

# 62<sup>ND</sup> ANNUAL CONFERENCE ON MAGNETISM AND MAGNETIC MATERIALS PITTSBURGH, PENNSYLVANIA • NOVEMBER 6 - 10, 2017

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## STUDENT AWARDS and TRAVEL

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## FINAL CALL FOR PAPERS

**Abstract Submission Site Opens: June 5, 2017**  
**Abstract Submission Site Closes: June 23, 2017**

**SPECIAL VISA NOTICE:** If you plan to attend the 2017 MMM Conference, please make an appointment NOW to apply for your visa to visit the U.S. This application process may take 3–6 months, so we urge you to submit your application as soon as possible. To request a letter of invitation from the Conference, complete the online form at [www.magnetism.org](http://www.magnetism.org) under “Travel Guide, Visa Info”.

The 2017 MMM Conference will be held at The David L. Lawrence Convention Center in Pittsburgh, Pennsylvania, USA from November 6 to November 10, 2017. Members of the international scientific and engineering communities interested in recent developments in fundamental and applied magnetism are invited to attend the Conference and contribute to its technical sessions.

## IMPORTANT DATES

Abstract Submission Site Opens .....	June 5, 2017
<b>Abstract Submission Site Closes (deadline will be strictly observed).....</b>	<b>June 23, 2017</b>
Best Student Oral Presentation Award Application Deadline .....	June 23, 2017
Accept / Reject Notices Sent Via Email .....	August 11, 2017
Magnetism as Art Submission Site Opens .....	August 11, 2017
Hotel Reservations Opens .....	August 14, 2017
Conference Registration Opens .....	August 14, 2017
Child Care Grant Application Deadline .....	August 18, 2017
Student Travel Grant Application Deadline .....	August 18, 2017
Manuscript Submission Site Opens .....	September 5, 2017
Manuscript Submission Site Closes.....	September 26, 2017
Conference Registration Closes.....	October 16, 2017
Hotel Reservations Deadline .....	October 16, 2017
Magnetism as Art Submission Site Deadline .....	October 16, 2017

[www.magnetism.org](http://www.magnetism.org)



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**SCOPE OF THE CONFERENCE:** This Conference will include basic and applied science and technology related to the field of magnetism and magnetic materials. The technical subject categories are as follows:

**I. Fundamental Properties and Cooperative Phenomena**

- a. Electronic Structure
- b. Critical Phenomena
- c. Spin Glasses and Frustration, and Heavy Fermion Systems
- e. Superconductivity
- f. Low-Dimensional Systems and Molecular Magnets

**II. Magnetoelectronic Materials and Phenomena**

- a. Multiferroic Materials and Hetero-Structures
- b. Magnetoelectric Phenomena
- c. Complex Oxides (Bulk)
- d. Complex Oxides (Films and Hetero-Structures)
- e. Half-Metallic Materials
- f. Magnetoresistance, Magnetoimpedance, and Hall Effect
- g. Magnetic Semiconductors

**III. Spintronics - Fundamentals and Devices**

- a. Giant Magnetoresistance
- b. Tunnel Magnetoresistance
- c. Voltage-Controlled Magnetic Anisotropy and Switching
- d. MRAM, Magnetic Logic, and Related Devices
- e. Domains and Domain Wall Devices
- f. Skyrmions and Spin-Orbitronics
- g. Antiferromagnetic Spintronics
- h. Spin Injection and Spin Transfer Torques
- i. Spin Currents, Spin Pumping, Spin Hall, and Related Effects
- j. Spins in Graphene, Topological Insulators, and Other 2D Materials

**IV. Magnetization Dynamics and Micromagnetics**

- a. Magnetization Dynamics and Damping
- b. Spin Waves
- c. Domain Walls and Vortex Dynamics
- d. Ultrafast Switching
- e. Micromagnetic Modeling
- f. Hysteresis Modeling

**V. Soft Magnetic Materials**

- a. Ferrites and Garnets
- b. Crystalline Alloys
- c. Amorphous and Nanocrystalline Materials

**VI. Hard Magnetic Materials**

- a. Rare-Earth Transition Metal Borides
- b. Nanostructured Hard Magnetic Materials
- c. Intermetallic and Other Hard Magnetic Materials

**VII. Structured Materials**

- a. Thin Films and Surface Effects
- b. Multi-Layered Films and Superlattices
- c. Patterned Films
- d. Nanoparticle and Nanowire Arrays and Self-Assembly
- e. Nanoparticles and Nanowires (not in arrays)
- f. Exchange Bias
- g. 3D and Other Magnetic Structures

**VIII. Special Magnetic Materials**

- a. Magneto-Optic Materials
- b. Magneto-Elastic Materials
- c. Magneto-Caloric Materials
- d. Microwave and Millimeter-Wave Materials
- e. New Magnetic Materials

**IX. Magnetic Recording**

- a. Recording Media
- b. Write and Read Heads
- c. Energy-Assisted Recording
- d. All-Optical Recording and Other New Recording
- e. Recording Systems and Modeling

**X. Sensors, High Frequency Devices, and Power Devices**

- a. Magnetic Sensors (non-recording)
- b. High Frequency, Microwave, and Millimeter Wave Devices
- c. Transformers and Inductors
- d. Magnetics for Power Electronics and Control
- e. Shielding, Levitation, and Propulsion

**XI. Interdisciplinary Topics**

- a. Bio-Magnetism and Chemical Magnetism
- b. Biomedical Applications
- c. Magnetic Fluids and Separations
- d. New Applications

**XII. Magnetic Characterizations**

- a. Magnetic Microscopy and Imaging
- b. Instrumentation and Measurement Techniques

**PROGRAM:** The program will consist of invited and contributed papers falling broadly within the scope of the categories listed above. There will also be a tutorial session on Monday afternoon and special evening sessions during the week. The Program Committee is co-chaired by Yayoi Takamura and Mingzhong Wu.



@MMMConf



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**ABSTRACT CRITERIA:** To maximize your chances of acceptance, please follow the submission requirements and keep in mind the following abstract criteria:

- The abstract must report a substantial advance in the science of magnetism or magnetic materials.
- The advance in knowledge must be both original and significant.
- The work reported must be substantially complete, with specific reference to new results. Sufficient context and details must be included to allow the Program Committee to make an assessment of the work.
- The Program Committee wishes to permit as many groups as possible to present their work. Groups or individuals considering the submission of several related abstracts should, wherever possible, combine them into a single submission.
- The abstract must be written in clear English. If necessary, please have a native English speaker edit your abstract before submission.

**ABSTRACT SUBMISSION REQUIREMENTS:** Complete details on formatting your abstract and the online submission process may be found at [www.magnetism.org](http://www.magnetism.org) under “Authors-Abstract Submission”. Note that all abstracts must be submitted electronically. Abstracts sent via email, fax, or regular mail will not be processed or acknowledged. The presenting author must also be a paid registrant at the Conference. The Conference does not provide financial support or registration fee waivers for any presentations.

Important Deadlines:

- June 5, 2017: Abstract submission site opens.
- **June 23, 2017:** Abstract submission site closes. *This deadline will be strictly observed.*
- August 11, 2017: Authors will be notified via email regarding the status of their submission.

**INVITED PAPERS:** Some of the invited papers will be tutorial in nature, while others will review recent work in specialized fields. Invited speakers will be selected from the nominations received, and contacted by Program Co-Chairs around the first week of June. The Program Committee may also select certain contributed abstracts on important late-breaking results for upgrade to invited status. Invited talks will be 30 minutes long, followed by a 6-minute discussion period.

**PRESENTATION OF CONTRIBUTED PAPERS:** Contributed papers accepted for the Conference will be presented either as oral or poster presentations. Both oral and poster presentations are vital to the success of the Conference and are expected to be of similarly high technical quality.

Oral Contributed Presentations:

- Conventional format of a 10-minute talk by the registered author, followed by a 2-minute discussion period.
- Only LCD projectors will be provided.
- Authors are expected to bring their presentation on their own laptop computer along with a backup copy on a USB drive in case of laptop failure.
- All talks will be presented in this manner. No other presentation format is available.

Poster Presentations:

- Consist of well-prepared visual materials about the work posted on a designated board.
- A registered author must be present to provide details and answer questions during the first and last hour of the selected poster session times.
- Posting a copy of a paper is NOT appropriate and will be treated as a NO SHOW.
- Posters should be formatted in PORTRAIT/VERTICAL format.
- The surface area available is 46 inches (116 cm) wide by 94 inches (238 cm) high.
- The Conference provides a small sign designating the ID of the paper to be posted on each board and a small number of push pins for displaying the poster on the board.

No Show Policy: If any of the following applies, then the paper will be recorded as a “No Show” and will not be published.

- Papers that are listed in the program but NOT presented.
- Papers that are presented by an unregistered author or a representative.
- Papers that are presented by an unknowledgeable author or representative.

Authors are requested to indicate their preference for oral or poster presentations on the submission site; however, the Program Committee will make the final decision on the assignment of papers to specific sessions and the presentation format (oral or poster). Authors will be notified by email of their presentation format and specific session.

**PUBLICATION:** The conference papers will be published online in early 2018 as a special issue of *AIP Advances*. You can view all previously published MMM articles at <http://mmm.aip.org>. All accepted papers are identified by presentation IDs and will be **open access at no additional cost to the authors**. Detailed instructions on the preparation of manuscripts for submission to *AIP Advances* will be available on the Conference home page for authors whose papers are accepted for presentation at the Conference. The manuscript submission site will be available by September 5, 2017.



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- Paper length restrictions are as follows: 6,000 words for invited papers and 3,500 words for contributed papers.
- All manuscripts must be received by September 26, 2017. This deadline will be strictly observed.
- Post-deadline manuscripts will not be accepted and not forwarded for review.
- Papers must be presented at the Conference by an author registered at the Conference AND knowledgeable about the work in order to be published in *AIP Advances*.
- All manuscripts assigned to *AIP Advances* must be submitted through the AIP Publishing online submission system, PeerX-Press (PXP).
- Instructions for submission and accepted formats will be available at [www.magnetism.org](http://www.magnetism.org). Presenters of invited talks will receive separate submission instructions.
- Reviewing and revisions will be handled through the online system. Authors are reminded that review standards will mirror those used for regular articles submitted to *AIP Advances*, and that, because of time constraints, a second review may not be possible for resubmitted papers that were originally rejected.

**EXHIBITS:** An exhibition of related services, equipment, materials, software, and technical journals and books will be held as a part of the 2017 MMM Conference. Individuals and organizations that are interested in purchasing booth space or supporting the Conference events should contact Jennifer Fiske, Exhibits Manager, at [jennifer@mmmconference.com](mailto:jennifer@mmmconference.com). The Exhibitor Prospectus is available at [www.magnetism.org](http://www.magnetism.org) under “Supporters”.

**HOTEL:** The 2017 MMM Conference has negotiated special discounted rates for Conference attendees at two hotels close to the Conference venue, the David L. Lawrence Convention Center.

The [Westin Convention Center Hotel](#) is directly connected to the Convention Center. The special group rate for 2017 MMM Conference participants is **\$179 USD/single or double plus tax**. A very limited number of government rate rooms are available at the Westin from November 6-9, 2017 for U.S. Government employees. There are no student rate rooms at the Westin.

The [Omni William Penn Hotel](#) is located five blocks from the Convention Center. The special group rate for 2017 MMM Conference participants is **\$175 USD/single or double plus tax**. A limited number of student rate rooms are available at the Omni from November 4-9, 2017 for \$109 USD plus tax per night. Student IDs must be provided at check-in.

Hotel reservation links will be posted on the Conference website in August 2017.

**REGISTRATION:** Information on the Conference registration fees and an online registration link will be available on the Conference website in August 2017. Please note that the Conference registration fees do not include any meals during the Conference week.

**VISA REQUIREMENTS FOR ENTRY INTO THE USA:** Obtaining your visa to enter the USA for the 2017 MMM Conference may take 3-6 months for processing of your application and receipt of your visa. **For details that apply specifically to your country, please go immediately to the nearest U.S. Consulate or Embassy.** Review your visa status now to determine if you need a U.S. visa or visa renewal and to find out how to schedule an interview appointment, pay fees, and other vital instructions. To request a letter of invitation from the Conference, complete the online form at [www.magnetism.org](http://www.magnetism.org) under “Travel Guide, Visa Info”.

All nationals and citizens of **Visa Waiver Program (VWP)** countries who plan to travel to the U.S. for temporary business or pleasure for 90 days or less are required by law to obtain travel authorization prior to travel to the U.S. This authorization can be obtained online through the Electronic System for Travel Authorization (ESTA).

## FUTURE CONFERENCES

### 2018 Intermag Conference

April 23-27, 2018, Singapore, Singapore

### 2018 International Conference on Magnetism (ICM 2018)

July 16–20, 2018, San Francisco, California

### 2019 Joint MMM-Intermag Conference

January 14-18, 2019, Washington, DC

### 2019 Conference on Magnetism and Magnetic Materials

November 4-8, 2019, Las Vegas, Nevada

### 2020 Intermag Conference

May 4-8, 2020, Montreal, Canada

### 2020 Conference on Magnetism and Magnetic Materials

November 16-20, 2020, Fort Lauderdale, Florida

### 2022 Joint MMM-Intermag Conference

January 10-14, 2022, New Orleans, Louisiana



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**BEST STUDENT PRESENTATION AWARD:** This award is generously sponsored by the APS Topical Group on Magnetism (GMAG). This \$1,000 USD one-time fellowship recognizes and encourages excellence in graduate studies in the field of magnetism. Finalists will receive a \$250 USD one-year fellowship. For additional details on the nature of the award and the selection process go to [www.magnetism.org](http://www.magnetism.org) under “Students.”

**Congratulations to the winner and the finalists  
at the 2016 MMM Conference:**

**APS-GMAG Best Student Presentation Award:**

Winner: Jamileh Beik Mohammadi,  
University of Alabama (AB-09)

Finalists: Jeffrey Brock, Simon Couture, Arsham Ghasemi,  
Matthew Riou, and Pankaj Sethi

**Eligibility:**

- The nominee must be a full time graduate student expecting to graduate within one year of the 2017 MMM Conference.
- The student’s area of research may either be theoretical or experimental in any of the general technical and scientific areas normally presented as part of the 2017 MMM Conference.
- The student’s regularly submitted abstract must have been accepted for presentation through the normal abstract review process by the 2017 MMM Conference Program Committee.

**Student Award Application Procedure:**

1. Students must submit an abstract to the 2017 MMM Conference according to the standard submission guidelines and deadlines as outlined on the Conference website. Please DO NOT identify the abstract as part of the student award competition in the text of the abstract. The 2017 MMM Conference **abstract submission deadline is June 23, 2017.**
2. Students must also submit **an extended 2-page abstract of their presentation**, including the already submitted abstract number, **plus a short (300 words or less) explanation of their contribution to the work described and its significance**, directly to the Awards Chair, by the submission deadline of June 23, 2017.
3. Applications MUST be submitted via email as PDF attachments. Fax or mail submissions will not be considered. The email containing the student award application must have a subject line that reads “STUDENT AWARD - <APPLICANT’S NAME>”.
4. Submit extended abstracts via email to:

Claudia Mewes, University of Alabama

To: [StudentPresentationAwards@mmmconference.com](mailto:StudentPresentationAwards@mmmconference.com)

Subject: STUDENT AWARD – <APPLICANT’S NAME>

**STUDENT TRAVEL GRANTS:** The 2017 MMM Conference will offer travel grants to a limited number of students working in magnetism and magnetic materials. The grants are intended to partially offset travel costs (with the exception of Conference registration). Each Conference grant will be up to \$750 USD. Support is for current students only. Postdoctoral fellows or non-students are not eligible.

**2017 MMM Student Travel Grant Eligibility:**

- The student must be presenting a paper at the Conference.
- The student’s supervisor must submit a letter of endorsement.
- The student must NOT have previously received a MMM Conference or IEEE Magnetics Society travel grant.
- Only ONE application per research group will be accepted.
- Preference will be given to students who are nearing completion of their PhD graduate studies, although a limited number of Conference travel grants will be awarded to other graduate and undergraduate students.

**How to apply for a 2017 MMM Student Travel Grant:**

- Applications MUST be submitted online using the forms at [www.magnetism.org](http://www.magnetism.org) under “Students”.
- Incomplete or late applications and endorsement letters will NOT be considered.
- All students who will be presenting a Conference paper are eligible for travel support and, subject to the conditions stated above.
- Applicants will be notified of the committee’s decision in early September 2017.
- **The deadline for submitting applications and letters of endorsement is August 18, 2017.**

**CHILD CARE GRANTS:** There are a limited number of child care grants, up to \$400 USD each, for the 2017 MMM Conference participants who are bringing small children to the meeting or who incur extra expenses in leaving their children at home (i.e., extra daycare or babysitting services). Details about allowable expenses and an application form are available at [www.magnetism.org](http://www.magnetism.org) under “Travel Guide”. After acceptance of your presentation, applications for child care support may be submitted to [ChildCareSupport@mmmconference.com](mailto:ChildCareSupport@mmmconference.com). **The deadline for submitting applications is August 18, 2017.** Recipients will be notified upon approval of their application in early September 2017. A list of allowable expenses and receipts is due no later than November 27, 2017.



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## BEST POSTER AWARDS

**Eligibility:** All posters will be eligible for nomination for this award provided they meet the requirements and guidelines stated below.

- The presentations should consist of well-prepared visual materials about the work, posted on a designated board.
- It is required that an author be registered for the Conference and in attendance to present details and answer questions during the first and last hours of the designated session time.
- Because the award will be made at the session, it is recommended that the authors be present for the majority of the session.

### Nature of the Award:

- This award consists of a \$50 USD cash award, a certificate, and a Best Poster ribbon.
- The awards will be given during the last hour of each poster session and a ribbon will be attached to the winning posters.
- Winning posters will be prominently displayed through the remainder of the Conference.

### Selection Process:

- Nominations will be made by the individual session chairs and will be forwarded to the Poster Award Committee.
- The Poster Award Committee, comprised of session chairs, will then review all nominations and select the winner.
- Selections will be based on the level of the research, quality of the poster, and clarity of the presentation.

Information regarding the Best Poster Awards can be found at [www.magnetism.org](http://www.magnetism.org) under “Authors”.

## MAGNETISM AS ART SHOWCASE

The 2017 MMM Conference is pleased to announce a new event, “Magnetism as Art Showcase”, to highlight the beauty of magnetism and magnetic materials. Selected submissions to the showcase will be displayed at the Conference while all submissions will be posted to the Conference Facebook page (<https://www.facebook.com/MMMConference/>). Prizes will be awarded by a panel of judges as well as by popular vote. The awards (up to four) will each consist of \$50 USD cash and a certificate. The winners will be recognized at the evening session on November 8, 2017. More information on the submission requirements and an example of Magnetism as Art will be available at [www.magnetism.org](http://www.magnetism.org) under “Info/Magnetism as Art Showcase”. The submission site will open on August 11, 2017 and close on October 16, 2017. A submitter must be a registered attendee at the Conference in order to participate. If a submission is selected for display at the Conference, the submitter will be responsible for printing and transporting the entry to the Conference venue.

**ADDITIONAL INFORMATION:** To receive additional information about the 2017 MMM Conference, to be added to the Conference mailing list, or to update your mailing address, please contact [info@mmmconference.com](mailto:info@mmmconference.com). The latest information on the 2017 MMM Conference can be found at [www.magnetism.org](http://www.magnetism.org).



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