

IMU-Net 104: November 2020

A Bimonthly Email Newsletter from the International Mathematical Union

Editor: Martin Raussen, Aalborg University, Denmark

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1. EDITORIAL: NEW IMU-COMMITTEE ON DIVERSITY

This year has brought an increase of attention, worldwide, to the issues of diversity and inclusion. Many countries, institutions and organizations have recognized the need to re-assess their relationship with these issues. Many institutions have come to realize that old policies have to be re-considered and that many more active measures have to be taken to address diversity and inclusion, and to make sure that addressing these issues is fully incorporated in their activities and their decision-making.

For the last few years, there has been increased attention to diversity and inclusion, in all the activities of the IMU. This has been combined with an increased awareness and consideration of conflict of interest and implicit biases. These changes have certainly improved the operations of the IMU. For the Commission for Developing Countries ([CDC](#)) diversity has always been an integral part of its activities. The successful creation of the Committee for Women in Mathematics ([CWM](#)) has helped increase the attention given to gender equality and the underrepresentation of women in mathematics. Also for the International Commission for Mathematical Instruction ([ICMI](#)) diversity in mathematics education has always been important.

Nevertheless, the Executive Committee ([EC](#)) felt that there are good reasons to reconsider now how the IMU addresses the issues of diversity and inclusion. For this purpose, the EC has created an ad-hoc committee on diversity, the IMU Committee on Diversity ([CoD](#)), to give advice to the IMU regarding diversity and inclusion. Given the vastness and pervasiveness of mathematics, diversity and inclusion, the EC decided that there is a need to restrict the remit of the CoD to the aspects of diversity that pertain to IMU activities. By diversity we mean here issues pertaining to race, gender, gender identity and sexual orientation, ethnicity, disabilities, geography, underprivileged background as well as to political and religious beliefs and related issues. Since the IMU already has a committee working on the gender aspect of diversity, the CWM, the CoD will put the main focus on other aspects of diversity. The CoD was established at the end of August 2020.

The CoD will deliver a report to the EC by the end of 2021. The report will be distributed to the IMU Adhering Organizations. The CoD will cease to exist at that point. The EC will then offer its

recommendations, based on the CoD's report. The topic and recommendations will be discussed at the General Assembly in St Petersburg in 2022.

The CoD is charged with producing:

1. an assessment on how the IMU performs regarding diversity and inclusion.
2. advice on how the IMU can improve its activities regarding diversity and inclusion in its activities.
3. make recommendations to the IMU on how the IMU can advise and help its members regarding diversity and inclusion.

The CoD's membership is publicly known and it is receptive to advice and proposals from mathematicians worldwide

The following are the members of the CoD:

- Robert Bryant, Chair, USA (chair@cod.mathunion.org)
- Gugu Moreira, Brazil
- Ngo Bao Chau, USA/Vietnam
- Tatiana Toro, USA/Colombia
- Philibert Nang, Gabon
- Elena Vazquez Abal, Spain
- Anjum Halai, Pakistan
- Sophie Dabo-Niang, France/Senegal
- Edy Tri Baskoro, Indonesia
- Edray Goins, USA

Carlos E. Kenig (IMU President) and Helge Holden (IMU Secretary General)

2. CEIC: NOTES AND COMMENTS

Beyond just disseminating electronic versions of traditional mathematics publications, technology offers new possibilities for how to document and communicate mathematics. For example, online databases and services such as the On-Line Encyclopedia of Integer Sequences (<https://oeis.org>) or the L-functions and Modular Forms Database (<https://www.lmfdb.org>) play an increasingly important role in mathematics.

One of the most intriguing technologies is interactive theorem proving, in which a computer program called a "proof assistant" helps the user develop and verify a rigorous proof. To date, interactive theorem proving has played only a limited role in mathematics, with its highest-profile success being the formal verification of the proof of Kepler's conjecture on three-dimensional sphere packing (see <https://doi.org/10.1017/fmp.2017.1>). However, it has the potential for much broader application. In a recent article, Kevin Buzzard gives a thought-provoking introduction to this topic:

K. Buzzard, Proving theorems with computers, Notices of the American Mathematical Society 67 (2020), 1791-1799, <https://doi.org/10.1090/noti2177>

3. NEWS FROM THE COMMISSION FOR DEVELOPING COUNTRIES (CDC)

IMU-CDC graduate assistantships in developing countries program (GRAID): New call

The Program provides modest support for emerging research groups, working in a developing country listed in Priority 1 or 2 of the IMU [Definition](#), making it possible for them to fund their most talented students to study full-time and pursue a Master or PhD graduate degree in mathematics.

We invite applications from Teams consisting of a Principal Investigator plus his or her research group and an International Partner by **March 15, 2021**.

The Principal Investigator should be a university professor in mathematics holding a PhD, working at a university or research centre in a developing country listed in Priority 1 or 2 of the IMU Definition, who is already training mathematics Master's or PhD students and who is part of a research group. The International Partner should be a mathematician working at a university or research centre not based in any of the countries listed in Priority 1 or 2 of the IMU Definition. At the time of application, there should be an active and ongoing collaboration between the International Partner and the Principal Investigator.

This program is managed by the GRAID Subcommittee and the American Mathematical Society.

For more information please visit <https://www.mathunion.org/cdc/scholarships/graduate-scholarships/graduate-assistantships-developing-countries>

Call for Donations to the GRAID Program

Funding for GRAID is provided by voluntary donations from mathematicians or mathematical institutions worldwide. IMU-CDC acknowledges and encourages donations to GRAID that can be done via the Friends of IMU website <http://friends-imu.org/donate/#graid>.

2021 Bertrand Russell Prize of the AMS awarded to Michel Waldschmidt

From the [citation](#): The 2021 [Bertrand Russell Prize](#) was awarded to Michel Waldschmidt in recognition of his outstanding contributions to graduate schools and mathematical research in developing countries, and of his sustained commitment to building bridges between mathematical communities around the world. Throughout his career, Waldschmidt has worked tirelessly toward the development of graduate schools in multiple countries, both through lecturing and serving on advisory committees.

Waldschmidt is presently a member of the Commission of Developing Countries of the International Mathematical Union and Chair of the GRAID Committee (Graduate Research Assistantships in Developing Countries).

Congratulations!

4. NEWS FROM THE COMMISSION FOR WOMEN IN MATHEMATICS CWM

CWM 2021 call

[CWM](#) invites proposals for funding of up to €3000 for activities or initiatives taking place in 2021. Because of the COVID crisis, (totally or partially) virtual on-line events are welcome and non-virtual projects should explain their plans in case they have to turn virtual. The deadline for applications is 15 December 2020.

Applications should be sent to applications-for-cwm@mathunion.org. Successful applicants will be informed no later than 31 January 2021.

World Meeting for Women in Mathematics – (WM)² and МАТЕМАТИКА exhibition

The second World Meeting for Women in Mathematics – [\(WM\)²](#) has been approved as a special satellite event of the ICM 2022 in St. Petersburg by the Local Organising Committee (LOC). It will take place on July 5th, 2022, at the Expoforum center – the ICM 2022 venue.

Place will be also provided for the “МАТЕМАТИКА” exhibition, at the Expoforum for the duration of the ICM. The goal of МАТЕМАТИКА is to give more visibility to women active in mathematics throughout Russia, by telling stories of ten women who contribute in an important way, directly and indirectly, to research in mathematics.

Women in math and the COVID-19 crisis

The Covid-19 pandemic continues to spread and affect the lives of everyone, and the negative impact of this crisis on women and junior mathematicians is hard to ignore. We invite contributions to the CWM page “Women in math and the COVID-19 crisis”: these may be links to initiatives or data regarding the impact on women or other vulnerable groups in the math or science community; or they may be personal stories. Please write to cwm.info@mathunion.org.

CWM Newsletter 4

CWM Newsletter number 4 can be found here:

<https://www.mathunion.org/fileadmin/CWM/Initiatives/CWMNewsletter.pdf>.

The newsletter starts with an interview of a CWM member, Neela Nataraj, head of the Department of Mathematics at [IIT Bombay](#) and continues with “News From CWM”. Our external article is about the ‘Standing Committee for Gender Equality in Science ([SCGES](#))’, by its chair Catherine Jami. See also part c. above.

You are welcome to subscribe to the CWM Newsletter with 2 options:

1. send a mail to cwm.newsletter-subscribe@mathunion.org or
2. use the subscription form on <https://www.mathunion.org/cwm/about/cwm-newsletter>.

5. INTERNATIONAL DAY OF MATHEMATICS (IDM 2021)

1. The theme of the [International Day of Mathematics](#) 2021 (March 14, 2021) is "Mathematics for a Better World".
2. In view of the pandemic, it is highly likely that it will not be possible to hold events for the general public. It is therefore recommended that celebrations be planned in schools and colleges during class time or as extracurricular activities. Since March 14, 2021 is a Sunday, schools and colleges may choose to celebrate around March 14, for example Friday, March 12 and/or Monday, March 15. Since IMU has no direct contact with the school networks, we would be very grateful if you could pass the invitation to the school network(s) of your country and/or all the schools with which you are in contact.
3. In a few weeks, it will be possible to submit your plans to our IDM event map. Subscribe to the [IDM newsletter](#) to be notified when the submission form is online.
3. Each school and college is invited to participate in the Mathematics for a [Better World Poster Challenge](#). Again, we would be grateful if you could pass the word in the schools in your country.
4. A live event will be held online, like the one we had in 2020.
5. The Next Einstein Forum 2020 (NEF 2020) where the African launch of the IDM was supposed to take place had been postponed due to the pandemic. [NEF 2020](#) will now take place virtually on December 8-10 2020. IMU and the IDM will be represented in a plenary activity "International Day of Mathematics – Mathematics for a Better World" that will take place on December 10 2020, 13:30-14:30 Kigali time, and that will be chaired by IMU Vice-president, Loyiso Nongxa.
6. To receive the IDM 2021 announcements, subscribe to the newsletter at www.idm314.org or via [this direct link](#).

6. INSIDE THE IMU

The ballot on Denmark's application to change from group II to group III yielded a positive result. As of November 2020, Denmark is a Member in Group III of the IMU.

7. EDITOR'S FAREWELL

It has been my privilege to serve as the editor of IMU-net during the 5-year period 2016 – 2020. Assembling the 30 issues of the newsletter, I have constantly been supported by many mathematicians. I would like to thank in particular IMU Secretary General Helge Holden, liaison officers Dick Gross and Andrei Okounkov from the IMU-EC, IMU technicians Gerhard Telschow and Frank Klöppel, as well as Olga Gil Medrano from the IMU-CDC and Marie-Francoise Roy from the IMU-CWM for their friendly, efficient and swift cooperation through these years. I shall miss it collaborating with these dedicated colleagues!

I would like to welcome my successor, the incoming editor of the re-shaped IMU-News, Yoshi Kohayakawa and wish him and IMU-News a splendid development. A newsletter should first of all be attractive for its subscribers. In order to achieve this, it needs to offer *relevant and fresh* information (related to the work of the IMU in our case) presented in a *concise* manner. It is an art to achieve an optimal balance!

I am happy to learn about the plans to give IMU-News a new visually attractive format and to integrate information from correspondents covering the events within the mathematics profession from a regional perspective. Such a sounding board has the perspective to make IMU News far more appealing. I will envy you, Yoshi, for the support of such a team, but I am also aware of that the coordination of a team is a challenge in itself.

Finally, let me wish the IMU, its newsletter and its subscribers all the best.

Martin Raussen

8. SUBSCRIBING TO IMU-NET

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1. Click on <http://www.mathunion.org/organization/IMU-Net> with a Web browser and go to the "Subscribe" button (at the bottom) to subscribe to IMU-Net online.

2. Send an e-mail to imu-net-request@mathunion.org with the Subject-line:
Subject: subscribe

In both cases, you will receive an e-mail to confirm your subscription so that misuse will be minimized. IMU will not use the list of IMU-Net emails for any purpose other than sending IMU-Net, and will not make it available to others.

IMU-Net is the electronic newsletter of the International Mathematical Union.

More details about IMU-Net can be found at <http://www.mathunion.org/organization/imu-net/>. You can find here, for instance, detailed information about subscribing to the IMU-Net mailing list and unsubscribing from it.
