

Newsletter

February 2022

'Northern Lights': Aurora Borealis above Pinehouse Lake, Saskatchewan, Canada.
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Newsletter of the IEEE Magnetics Society

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From the President

By **Masahiro Yamaguchi**, *President of the IEEE Magnetics Society*

In this early part of the new year I wish you a wonderful and safe 2022! While we are greatly concerned by the spread of the new Omicron variant of COVID-19 and its social impact, our lives and businesses go on. I really wish things were different and that before too long we will be able to meet in-person in 2022.



I would like to start this column by congratulating the great success of the 2022 Joint MMM-INTERMAG conference, held in New Orleans, Louisiana in the USA, during 10-14 January 2022. This conference used a 'hybrid' format for the first time in the long history of INTERMAG and MMM, after we experienced a 'fully virtual' format for the MMM 2020 and INTERMAG 2021 conferences. As of 19 January 2022 we had 242 onsite participants out of 1507 total participants. One half of the participants were from the USA and others were from all over the world. I believe that this is a clear message that the community is eager to attend conferences in person. So, I would firstly like to address my deepest thanks and congratulations to Victorino Franco, General Chair of the conference, and his team for overcoming countless difficulties and uncertainties to make the meeting possible.

I extend my congratulations to all award winners for their achievements and impact on the community. All awardees were celebrated at the Plenary Session held as a live event of the conference. Ron Goldfarb, Secretary/Treasurer of the IEEE Magnetics Society, represented the Society as I could not join the conference in-person because of the travel restrictions of my country. I am happy to share that Bulent Sarlioglu (University of Wisconsin at Madison, USA), Guohan Hu (IBM Yorktown Heights, USA), Andrew Kent (NYU, USA), Ping Liu (University of Texas at Arlington, USA), Mark Stiles (NIST, USA), Baoxing Chen (Analog Devices, USA), and Heath Hofmann (University of Michigan at Ann Arbor, USA) were recognized as IEEE Fellows. Congratulations! The nomination period for Fellows ends on March 1 each year for the Fellow class of the following year. Nominations for women and from developing countries/area are particularly encouraged. Information on eligibility and nomination deadlines are available at the IEEE Fellows Nomination page: <https://www.ieee.org/membership/fellows/fellows-nomination.html>.

Allow me to continue my congratulations to younger participants: to Shabbir Tahir, Manisha Bansal, Hanae Kijima-Aoki, Shuang Xia, Vittorio Basso, Daigo Kosaka and Kai Wu for the Best Poster Award, Sujung Kim for the Best Student

Presentation Award, and Yong Hu, Daniel Casaleiz and Stefan Pollok for the Best Student Presentation Award Finalists.

The next INTERMAG conference will be held in Sendai, Japan, during 15-19 May, 2023. There will be a special open-house event featuring related Tohoku University laboratories. I am looking forward to meeting you there, hopefully in person.

The 2022 Annual Meeting of the IEEE Magnetics Society was held immediately after the Plenary Session. Ron Goldfarb, Secretary/Treasurer of the Society, led the session. Ron outlined details of the Society, gave a volunteers' update, encouraged submissions to our new open-access publication of IEEE Magnetics Society section in *IEEE Access*, and introduced our Society's history.

Please remember the IEEE Magnetics Society offers extended knowledge resources for you through the publications in the *Transactions*; *IEEE Magnetics Letters* and the new Magnetics Society Section of *IEEE Access*, which is an open-access journal, together with videos available at ieeetv.org. The Society's **web page** is the gateway to your knowledge.

I thank the outgoing elected Administrative Committee (AdCom) members—Elke Arenholz, David Jiles, Olga Kazakova, Nicoleta Lupu, Katsuji Nakagawa, Johannes Paulides, Gunter Reiss and Shinji Yuasa—for their service; and welcome Jonathan Bird, Kristen Buchanan, Xiufeng Han, Dafiné Ravelosona, Valeria Rodionova, Johan Swerts, Yoichiro Tanaka and Hideto Yanagihara as the new members.

A very special thank you to Bert Koopmans, Mathias Kläui, Tim Mewes and Masashi Shiraishi who served as outstanding Distinguished Lecturers (DLs) for our Society in 2020 and 2021. I would like to acknowledge the exceptional contribution of these DLs who served for two years rather than the normal one-year term and delivered their lectures mostly in virtual format because of the COVID-19 pandemic. It was indeed unfortunate that both DLs and local communities missed the chance of in-person interaction. Nevertheless, we will remember their important contribution and their inspiring message that should impact our community for a long time. Our Distinguished Lecturers for 2022 will be Jingsheng Chen, Michael E. Flatté, Aurélien Manchon and Tiffany S. Santos. You can find more information about the lecturers and lecture topics in the **previous edition** of the Newsletter.

The Conference Executive Committee finally made a site search trip to Latin-American countries to select the venue for INTERMAG 2024. The trip has been put off for 19 months because of the COVID-19 pandemic. This will be the first INTERMAG conference in Latin America ever since the Society was established in 1964. Rio de Janeiro, Brazil, has been selected after a tough discussion, as each proposal from three candidate

city was excellent. Congratulations Rio! I hope that this event will extend the opportunities for all members of our community to interact with people in Brazil and all Latin-American countries.

The second set of the Society's outreach videos is now published on [ieeetv](https://www.ieee.org/ieeetv). It consists of three-minute independent videos on spintronics, power magnetics, and biomagnetics. Each of them introduces the activities of the Society particularly in Asian countries. The second set targets the general public, particularly high-school students, their teachers and parents. Participants from Asian countries include appearances from Japan, China, Korea, Singapore, and Taiwan. Please refer the separate article by Sachiko Yamgauchi, leader of the project, in this issue of the Newsletter.

As always, please feel free to reach out to me by e-mail with feedback and suggestions for our Society.

Masahiro Yamaguchi can be contacted via email: masahiro.yamaguchi@ieee.org.

Hideo Ohno Receives the 2022 Achievement Award

Submitted by Jürgen Fassbender, Honors and Awards Committee Chair

Prof. Hideo Ohno from Tohoku University, Japan, has been awarded the 2022 Achievement Award of the IEEE Magnetics Society. This is the highest award bestowed by the Society, given in recognition of exceptional technical accomplishments in the field of magnetics.

The citation reads: *"For fundamental discoveries of spintronic phenomena and their applications in memory and computing technologies."*

Prof. Ohno received his doctorate in physics from the University of Tokyo. Subsequently, he joined the School of Engineering at Hokkaido University, Japan as Lecturer and Associate Professor.



In 1994 Prof. Ohno became a full professor at Tohoku University. From 2004 to 2010, he was the Head of the Laboratory of Nanoelectronics and Spintronics; from 2010 to 2018 he was Director of the Center for Spintronics and Integrated Systems. In 2018 Prof. Ohno became President of Tohoku University. From 1988 to 1990 he was a visiting scientist at the IBM T. J. Watson

Research Center in the USA. Prof. Ohno's research explores a broad range of subjects in spintronics that is world-class, as reflected by excellent papers and exceptionally strong citation record; h-index over 110, more than 93,000 citations, and 14 publications with more than 1000 citations.

One of the more important aspects of Professor Ohno's research is that it spans from fundamental phenomena, to the development of new materials that enable new technologies. The scope and impact of his research is truly spectacular; he is one of the giants in the field of magnetism. A consistent theme for his research is the development of novel materials and the exploration of new phenomena to enable low-power spin-based memory and processing.

Previous awards that Prof. Ohno has received include: the IBM Japan Science Award (1998), Japan Academy Prize (2005), JSAP Outstanding Achievement Award (2012), IEEE David Sarnoff Award (2012) and the Leo Ezaki Prize (2016). He received an Honorary Doctorate from the University of Lorraine, France in 2021. Now he receives the Achievement Award 2022 of the IEEE Magnetics Society.

Pallavi Dhagat Receives the 2022 Distinguished Service Award

Submitted by Jürgen Fassbender, Honors and Awards Committee Chair

Prof. Pallavi Dhagat from Oregon State University, USA, has been awarded the 2022 Distinguished Service Award of the IEEE Magnetics Society. In 2015 the Distinguished Service Award was established to honor outstanding service to the IEEE Magnetics Society, characterized by sustained voluntary service work, which has been significantly beyond the average performance of a person in that function.



The citation reads: *"For exceptional services to the IEEE Magnetics Society as seen in her outstanding leadership during the pandemic, her dedicated efforts to modernize the Society and implement new ways of work and communication through virtual conferences as well as promotion of professional and leadership development opportunities for early-career professionals and women in magnetism."*

Prof. Dhagat has been a member of the IEEE Magnetics Society for 25 years, starting first as a student member. She has served on program committees for several conferences, including as

program co-chair for INTERMAG in 2009 and 2012, and as the general chair for the MMM conference in 2017. As Newsletter Co-Editor (2007-2008) and Publicity Chair (2009-2010), she made Society communication more relevant to its members. She revamped the Society's website using modern software to facilitate content management without the need for programming skills. This website management framework is still in use today. Prof. Dhagat continues to contribute to Society publications as a member of the Editorial Review Board and an Associate Editor for *IEEE Magnetics Letters*. She has served as a member of the Technical Committee (2006), the Honors and Awards Committee (2016-2018), and the Administrative Committee (since 2007). Prof. Dhagat was elected as Secretary-Treasurer of the Magnetics Society for 2015-2016, President Elect in 2017-2018, and President in 2019-2020.

The Magnetics Society was fortunate to have been led by Prof. Dhagat during the pandemic. She had the unfortunate responsibility of managing the cancellation of INTERMAG 2020 and she played a leading role in organizing the transition of MMM 2020 and INTERMAG 2021 from in-person to virtual events. Her leadership at that time was highly effective: the two conferences had to be re-organized with a certain degree of haste. She established the new Mid-Career Award, the eligibility criteria for which, in a first, allows for career interruptions due to military service or family-care needs. Prof. Dhagat has been a champion for women in magnetism, encouraging their representation on the Society's working committees and helping coordinate activities for the group since 2012. For all of these efforts she is now honored with the Distinguished Service Award.

Ilya Krivorotov Receives the 2022 Mid Career Award

Submitted by Jürgen Fassbender, Honors and Awards Committee Chair

Prof. Ilya Krivorotov from UC Irvine, USA has been awarded with the 2022 Mid Career Award at the Joint MMM-INTERMAG conference in New Orleans, USA. The aim of this award is to recognize scientists and engineers at the mid-stages of their career for outstanding research and technological contributions in a field represented by the IEEE Magnetics Society. Eligible are members of the Society in the mid-stages of their career (typically between 10 to 20



years after completion of the PhD). This award fills a void between the Society's Early Career Award, limited to a nominee within 5 years of completion of PhD, and the Achievement Award, which recognizes a nominee for research that has demonstrated unusually high impact, regardless of stage in career. Following its inauguration in 2021, Prof. Krivorotov is the second recipient of this award.

The citation reads: *'For seminal contributions to the understanding of the interplay between spin transport and magnetization dynamics due to spin torques.'*

Prof. Krivorotov made seminal contributions to the understanding of spin transport and magnetization dynamics in nano-structures. Highlights of his work include discoveries of a new type of spin-orbit torque – the planar Hall torque, magnon condensation by spin Seebeck current, non-adiabatic magnetic stochastic resonance, giant resonant non-linear magnetic damping and chaos-driven magnetization reversal. In addition, he made significant contributions to the physics and applications of spin torques. Starting from early demonstration of spin torque nano-oscillators (STNOs), he made crucial experiments uncovering dynamic properties of STNOs. Recently Prof. Krivorotov has developed new classes of STNOs including thermo-magnonic torque STNOs, nanowire spin Hall STNOs and dual free layer STNOs. His recent discovery of planar Hall torque arising from spin transport in ferromagnetic conductors advanced our knowledge of spin-orbit coupled transport and dynamics.

Prof. Krivorotov received his bachelor and master degrees from the Tomsk State University, Russia. In 2002 he received his Ph D in Physics from the University of Minnesota, USA. After having spent four years as a postdoctoral research associate at Cornell University, USA, he became Assistant Professor at UC Irvine in 2005. In 2011 he was promoted to Associate Professor and in 2015 to Full Professor.

Qiming Shao Receives the 2022 Early Career Award

Submitted by Jürgen Fassbender, Honors and Awards Committee Chair

Prof. Qiming Shao from the Hong Kong University of Science and Technology has been awarded with the 2022 Early Career Award of the IEEE Magnetics Society at the Joint MMM-INTERMAG conference in New Orleans, USA. This award was established in 2016 in order to honor an individual, nominated not more than five years after completion of the PhD, and who has already shown outstanding scientific or technical achievements.



The citation for Prof. Shao's award reads: "*For contributions to exploring spin-orbit torque devices with quantum materials and systems.*"

Prof. Shao received his bachelor degree from Tsinghua University in 2013 and his PhD from the University of California, Los Angeles (UCLA) in 2019. After a

short postdoc stay at UCLA, he is now a tenure-track assistant professor in the Department of Electronic and Computer Engineering at the Hong Kong University of Science and Technology (HKUST) and the director of the Spintronic Quantum Material Laboratory (SQML).

Prof Shao is a recipient of the UCLA 2019 Distinguished PhD Dissertation Award and the 2019 Chinese Government Award for Outstanding Self-financed Students Abroad. He is the current chair of the IEEE Hong Kong Joint Chapter of Electron Devices and Solid-State Circuits and an active member of the IEEE Magnetics Society Hong Kong Chapter.

Prof. Shao has contributed to making a room-temperature topological-insulator-based perpendicular spin-orbit-torque (SOT)-MRAM device with record-high SOT efficiency. He has quantified the SOT efficiency from monolayer transition-metal dichalcogenides, which is among the first investigations on 2D materials. In addition, his works provide foundations for investigating SOT-driven skyrmion dynamics in insulators. For these groundbreaking achievements Prof. Shao has now received the Early Career Award of the IEEE Magnetics Society.

Search for New Editor of the Newsletter

By Tom Thomson, Publications Committee Chair

The Newsletter of the IEEE Magnetics Society is published four times per year and includes articles on activities, conferences, workshops and other information of interest to Society members, and other people in the area of applied magnetism.

The Society's Publications Committee is conducting a search for the next Editor of the Newsletter, ideally to start in early 2022. The qualified candidate should be a member of the IEEE and the Magnetics Society, and have a background in engineering, physics, materials science, or a related area; prior editorial experience is desirable.

The Editor manages the publication of the Newsletter, including the solicitation and editing of contributions to it. It is an unpaid, volunteer position.

The new Editor will have the full support of the outgoing Editor and the Publications Committee.

To apply, please submit a brief resume and letter outlining your qualifications and position statement to me via email at thomas.thomson@manchester.ac.uk. The current Editor, Gareth Hatch, is available to answer questions via g.p.hatch@ieee.org.

New Senior Members

The following members of the IEEE Magnetics Society were recently elevated to the grade of Senior Member:

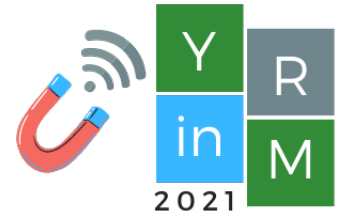
November 2021: Xiao Chen, Suryanarayana Jammalamadaka, Saima Siddiqui and Yasushi Takemura.

For more information on elevation to Senior Member, visit the [IEEE Senior Member Grade Web page](#).

5th Young Researchers in Magnetism (YRinM) 2021

By Alvaro Gallo-Cordova, Elena H. Sánchez and Irene Morales Casero, General Chairs of YRinM

The Young Researchers in Magnetism Conference (YRinM) is an international, cost-free initiative created five years ago



within the Joint Annual Meeting of the Spanish Chapter of the IEEE Magnetics Society and the Spanish Club of Magnetism (CEMAG). Since last year's edition, this initiative has been organised by PhD students and young postdocs following the same spirit of the AtC-AtG Magnetism Conference of the IEEE Magnetics Society.

The YRinM Conference is open to young researchers in every field of magnetism but, until this year, it was mainly attended by Spanish PhD students and postdocs working closely with the groups involved in the Chapter and/or CEMAG. Nevertheless, in the present edition, thanks to the support of the Society (as the result of winning one of the awards for student proposals for chapter initiatives), it has been possible to expand the conference so that PhD students and postdocs across the world have found a place to share their research and to expand their network in a relaxed and positive environment.

The 5th YRinM Conference took place at the University of Girona, Spain, during 10-11 November 2021, and used a hybrid format to allow for virtual participation. The organization was carried out by a team of 15 highly motivated young researchers in magnetism, from different institutions and universities

around Spain and a few from elsewhere, divided into the Organizing, Advisory, Abstract and Award Committees, and the Supporting Team.

The conference consisted of oral sessions with networking and poster sessions in-between. Thanks to the visibility provided by IEEE, there was a great reception for the event, as there were 137 registrations with 59 abstracts submitted. Furthermore, this year for the first time, the YRinM held the CEMAG Capturing Science contest, a scientific image competition. Contributions were received from eight different countries and exhibited the wide reach of the event compared to previous editions. It is worth mentioning that the selected contributions for oral presentations (23 out of 59) were also from young researchers in magnetism, following the spirit of an event from youth for youth.

3rd Joint Annual Meeting of the Chicago Chapters of the IEEE Magnetics Society and IEEE Nanotechnology Council

Submitted by Pedram Khalili, Chair of the IEEE Magnetics Society Chicago Chapter

On 3 December 2021, the Chicago Chapters of the IEEE Magnetics Society and IEEE Nanotechnology Council organized their third annual joint meeting. As in 2020, the meeting was held virtually, which provided the opportunity for participation of invited speakers and attendees from around the world, in addition to local participants from the Chicago area.

The meeting featured eleven invited talks by experts in the areas of nanotechnology and magnetism, which were presented in two morning and afternoon sessions. The speakers included two IEEE Distinguished Lecturers (DLs): Prof. Bert Koopmans from Eindhoven University of Technology, The Netherlands (Magnetics Society DL) delivered a talk titled "Femto-magnetism meets spintronics", and Dr. Elena Rozhkova from Argonne National Laboratory, USA (Nanotechnology Council DL) presented a talk on "Merging Nanotechnology and Synthetic Biology toward Directed Evolution of Energy Materials". The speakers also included the awardees of the inaugural IEEE Chicago Early Career Awards in Magnetics and Nanotechnology: Dr. Saima Siddiqui from the University of Illinois at Urbana-Champaign, USA (Magnetics Award winner) discussed her work on "In-memory computing with novel magnetic devices", and Dr. Rohit Batra from Argonne National Laboratory, USA (Nanotechnology Award winner) presented a talk on "Nanostructure self-assembling peptide discovery".

In addition to the IEEE DLs, in the morning session Prof. Axel

Hoffmann from the University of Illinois at Urbana-Champaign, USA, presented an engaging talk about "Hybrid Magnon Modes", and Dr. Nora Dempsey from the Institut Néel, CNRS and Université Grenoble Alpes, France discussed "Hard magnetic films, from model systems to micro-system applications". These talks were followed by two presentations in the Nanotechnology area by Prof. Matthew Rosenberger, University of Notre Dame, USA, titled "Nanometer-scale engineering and analysis of transition metal dichalcogenides with atomic force microscopy" and by Prof. Robert Hovden, University of Michigan, USA, who spoke about "Stabilizing 2D Charge Density Waves using Confined Polytypes".

The afternoon session included talks by Prof. Pramey Upadhyaya from Purdue University, USA who discussed "Quantum defect spin and magnet hybrids: a new platform for quantum spintronics", followed by Dr. Jie Xu from Argonne National Laboratory, USA who spoke about "Polymer engineering at nanoscale for skin-like electronics" and Prof. Bayaner Arigong of the Florida A&M University - Florida State University College of Engineering, USA, whose presentation was titled "Engineered Nanoparticle for RF/Microwave and Optical Application".

All of the talks were followed by interesting follow-up discussions among the speakers and the attendees. The meeting provided an excellent opportunity for learning and networking among the magnetism, spintronics, nanotechnology, and nanoelectronics communities. The two Chicago Chapters plan to continue organizing these events on an annual basis in future years.

Spain Chapter Activities in 2021

Submitted by José Miguel García-Martín, Spain Chapter Chair

First of all, I wish that all of our readers and their families are staying safe during these difficult pandemic times. Vaccines are our strongest weapon against SARS-CoV-2 and I do hope that all Society members are promoting their use.

Now, let me explain our activities in 2021. The new Board of the Spain Chapter was elected in February 2021: José Miguel García-Martín (Institute of Micro and Nanotechnology, CSIC) as Chair, Victor Manuel De La Prida (University of Oviedo) as Treasurer and Alfredo García Arribas (University of the Basque Country) as Past-Chair. Since then, we have been quite active, not only online but also recently with a successful hybrid event, as you will see below.

We have organized a series of virtual talks called "Experts from the Non-Academic World", co-hosted with the Italian Chapter, which will continue in 2022. The main objective of these talks is



Attendees of the 2021 Joint Annual Meeting of the IEEE Magnetics Society Spain Chapter and the Spanish Club of Magnetism (CEMAG), held at Girona.

to provide pre-doctoral students and early-career scientists in magnetism, insight into job opportunities beyond the academic world, and as a secondary objective to give senior researchers a view into the latest developments in industry. These are carried out in two parts; first, with a presentation by the expert of approximately 45 minutes, where the speaker presents his/her career, current job and its relationship with magnetism, and then a round of questions which lasted a maximum of 45 minutes. We have had two talks that can be now watched at YouTube.com:

- Dr. David García Gómez, from Airbus Defence & Space, talked on July 6th about electromagnetic compatibility in airplanes, especially when hit by lightning.

<https://www.youtube.com/watch?v=vvENRpbQXOI>

- Dr. Juan Luis Muñoz, from ESS (European Spallation Source)-Bilbao, talked on Sep. 20th about particle accelerators and the steelmaking industry.

<https://www.youtube.com/watch?v=n5bctc0Q3ug>

In October we held a three-day event called "IEEE Magnetics Collaboration Days Spain-Brasil-Chile", co-organized with the Society Chapters in Rio de Janeiro and Chile. The main goal was the strengthening of the Society in Latin America, a region with strong cultural and historical connections with Spain, by boosting collaborations among groups in these three countries.

In order to achieve this objective, 26 speakers from Spain, Chile and Brazil gave short online talks presenting their areas of research, facilities and recent results. Moreover, six additional talks were given by researchers from Argentina, México and Colombia, trying to encourage the spread of the Society in those countries in spite of the high cost of the IEEE membership fee compared to their average salaries. The event website was:

<https://sites.google.com/view/collab-days/magneticsociety>

and there are links there to watch the sessions held each day, via YouTube.

We also held two Distinguished Lecturer talks. Tim Mewes participated on 19 May 2021 at the online ESpinRed School on Spintronics, organized by the Spanish Network on Spintronics and coordinated by Prof. Fernando Bartolomé (INMA, CSIC – University of Zaragoza). Prof. Bert Koopmans joined us in person, for the Joint Annual Meeting of the IEEE Magnetics Chapter and the Spanish Club of Magnetism (CEMAG), held at Girona.

I would like to highlight that we had the largest attendance to date, for a joint annual meeting: about 130 attendees, 83 being in-person. The meeting took place during 10-12 November 2021 and comprised several activities: the Young Researchers in Magnetism event (YRinM), mentioned elsewhere in this edition of the Newsletter; a wonderful visit to the IMA factory (IMA is a company that makes magnets); the Prof. Koopmans DL talk; other talks (by a promising postdoc, Ester Palmero, and the awardees of the Salvador Velayos Prize, Prof. José Manuel Barandiarán and Prof. José Carlos Gómez Sal); and the general assemblies of CEMAG and the IEEE Magnetics Chapter.

All things considered, and despite the pandemic, 2021 was a year full of activities for the Chapter, expanding the scope of the Society and increasing the number of its members. The Chapter went from 69 to 80 members, i.e. a 16% increase. Let us hope that 2022 will see the end of the pandemic, and that more events will be celebrated in-person.

Conference Calendar

By *Gareth Hatch*, Newsletter Editor

Please check the conference websites shown below for the latest information on COVID-19-related schedule or format changes.

Magnetism 2022

28-29 March 2022 - York, UK.

3rd European Conference on Molecular Spintronics (ECMoIS 2022)

5-8 April 2022 - Dortmund, Germany.

25th Soft Magnetic Materials Conference (SMM25)

2-5 May 2022 - Grenoble, France.

Magnetic Frontiers: Quantum Technology

6-9 June 2022 - New York, New York, USA.

13th International Conference on the Scientific and Clinical Applications of Magnetic Carriers

14-17 June 2022 - London, UK.

7th International Conference on Microwave Magnetics (ICMM 2022)

19-22 June 2022 - Beijing, China.

The Joint European Magnetic Symposia (JEMS2022)

24-29 July 2022 - Warsaw, Poland and online.

7th Workshop on Magnonics (Magnonics 2022)

31 July - 4 August 2022 - Southern California, USA.

The European School on Magnetism 2022 (ESM2022)

11-23 September 2022 - Saabrücken, Germany.

International Conference on Fine Particle Magnetism (ICFPM 2022)

16-21 October 2022 - Yokohama, Japan.

67th Annual Conference on Magnetism and Magnetic Materials (MMM 2022)

31 October - 4 November 2022 - Minneapolis, Minnesota, USA.

To list your conference in the Newsletter Conference Calendar in a future edition, please contact the **Newsletter Editor**.

About the Newsletter

The purpose of the Newsletter of the IEEE Magnetics Society is to publicize activities, conferences, workshops and other information of interest to Society members and other people in the area of applied magnetics.

Contributions are solicited from Society members, Officers & other volunteers, conference organizers, local chapters, and other individuals with relevant material. The Newsletter is published quarterly on the Society webpage at: <http://www.ieeemagnetics.org>

Please send all contributions via email to the Newsletter Editor, Gareth Hatch, at: g.p.hatch@ieee.org

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