

## IMU News 113: May 2022

A Bimonthly Email Newsletter from the International Mathematical Union

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### 1. EDITORIAL: THE 19TH IMU GENERAL ASSEMBLY AND VIRTUAL ICM 2022

The last couple of months have been like a bumpy ride on a roller coaster, preparing for the 19th General Assembly (GA) and first [virtual International Congress of Mathematicians](#) (ICM), which are only one month away.

The IMU Executive Committee (EC) decided at its meeting in February 2022 that it would be impossible to host the scheduled ICM and GA in St Petersburg, due to the brutal and unprovoked Russian invasion of Ukraine (see our editorial in [IMU News 112](#) of March 2022 for further details and background). Furthermore, the EC decided to take over the organization of a virtual ICM, to be held over the same period as the original ICM (6–14 July 2022), with free participation for all, and an in-person GA, taking place on the same dates as originally scheduled, namely 3–4 July 2022.

This decision gave us about 4 months to organize these two large scale and rather distinct events. Let us start with the GA, which is a rather intense two-day business meeting with 200+ participants. Here elections will be carried out, budgets decided, and the venue for the ICM in 2026 will be selected, in addition to many other decisions that set the direction of the IMU for the coming four years. It is important for the legitimacy of the decisions that are taken that as many of our members as possible are present. In 2018, the IMU decided to offer partial travel support for one delegate from each member, in addition to covering accommodation expenses for all delegates. In a similar spirit, the IMU decided, prior to the invasion, to do the same in 2022. We accepted a generous offer from Finland and the Council of Finnish Academies, to host the GA in Helsinki. The IMU shares a long history with Finland – the ICM in 1978 was in Helsinki and the IMU Archive was also located there before it was moved to Berlin in 2011. And Helsinki will see the first awarding of the IMU Abacus Medal this year, partially funded by the University of Helsinki. In March 2022, we made a site visit to the conference center in Helsinki where the GA will take place, and we

are convinced it will be a great success. Parallel to these preparations, we have communicated with delegates, and we are happy to report that despite the dramatic changes worldwide following the pandemic and the invasion, we will welcome about as many delegates at the GA in Helsinki as in São Paulo in 2018. We are very grateful to our Finnish colleagues for their rapid response and active support.

Let us now turn to the ICM. We started right away to re-establish contact with all speakers, re-inviting those that had declined the first invitation, and collecting titles and abstracts for their talks. At the same time, we investigated various options regarding the platform for the virtual ICM. Ultimately we accepted an offer from the K.I.T. Group, a subsidiary of the Messe Berlin GmbH group of companies, which is based in Berlin. The lack of additional funding and staff has posed a serious challenge throughout the planning. We decided to organize the program according to Central European Summer Time (CEST). Knowing that this could potentially be problematic for speakers located in completely different time zones, each speaker was given the choice between giving a live talk or submitting a prerecorded talk. We are happy to report that as of now, about 2/3 of the talks will be given live. In addition, the so-called [ICM Satellite Coordination Group](#) is working independently of the IMU to organize various overlay events in conjunction with the virtual ICM. We are grateful to this group for their efforts. To develop the platform for the virtual ICM is no small task, and we are immensely grateful to the Heidelberg Laureate Forum Foundation for their generous financial support.

The production of the ICM Proceedings, a tradition going back to the ICM in 1893, is well underway. The 6 volume proceedings will be published by EMS Press and posted with free access on the IMU website as all previous proceedings.

The present situation does allow for a rather unique event – on 5 July, the day after the GA, we will organize a live award ceremony at which all the coveted IMU prizes will be announced, in particular, the Fields Medals and the inaugural IMU Abacus Medal. On the opening day of the virtual ICM on 6 July, we will take advantage of the fact that the Fields Medalists and the IMU Abacus Medalist will all be present in Helsinki, with the recipients giving their plenary talks live in front of an audience. Of course, their lectures will also be streamed via the virtual ICM platform for those who are not fortunate enough to be in Helsinki on the day.

The virtual ICM will soon open for registration. Due to the tight time schedule, the platform will develop nonstop, and we expect it to be complete only one week before the opening.

As we are writing this editorial, the preparations from our side are well on their way. We will continue to keep a close eye on the process, and trust that – despite the many challenges – the events will turn out to be a success in the end.

Berlin, 30 May 2022

*Carlos E. Kenig*  
*IMU President*

*Helge Holden*  
*IMU Secretary General*

## 2. NEWS FROM THE COMMISSION FOR DEVELOPING COUNTRIES (CDC)

**Virtual Volunteer Lecturer Program.** IMU-CDC Volunteer Lecturer Program fosters international cooperation by offering financial assistance to universities in developing countries to host a volunteer lecturer for a 3-4-week intensive course. The new strand *Virtual Volunteer Lecturer Program* (VVLP) aims to support lectures to take place remotely. In the case of lectures developed partially on line and partially in-person the host institution has to apply to the VLP.

The course given by the volunteer should be part of a regular mathematics undergraduate or master's degree program at the hosting university, in subjects where the applicant university could have a lack of expertise. Only host institutions can apply for the grant in the VLP. This program is partially funded by the American Mathematical Society and the Niels Henrik Abel Board.

Funding can cover the expenses of the Volunteer Lecturer up to €4400 in the case of in-person teaching. Additionally, in both cases, the grant can support preparation of course material (printing, photocopying, books) up to €1000 and possible expenses for the acquisition of material or use of services to conduct lectures entirely or partially in the online format up to €2000.

IMU-CDC encourages applications to VLP and VVLP by September 1, 2022, for lectures to be held after January 1, 2023.

We recommend consulting the details and subsequent deadlines at the [program's webpage](#).

**CDC Panel Discussion during the virtual ICM 2022.** The IMU-CDC organizes at this year's virtual International Congress of Mathematicians a panel session:

*CDC Panel Discussion*

*Date:* Tuesday, July 12, 2022

*Time:* 2:15PM – 4:15PM (CEST)

The topic of the virtual panel session is *Online International Cooperation in Mathematics: Challenges and Opportunities for Developing Countries*. The panel session will host eight speakers from organizations and institutions across the continents, such as those that work on increasing capacities within developing countries, those focusing on education and gender within mathematics, as well as institutions from the developing regions themselves.

Panelists and the represented organizations:

- Olga Gil Medrano, IMU Commission for Developing Countries (IMU-CDC)
- Anjum Halai, International Commission on Mathematical Instruction (ICMI)
- Marie-Françoise Roy, IMU Committee for Women in Mathematics (IMU-CWM)
- Christophe Ritzenhaller, Centre International de Mathématiques Pures et Appliquées (CIMPA)
- Claudio Arezzo, International Centre for Theoretical Physics (ICTP)
- Mama Foupouagnigni, African Institute for Mathematical Sciences Global Network (AIMS)
- Guillermo Cortiñas, University of Buenos Aires, Argentina
- Edy Tri Baskoro, Institut Teknologi Bandung (ITB), Indonesia

Join us at the CDC Panel to learn about the challenges of mathematicians and institutions in developing countries, and the initiatives and programs of various organizations to promote international cooperation despite challenges in global mobility, in particular how communication technology can be harnessed to reach mathematicians all over the world.

To participate in the panel, registration for the ICM2022 is mandatory. Information on how to sign up for the ICM will be put up soon on the [virtual ICM website](#). Stay tuned!

[Olga Gil-Medrano](#)

[Secretary for Policy of the CDC](#)

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### 3. NEWS FROM THE COMMITTEE FOR WOMEN IN MATHEMATICS (CWM)

**Program and registration for (WM)<sup>2</sup>, July 1 and 2, 2022.** The second edition of (WM)<sup>2</sup> World Meeting for Women in Mathematics is a mostly virtual event taking place on July 1-2, 2022.

The program features on July 1 a virtual session with four plenary lectures by distinguished female mathematicians from the region where (WM)<sup>2</sup> 2022 was originally planned to take place. The lecturers are Mina Aganagic, Eugenia Malinnikova, Natalia Maslova and Maryna Viazovska. More information about them can be found [on this page](#). This is followed by a panel discussion "[Girls and Mathematics: reflections and initiatives](#)", dedicated to the memory of Yulia Zdanovska

The program on July 2 is devoted to Olga Alexandrovna Ladyzhenskaya (OAL) in a joint session organized by (WM)<sup>2</sup> and the Probability and Mathematical Physics conference. The [OAL Celebration](#) starts with the premiere of a film about OAL and her influence, and continues with the awarding the OAL Prize: presentation of the OAL Prize by Ingrid Daubechies, announcement of the Prize Winner, Laudatio and Prize Winner Lecture. The Laudatio and the Prize Winner Lecture will take place live in Helsinki and are also part of the virtual (WM)<sup>2</sup>.

For the program and registration for the meeting (which is free!) please visit [this page](#).

**Best practices towards a more diverse and inclusive mathematical community.** A joint panel will be organized by the IMU Committee for Women in Mathematics (CWM) and the IMU Committee on Diversity (CoD) during the virtual ICM 2022. It will be broadcast on Friday July 8, 14:15-16:15 (CEST). The moderators are Motoko Kotani (CWM) and Edray Goins (CoD). The panelists are Carolina Araujo (CWM), Edy Tri Baskoro (CoD), Nira Chamberlain, Anjum Hala (CoD), Ekin Ozman (CWM) and Marie-Françoise Roy (CWM). More information can be found on [this page](#).

**CWM Newsletter Issue 7, May 2022.** On this issue of the Newsletter from the Committee for Women in Mathematics:

- Program of (WM)<sup>2</sup> 2022, the virtual World Meeting for Women in Mathematics
- Interview with CWM member Ekin Ozman
- News From CWM (CWM 2022 call result and much more)

- Other News and Announcements (prizes and honours to very successful women mathematicians, meetings, reports etc)
- Article about the great influence of Olga Alexandrovna Ladyzhenskaya on the developments in Partial Differential Equations and Mathematical Physics in the 20th century written by Panagiota Daskalopoulos.

Click [here](#) for the CWM Newsletter Issue 7 in PDF.

Subscribe to CWM Newsletter [here](#).

[Marie-Françoise Roy](#) and [Carolina Araujo](#)  
Chair and Vice-chair of the IMU [Committee for Women in Mathematics](#)

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#### 4. IMU SIGNS THE SCIENCE IN EXILE DECLARATION

The [Science in Exile initiative](#) has launched the declaration [Supporting at-risk, displaced and refugee scientists: A call to action](#), and the IMU has signed it. The initiative came from the [International Science Council](#) (ISC).

Specifically:

- The Science in Exile mission is to enhance the work and lives of at-risk, displaced, and refugee scientists globally.
- The Science in Exile vision is an active international movement which promotes the protection of scientists, leading to better science and contributions to humanity.

Readers are invited to [sign the declaration](#).

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#### 5. ABEL PRIZE CELEBRATIONS

The Abel Prize Week 2022 took place in Oslo from 23 to 25 May 2022. The celebrations started with the 2022 laureate, [Dennis P. Sullivan](#), laying down a wreath by the Abel monument. Readers can watch the beautiful Abel Prize award ceremony on the [Abel Prize homepage](#). The celebrations closed with the [Abel Lectures](#), by the laureate and invited lecturers Michael J. Hopkins, Harvard University, and Étienne Ghys, ENS Lyon, and with a conversation led by Jim Simons with Nicolai Tangen and Nils A. Baas. The Abel lectures should soon be [available online](#).

The Abel Prize maintains a rich [collection of videos](#) the readers are invited to visit.

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## 6. WOLF PRIZE IN MATHEMATICS 2022

The [Wolf Prize](#) in Mathematics 2022 has been awarded to [George Lusztig](#), Abdun Nur Professor at the Massachusetts Institute of Technology, “for Groundbreaking contributions to representation theory and related areas”. Lusztig is known for his work on representation theory, in particular for the objects closely related to algebraic groups, such as finite reductive groups, Hecke algebras,  $p$ -adic groups, quantum groups, and Weyl groups.

Lusztig was the recipient of the 2014 Shaw Prize in Mathematical Sciences. He has also been awarded the Berwick Prize of the London Mathematical Society, the AMS Cole Prize in Algebra, the Brouwer Medal of the Dutch Mathematical Society, and the AMS Leroy P. Steele Prize for Lifetime Achievement. Lusztig is a fellow of the Royal Society, a fellow of the American Academy of Arts and Sciences, and a member of the National Academy of Sciences.

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## 7. SHAW PRIZE IN MATHEMATICAL SCIENCES 2022

The [2022 Shaw Prize in Mathematical Sciences](#) has been awarded to [Noga Alon](#), Professor of Mathematics at Princeton University, USA, and Baumritter Professor Emeritus of Mathematics and Computer Science at Tel Aviv University, Israel, and [Ehud Hrushovski](#), Merton Professor of Mathematical Logic, University of Oxford, UK, and Fellow of Merton College, Oxford University, UK, 'for their remarkable contributions to discrete mathematics and model theory with interaction notably with algebraic geometry, topology and computer sciences'.

Alon is a member of the Israel Academy of Sciences and Humanities and the Academy of Europe. He is also an honorary member of the Hungarian Academy of Sciences. Hrushovski is a member of the Israel Academy of Sciences and Humanities and the American Academy of Arts and Sciences. For further information, see the [press release](#).

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## 8. ACM TURING AWARD 2021

[Jack Dongarra](#), Distinguished Professor of Computer Science at the University of Tennessee, Distinguished Research Staff member of the Oak Ridge National Laboratory and Turing Fellow at the University of Manchester, is the recipient of the [2021 ACM Turing Award](#), “for his pioneering contributions to numerical algorithms and libraries that enabled high performance computational software to keep pace with exponential hardware improvements for over four decades”.

Dongarra is a Fellow of the American Association for the Advancement of Science (AAAS), the Association for Computing Machinery (ACM), the Society for Industrial and Applied Mathematics (SIAM), and the Institute of Electrical and Electronics Engineers (IEEE) and a foreign member of the Russian Academy of Sciences and a foreign member of the Royal Society. In 2001, he was elected a member of the US National Academy of Engineering.

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