

A message from the president



Photo by Jim Høyer,
University of Copenhagen.

I would like to wish all the members of the European Mathematical Society a happy new year, and I would like to extend these wishes to every reader of the EMS Magazine as well, but if you are not a member of the EMS please consider signing up.

A new year means we have to say goodbye to many people that have worked hard for the EMS throughout our many committees, both the Executive Committee and our standing committees. It of course also means welcoming all the new members. I would like, in particular, to thank our retiring EMS vice president Beatrice Pelloni who has worked tirelessly for the EMS. She has been instrumental in setting up our EMS Young Academy (EMYA), and for ensuring that this is one of the real success stories of the EMS from the past years. Beatrice was also a driver for many other activities of the EMS, such as the EMS Topical Activity Groups (TAGs). Her enthusiasm and wisdom will be missed on the Executive Committee. Beatrice will continue as officer for another EMS, namely the Edinburgh Mathematical Society, one of the member societies of the European Mathematical Society, and I am looking forward to working with her in that role. As I already mentioned in my last message, we are lucky that the council elected current EC member Victoria Gould is willing to replace Beatrice as vice president of the EMS. The EMS Executive Committee is also saying goodbye to Frédéric Hélein and Luis Narváez Macarro. Frédéric, in particular, has been very engaged with the politics of scientific publications, and I am very happy that he has agreed to stay on at our Committee for Publications and Electronic Dissemination, so our collaboration will continue. Luis has decided to devote more time to his research and some big ongoing projects. Luis is the kind of person every committee needs. Someone who stays out of heated discussions to then conclude them with decisive and insightful input. I wish Luis all the best with all his future projects. In my last message I already welcomed our new EC members María Ángeles García Ferrero (from EMYA), Adam Skalski, and Alain Valette. Maria, Adam, and Alain have already participated in our EC meetings for this fall, as in the recent great and successful meeting in Turin.

Let me also use this opportunity to thank all the outgoing members from our standing committees. The EMS is indebted to their hard work:

- Applications and Interdisciplinary Relations (CAIR): Thierry Horsin;
- Developing Countries (CDC): Bengt-Ove Turesson (chair), Sophie Dabo-Niang, and Francesco Pappalardi;

- Education: Gregoris Makrides (chair), Tinne Hoff Kjeldsen (vice chair), Jürg Kramer, Csaba Szabó, and Ayşe Berkman;
- Ethics: Patrizia Donato;
- European Solidarity: Roland Duduchava and Alice Fialowski;
- Meetings: Julio Moro Carreño (chair) and Monika Ludwig;
- Publications and Electronic Dissemination (PED): Olaf Teschke (chair), Thierry Bouche, Fatiha Alabau-Boussouira, Vittorio Coti Zelati, Tomaž Pisanski, and José Miguel Urbano;
- Mathematics Outreach and Engagement: Chris Budd, Kristóf Fenyvesi, Marianna Freiberger, and Sophia Jahns;
- Women in Mathematics (WiM): Alessandra Celletti and Shiri Artstein.

I am also very grateful that several people have accepted the non-trivial task of being new chairs of committees: Balázs Szendrői (CDC), Christophe Ritzenthaler (ERCOM, European Research Centres on Mathematics), Klavdija Kutnar (Meetings), and Evelyne Miot (PED).

On the publication side, Laure Saint-Raymond is stepping down as editor-in-chief of the EMS Surveys and François Golse has accepted to replace her and join Gerard van der Geer on the EMS Surveys editor-in-chief team. Thanks to Laure for all the amazing work she has put into making the Surveys a great success and to François for carrying on the torch.

So what are we planning to do in the EMS in the coming year? In the past few years the EMS has started several new activities: the EMS Young Academy (EMYA), Topical Activity Groups (TAGs), and Strategic Activities. The Strategic Activities were paused for several reasons, but it is our hope to restart these soon. We think, however, that the time has now come to engage more with research and educational politics. We are considering forming a few working groups to support us in this endeavor and have already started a working group to engage with the European Research Council – an EMS-ERC working group that, among other things, should support the ERC in their goal to promote diversity in the group of applicants and grantees in mathematics. I am glad that Pavel Exner, Eduard Feireisl, Sara van de Geer, Kathryn Hess, Volker Mehrmann, Piotr Nowak, Marie-Francoise Roy, Wil Schilders, Susanna Terracini, and Ulrike Tillmann have joined me in this group.

Lastly, I ask you to please mark your calendars for some of our forthcoming conferences. In June 2025, we will have the second Balkan Mathematical Congress BMC II in Thessaloniki, Greece and in less than a year from now in January 2026, the EMS will join colleagues in India to have a joint mathematics meeting in Pune, India. I hope to see many of you at these conferences.

For now, I wish you all a healthy and productive 2025.

Jan Philip Solovej, President of the EMS

Brief words from the editor-in-chief



Dear Readers of the EMS Magazine,

This issue is the last one of 2024. The balance of this year is very positive: the published articles cover a variety of topics, as they range from interviews to articles on scientific themes, education, gender, generational opportunities, and equity. Furthermore, our articles continue to attract the at-

tention of other societies. Some articles originally published in the Magazine have been requested for republication in other English-language publications, such as the ICIAM Newsletter, *ICIAM Dianoia*, or translated into Chinese for *Mathematical Advances in Translation*, a publication of the Chinese Academy of Sciences.

This issue will also be the last one with Michael Th. Rassias as editor. He will conclude his second four-year term as editor in charge of the "Problem corner" section on the last day of 2024. I would like to thank him for the exceptional work he has done over

the years in making this section consistently engaging and dynamic by suggesting and collecting challenging new problems, some of which were proposed by the most prominent mathematicians in the field, including several Fields medalists and Abel Prize winners.

As usual, this issue will contain many interesting articles on a wide range of topics. Without diminishing other contributions, I would like to particularly highlight the following: with this issue, we are starting a series of articles presenting the work of the 2024 winners of the ten EMS Prizes, the Felix Klein Prize, the Otto Neugebauer Prize, and of the two new prizes: the Paul Lévy Prize in Probability Theory and the EMS/ECMI Lanczos Prize. In this issue, we begin with the article "Learning large-scale industrial physics simulations" by the Felix Klein Prize winner Fabien Casenave.

Finally, I conclude by wishing all of you a *new year* full of discovery, inspiration, and sharing of knowledge.

Donatella Donatelli
Editor-in-chief