Asian Union of Magnetics Society (IcAUMS)
  14 August 2023 – 16 August 2023
  Bali, Indonesia
  https://ieeemagnetics.org/event/conference/international-conference-asian-union-magnetics-society-icaums

- MMM 2023 — 68th Annual Conference on Magnetism and Magnetic Materials
  30 Oct 2023 - 03 Nov 2023
  Dallas, TX, United States
  https://magnetism.org/

- SPIN 2023 Spin Electronics and Nanomagnetism Colloquium
  30 August 2023 – 2 September 2023
  Nancy, France

- SPIN Asia 2023
  September 24-29, 2023
  ChiangMai, Thailand
  https://www.spin-asia.com/

- 2024 Intermag Conference
  5 May 2023 - 10 May 2023
  Rio de Janeiro, Brazil
  https://intermag2024.org/