

Newsletter

May 2021



'Squirrel in the Forest': Domain structure of sintered magnets $(\text{NdDy})(\text{FeCo})\text{B}$.
Source: Oksana Koplak (Institute of Problems of Chemical Physics of RAS, Russia).

Newsletter of the IEEE Magnetics Society

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Editor: Gareth Hatch



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From the President

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

I hope that you and your families are staying safe and healthy. While our daily lives and businesses are deeply impacted by the COVID-19 pandemic, we will make difficult but necessary decisions to support each other and to continue to push the frontiers of magnetism.

Our Society has a stable membership of 3,000+ members: 36% in the Americas, 32% in Europe and 29% Asia-Pacific at present. We recently organized the INTERMAG 2021 conference in a fully virtual format, for the first time in the long history of the conference series. The event, which took place last month, was very successful with more than 1,500 registrants. Congratulations to Bernard Dieny, General Chair, and his team.

We will be also sponsoring the 2021 IEEE International Conference on Nanomaterials: Applications & Properties (NAP-2021), IV International Baltic Conference on Magnetism (IBCM-2021), Trends in Magnetism 2021 (moved from 2020), IEEE AIM 2021, Physics of Magnetism '21 (PM'21), TMRC 2021, 2021 Around-the-Clock Around-the-Globe Magnetics Conference, and Spin Caloritronics XI. Please visit the Conference Calendar on the Society's website for more details.

I would like to acknowledge the outgoing representatives who I did not mention in the last edition of the newsletter – Jianping Wang as Nanotechnology Council Representative and Yizheng Wu as International Relations Coordinator. I welcome new representatives Chih-Huang Lai as Nanotechnology Council Representative and Chanyong Hwang as International Relations Coordinator.

Montserrat Rivas is the new Chief Open-Access Editor of the Magnetics Society and serves as Associate Editor of the Magnetics Society Section of *IEEE Access*, since this section was launched in January 2021. Philip Pong is also newly appointed as an Associate Editor, and joins the TAB Committee on Standards as well.

Financially, our Society has adequate funds to buffer any losses. Committee chairs are discussing how to use the funds most beneficially for our membership.

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:
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Search for the next Editor-in-Chief of *IEEE Transactions on Magnetics*

By *Tom Thomson, Publications Committee Chair*

Pavel Kabos will retire as Editor-in-Chief of *IEEE Transactions on Magnetics* at the end of 2021 after 10 years of distinguished service since January 2012. We invite expressions of interest from members of the Magnetics Society to be the next Editor-in-Chief.

IEEE Transactions on Magnetics is a peer-reviewed journal that covers science and technology related to the basic physics and engineering of magnetism, magnetic materials, applied magnetics, magnetic devices, and magnetic data storage. *IEEE Transactions on Magnetics* publishes scholarly articles of archival value as well as tutorial expositions and critical reviews of classical subjects and topics of current interest. It is a hybrid open-access/subscription journal.

The new Editor-in-Chief will start in January 2022 with an initial two-year appointment and two possible re-appointments. The qualified candidate is expected to have a doctorate in engineering, physics, materials sciences, or a related area; at least five years of editorial experience; broad interest across the full spectrum of magnetism and magnetic materials and devices; an established network in the magnetics community; and project-management skills.

The Editor-in-Chief manages the operations of the journal with the help of an editorial assistant, recruits associate editors and members of the editorial board, examines incoming manuscripts for originality and scope, assigns them to associate editors to manage the reviews, and shapes and leads the journal. It is an unpaid, volunteer position.

The new Editor-in-Chief will have the full support of the outgoing Editor-in-Chief and the Magnetics Society Publications Chair and Associate Publications Chairs.

To apply, please submit your brief resume and a letter outlining your qualifications and position statement to me at **thomas.thomson@manchester.ac.uk**. Pavel is available to answer questions at **pavel.kabos@nist.gov**. Applications will be considered until September 1, 2021. The appointment will be subject to approval by the Magnetics Society Administrative Committee.

Joint Italy-Chicago Chapters Meeting

Submitted by Giovanni Finocchio, Italy Chapter Chair

On March 26, 2021, the Italy and Chicago Chapters of the IEEE Magnetics Society organized a joint virtual meeting, to promote international collaboration between Italian and American



researchers in the field of magnetism. The two Chapters agreed to host such meetings annually in virtual form, in future years.

The meeting was chaired by Professor Giovanni Finocchio from the University of Messina, and Italy Chapter Chair, and Professor Pedram Khalili Amiri from Northwestern University, and Chicago Chapter Chair. Organization of the event was shared with the Italian association Petaspin, which has been responsible for various virtual seminars and workshops in this period of pandemic.

During the meeting, more than 160 participants followed up-to-date contributions provided by five invited speakers.

The first was Claudia Mewes from the University of Alabama, who presented a talk on the “Computational frontier of spintronics materials”. Jie Shan of Cornell University, talked about “Engineering new magnetic states in twisted 2D magnets”. The third speaker was Jean Anne Incorvia from the University of Texas at Austin, presenting “Implementing advanced biological functions in artificial magnetic neurons and synapses for energy-efficient computing”. Eric Fullerton from the University of California San Diego, followed with “Dynamic symmetry breaking in chiral magnetic systems”. Peter Fisher from Lawrence Berkeley National Laboratory,

closed the day with “X-ray visualization of topological and geometry-induced 3D spin textures”.

All the talks motivated interesting follow-up discussions among the speakers and attendees, confirming the value of these virtual activities to the international magnetism community. The number of participants in those virtual activities is far larger than has been seen for in-person only meetings. The two Chapters will in future adopt hybrid approaches for such meetings, where attendees can participate either in person or online.

Special Journal Topic on Emerging Hardware for Cognitive Computing

By Ron Goldfarb, Associate Publications Chair

One of the Magnetics Society's co-sponsored open-access journals, *IEEE Journal on Exploratory Solid-State Computational Devices and Circuits*, is planning a special issue on emerging hardware for cognitive computing. The guest editor is Jean Anne Incorvia, a member of our Administrative Committee.

Topics of interest for cognitive computing include reconfigurable and tunable materials; magnetic and resistive

memory (e.g., MRAM, RRAM, PCM, FeFETs); and materials and devices (e.g., low dimensional, spintronic, ionic). Manuscripts on prototypes, simulation, and theory are welcome.

The manuscript submission deadline is 15 July 2021; the target publication date is 30 September 2021. More information will be posted on the JxCDC website at <https://sscs.ieee.org/publications/ieee-journal-on-exploratory-solid-state-computational-devices-and-circuits-jcdc>.

New Senior Members

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

February 2021: Nikolai Chechenin, Yi Chen Mazumdar, Margarita Norambuena, Gwan Soo Park, Radu Andrei Tanasa, He Zhang, Zongzhi Zhang and Nerija Zurauskiene.

April 2021: Radhika Barua, Richard Dorrance, Jean Anne Currivan Incorvia, Adam Mehrabani and Bobby Rich.

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

Conference Calendar

By **Gareth Hatch**, Newsletter Editor

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

26th International Workshop on Rare Earth and Future Permanent Magnets and their Applications (REPM2021)

7-10 June 2021 - online.

IEEE Advances in Magnetism 2020/2021 (AIM 2020/2021)

13-16 June 2021 - online.

17th International Conference on Molecule Based Magnets (ICMM2021)

14-18 June 2021 - online.

16th European Conference Physics of Magnetism (PM'21)

28 June - 2 July 2021 - online.

2021 Topological Matter Conference

28 June - 2 July 2021 - Sant Feliu de Guíxols, Spain / online.

The Magnetic Recording Conference (TMRC 2021)

16-19 August 2021 - online.

IV International Baltic Conference on Magnetism 2021 (IBCM-2021)

29 August - 2 September 2021 - Svetlogorsk, Russia / online.

Trends in Magnetism 2021 (TMAG2021)

6-10 September 2021 - Cefalù, Italy / online.

European School on Magnetism 2021 (ESM 2021)

6-17 September 2021 - Cluj-Napoca, Romania / online.

2022 Joint MMM-INTERMAG Conference

10-14 January 2022 - New Orleans, Louisiana, USA.

Magnetic Frontiers 2022: Quantum Technology

25-28 April 2022 - New York, New York, USA.

25th Soft Magnetic Materials Conference (SMM25)

9-12 May 2022 - Grenoble, France.

11th International Conference on Fine Particle Magnetism (ICFMP 2022)

30 May - 3 June 2022 - Yokohama, Japan.

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

Request for Cover Image Submissions

By **Gareth Hatch**, Newsletter Editor

Each edition of the Newsletter features images from the art-related competitions at the INTERMAG and MMM conferences, and from elsewhere. I continue to invite image submissions directly from IEEE Magnetics Society members, to potentially feature on the cover of future editions.

Please send your high-resolution image submissions to me at g.p.hatch@ieee.org with a caption or title for the image, a brief technical description, the name of the creator of the image, and their organization or affiliation.

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 magnetism.

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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