

# 2020 MMM Conference

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## Final Call for Papers

**Abstract Submission Site Opens: June 8, 2020**

**Abstract Submission Site Closes: June 30, 2020**

The 2020 Annual Conference on Magnetism and Magnetic Materials will be held as a virtual conference from November 2 – 6, 2020. Members of the international scientific and engineering communities interested in recent developments in fundamental and applied magnetism are cordially invited to attend the Conference and actively participate in its technical sessions. The Conference provides an opportunity to share your research and interact with a large and broad collection of magnetism researchers, and to learn about the most recent developments in the field. Up-to-date information on all aspects of the Conference can be found at [www.magnetism.org](http://www.magnetism.org). A compilation of this information is provided below.

We look forward to seeing you online in November, and to an exciting, enjoyable, and productive Conference.

**Christopher Marrows**  
*General Chair*

**Adekunle Adeyeye**  
*Program Co-Chair*

**Sean Langridge**  
*Program Co-Chair*

**Bethanie Stadler**  
*Program Co-Chair*

## Important Dates

**Invited Speakers and Symposia Nominations Site Reopens ..... June 1, 2020**

**Invited Speakers and Symposia Nominations Deadline ..... June 7, 2020**

**Abstract Submission Site Opens ..... June 8, 2020**

**Abstract Submission Site Closes (deadline will be observed) ..... June 30, 2020**

Best Student Oral Presentation Award Application Deadline ..... June 30, 2020

Abstract Status Notices Sent Via Email ..... August 14, 2020

Conference Registration Opens ..... August 17, 2020

Manuscript Submission Site Opens ..... September 10, 2020

Magnetism as Art Showcase Submission Deadline ..... September 29, 2020

Manuscript Submission Site Closes ..... October 1, 2020

Advance Conference Registration Closes ..... October 2, 2020



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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 and Phase Transitions
- b. Quantum Materials and Cooperative States: Superconductivity, Spin Liquids, Chem Insulators, etc.

**II. Magnetoelectronic Materials and Phenomena**

- a. Multiferroic Materials and Hetero-Structures
- b. Complex Oxides (Bulk, Films and Heterostructures)
- c. Half-Metallic Materials
- d. Hall Effect and 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. Neuromorphic Computing
- j. Spin Currents, Spin Pumping, Spin Hall, and Related Effects
- k. Spins in Graphene, Topological Insulators, and Other 2D Materials

**IV. Magnetization Dynamics and Micromagnetics**

- a. Magnetization Dynamics and Damping
- b. Spin Waves
- c. Micromagnetic 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 Alloys 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. Exchange Bias
- f. 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
- e. Education, Outreach, and Public Engagement in Magnetism

**XII. Magnetic Characterization**

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

**PROGRAM:** The program will consist of invited and contributed abstracts falling broadly within the scope of the categories listed above. The vast majority of the technical program, both talks and posters, will consist of pre-recorded material, with one or two flagship events livestreamed each day. These livestreams will be recorded and made available to registered attendees, along with all the pre-recorded content, for a period after the Conference. A tutorial session and career development events will also take place during the week.



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**ABSTRACT CRITERIA:** To maximize your chances of acceptance, 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 complete, with specific reference to new results. Lack of sufficient context and details may result in abstract rejection.
- 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 and the presenting author must be registered at the Conference. The Conference does not provide financial support nor registration fee waivers for any presenters.

Important Deadlines:

- June 8, 2020: Abstract submission site opens.
- **June 30, 2020: Abstract submission site closes.** *This deadline will be strictly observed.*
- August 14, 2020: Authors will be notified via email regarding the status of their submission.

Please note that we are re-opening for nominations of invited speakers and symposia (to allow for nominations from those who were not confident about committing to travelling to Florida). **The nominations site will reopen on June 1, 2020 and close on June 7, 2020.**

**INVITED PRESENTATIONS:** Individual invited presentations and symposia consisting of up to 5 invited presentations are an important aspect of the program. Invited speakers will be selected from the nominations received and will be contacted by Program Co-Chairs in late 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. Authors will be expected to be available to answer questions during a specified timeframe. Additional information about opportunities to interact with attendees for questions and answers will be shared at a later time.

**CONTRIBUTED PRESENTATIONS:** Contributed abstracts 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:

- The contributed presentation format is a 10-minute recorded talk by a registered author.
- Authors will be expected to be available to answer questions during a specified timeframe. Additional information about opportunities to interact with attendees for questions and answers will be shared at a later time.

Poster Presentations:

- Virtual posters will feature an electronic poster of well prepared visual materials about the work.
- Presenters will have the option to submit a short video (up to 90 seconds) in a pre-recorded presentation.
- The presenting author must be registered at the Conference and will be expected to be available to answer questions during a specified timeframe. Additional information about opportunities to interact with attendees for questions and answers will be shared at a later time.

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 are NOT presented virtually (no presentation file uploaded).
- Papers that are presented by an unregistered author.
- Papers that did not have a registered author available and responsive during designated question and answer time frame.

Authors are requested to indicate their preference for oral or poster presentations on the abstract 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.

Please follow our social media to receive the latest information.



@MMMConference



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# AIP Advances

**PUBLICATION:** Conference papers will be published online in early 2021 in *AIP Advances* as a special topic. *AIP Advances* is an open access journal published by AIP Publishing, and articles are freely available to read, download and share. All previously published MMM articles can be viewed at <http://mmm.aip.org>, and all published Conference papers are identified by presentation IDs. **All MMM Conference papers published in *AIP Advances* will be open access at no additional cost to the authors.**

Detailed instructions on the preparation of manuscripts will be available on the Conference website in early September for authors whose abstracts are accepted for presentation at the Conference.

- Paper length recommendations are 6,000 words for invited papers and 3,500 words for contributed papers. The length of the paper should be dictated by good use of journal space.
- All manuscripts must be received by October 1, 2020. This deadline will be strictly observed.

- Post-deadline manuscripts will not be accepted nor forwarded for review.
- In order to be published in *AIP Advances*, papers must be presented virtually by an author or representative registered at the Conference AND knowledgeable about the work.
- All manuscripts must be submitted through the AIP Publishing online submission system, PeerX-Press.
- Instructions for submission and acceptable formats will be available at [www.magnetism.org](http://www.magnetism.org).
- Reviewing and revisions will be handled through the online system. Editorial standards are the same as those used for regular articles submitted to *AIP Advances*. Due to time constraints, a second review may not be possible for resubmitted papers that were originally rejected.

**Advances in Magnetism Award:** *AIP Advances* will sponsor the second annual **Advances in Magnetism Award** presented at the 2022 Joint MMM-Intermag Conference in New Orleans, Louisiana. The Award will be presented to the best paper submitted as part of the 2020 MMM Conference. **To be eligible to win this exciting Award, you must submit your 2020 MMM Conference paper to *AIP Advances*. The winner will receive a cash prize of \$3,500!**

## Future Conferences

### 2021 Intermag Conference

April 26-30, 2021, Lyon, France

### 2021 International Conference on Magnetism

July 4-9, 2021, Shanghai, China

### 2022 Joint MMM-Intermag Conference

January 10-14, 2022, New Orleans, Louisiana

### 2022 Conference on Magnetism and Magnetic Materials

October 31- November 4, 2022, Minneapolis, Minnesota

### 2023 Intermag Conference

May 15-19, 2023, Sendai, Japan

### 2023 Conference on Magnetism and Magnetic Materials

October 30- November 3, 2023, Dallas, Texas



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**EXHIBITOR & SUPPORTER OPPORTUNITIES:** A virtual exhibition of related services, equipment, materials, software, and technical journals and books will be held as a part of the 2020 MMM Conference. Individuals and organizations interested in exhibiting or supporting Conference events should contact Jennifer Fiske, Exhibits Manager, at [jennifer@MMMConference.com](mailto:jennifer@MMMConference.com). The updated Exhibitor Prospectus will be available soon at [www.magnetism.org](http://www.magnetism.org) under “Supporters”.

**REGISTRATION:** Information on Conference registration fees and an online registration link will be available on the Conference website in August 2020.

**BEST STUDENT PRESENTATION AWARD:** This \$1,000 USD one-time fellowship for the winner 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 2019 MMM Conference:  
2019 Best Student Presentation Award  
sponsored by GMAG  
Winner: Shuuyuan Shi,  
National University of Singapore (DB-04)  
Finalists: Eloi Haltz, Takuya Kawada,  
Shreyas Muralidhar and Nitin Prasad**

**Eligibility:**

- The nominee must be a full-time graduate student expecting to graduate within one year of the Conference. Postdoctoral fellows, undergraduates or non-students are not eligible.
- 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 Conference.
- The student’s regularly submitted abstract must have been accepted as an oral presentation through the standard abstract review process by the Conference Program Committee, and the student must present the work at the Conference.

**Student Award Application Procedure:**

1. Students must submit an abstract to the Conference according to the standard submission guidelines and deadlines as outlined on the Conference website. **DO NOT** identify the abstract as part of the student award competition in the text of the abstract. The Conference **abstract submission deadline is June 30, 2020.**
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**, by the **submission deadline of June 30, 2020.**
3. Applications **MUST** be submitted to [StudentPresentation-Awards@MMMConference.com](mailto:StudentPresentation-Awards@MMMConference.com) as PDF attachments. The email containing the student award application must have a subject line that reads “STUDENT AWARD”.

**BEST POSTER AWARDS**

All posters will be eligible for nomination for this award provided they meet the following requirements:

- Virtual posters will feature an electronic poster of well prepared visual materials about the work.
- It is required that an author be registered for the Conference and submit a short video (up to 90 seconds) in a pre-recorded presentation.
- Selections, made by Poster Session Chairs, will be based on the level of the research, quality of the poster, and clarity of the presentation. Award winners will be announced during the Conference and prominently displayed on the Conference website.

**MAGNETISM AS ART SHOWCASE**

The 2020 MMM Conference will host a Magnetism as Art Showcase to highlight the beauty of magnetism and magnetic materials. Submissions will be displayed online and prizes will be awarded by a panel of judges as well as by popular vote.

Detailed information on the Showcase rules and submission requirements are available at [www.magnetism.org](http://www.magnetism.org) under “Info, Magnetism as Art Showcase”. **The submission site will close on September 29, 2020.** Submissions must be made by a registered Conference attendee in order to participate.

**ADDITIONAL INFORMATION:** To receive additional information about the 2020 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 2020 MMM Conference can be found at [www.magnetism.org](http://www.magnetism.org).



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