IMU-Net 87: January 2018
A Bimonthly Email Newsletter from the International Mathematical Union
Editor: Martin Raussen, Aalborg University, Denmark

CONTENTS

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1. EDITORIAL: LOOKING BACK

I am now in my eighth (and last year) on the Executive Committee of the IMU. The mission of the IMU is to promote international collaboration in mathematical sciences. For the past eight years I have had the opportunity to contribute to this mission, and to experience first-hand how international collaboration in mathematics can make a difference.

The IMU endorsed the Mathematics of Planet Earth 2013 (MPE2013) initiative, which led to a collaboration highlighting the role of mathematical sciences in the study of our planet. The IMU is one scientific union inside the former International Council of Science (the former acronym ICSU came from "International Council of Scientific Unions"). At their General Assembly in Taipei (Taiwan) on October 22-23, 2017, the International Council of Science (ICSU) and the International Social Science Council (ISSC) voted to merge into the new International Science Council (ISC). In view of the urgency of limiting the global changes in climate and adapting to them, the new ISC will promote interdisciplinary collaboration in addressing planetary issues, and will also present a unified voice of science to the decision makers, the media, and the public.

The membership of IMU inside the International Science Council allows opportunities to collaborate with other unions. In 2013 and 2017, IMU co-organized with other unions networking capacity building workshops for young researchers. The 2013 workshop, "Mathematics of climate change, related hazards and risks", jointly with IUGG, IUTAM and ICIAM, targeted Latin America, and the 2017 workshop "Global change impact and infectious species", jointly with IUBS and ICIAM, brought together young researchers from 17 different African countries. The ISC (former ICSU) grant program allowed the launch of the project "A Global Approach to the Gender Gap in Mathematical and Natural Sciences: How to Measure it, How to Reduce it?" It is led by IMU through its Committee for Women in Mathematics (CWM) during the years 2017-2019.

Collaboration with UNESCO is also important to the IMU. On March 5 2013, IMU hosted the "Mathematics of Planet Earth Day" at UNESCO and IMU is presently working on having UNESCO declare March 14 the International Day of Mathematics (IDM). This initiative raises enthusiasm, and is supported by many countries, and by ICMI, CWM, the African Mathematical Union (AMU) and

ICIAM. The project is to promote the organization of outreach activities around the world on each March 14, potentially but not necessarily related to a chosen theme of the year. Material related to the theme will be available on the web, thus allowing countries to enlarge the spectrum of their traditional outreach activities.

I have been very privileged to represent IMU on all these committees and to make the case of the relevance of mathematical sciences in the mission of the International Science Council. The collaboration with other unions has been very fruitful and IMU and its sister unions inside ISC are looking forward to even greater collaboration in the future. For instance, the International Union of Pure and Applied Physics (IUPAP) is leading the project of an International Year of Basic Science for Development, and IMU has a natural role to play if the project moves forward.

During my years on the EC, I was also able to observe the development of mathematics in Africa, in particular when I represented IMU at the Next Einstein Forum in Dakar in March 2016. There I could feel that Africa is moving forward in developing science and mathematics education and research. In my opinion, the time has come for Africa to play an increased role in IMU in the years ahead.

Christiane Rousseau (Member-at-large of the Executive Committee)

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2. **CEIC: NOTES AND COMMENTS**
   A bold open-access push in Germany might change the future of academic publishing

   Readers of IMU-Net, and indeed most mathematicians, will be aware that publishing is in a state of flux, with both excellent and predatory open-access journals competing with the traditional subscription-based model, which itself is changing as publishers consolidate and increasingly offer bundles of electronic access. It is often felt that the "big publishers" have the negotiating upper hand, but at least in Germany that has changed. This author is grateful to Günter M. Ziegler (FU Berlin) for the following details, also presented at the January JMM in San Diego:

   The DEAL project has a mandate to negotiate national licences for the Electronic Journals for "all of Germany" with the three major Science Publishers: Elsevier, SpringerNature and Wiley. The project has these principles:

   1) One, New, Contract (we have to determine fair prices "ab initio", not a reduction)
   2) Transparency (one contract for all, and of course it is going to be public),
   3) Open Access (all papers from Germany should be published gold-OA immediately)
   4) Fair Prices (gauged by "per paper published with first author from Germany")
   5) Future-Oriented, Sustainable Pricing (designed for an open-access future; sustainable for the sciences, for the publishers, also in view of pre-publishing and piracy).

   A response from Elsevier has been "Germany's challenge, however, is that the vast majority of research nations - among which the US, China and Japan - do not pay to broadcast their research to the rest of the world like Germany wants to do."

   Germany is some 5-6% of the World Science Market, so it has weight, but its negotiations could profit from international support. As a British Academic, the author regrets that their national negotiators were not as bold as the German ones, and is pushing for change here.

James H. Davenport (CEIC chair)

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3. CDC PROGRAMS: DEADLINES DURING 2018

The Commission for Developing Countries (IMU-CDC) announces the following deadlines for applications:

Abel Visiting Scholar Program. This program, funded by the Niels Henrik Abel Board (Norway), supports young mathematicians professionally based in developing countries to visit an international research collaborator for a period of one month. Deadlines:
>   April 1, 2018, for visits between September 1 and December 31, 2018.
>   August 31, 2018, for visits between January 1 and April 30, 2019.
>   December 31, 2018, for visits between May 1 and August 31, 2019.

IMU-Simons African Fellowship Program. This program, funded by the Simons Foundation (USA), supports mathematicians from African developing countries employed in Africa to visit an internationally known mathematical centre (university) of excellence for a limited research period. Deadlines:
>   February 1, 2018 (Decisions will be made by March 30, 2018)
>   June 1, 2018 (Decisions will be made by July 30, 2018)
>   October 1, 2018 (Decisions will be made by November 30, 2018)

Individual Research Travel Support Program. This program supports travel costs for invited research visits (minimum stay is four weeks) by mathematicians based in developing countries. The host institution must cover local living expenses like accommodation and boarding. Deadlines:
>   February 1, 2018 (Decisions will be made by March 30, 2018)
>   June 1, 2018 (Decisions will be made by July 30, 2018)
>   October 1, 2018 (Decisions will be made by November 30, 2018)

Conference Support Program. This program gives partial support to Mathematical Science based conferences organized in developing countries. The funds are for travel and accommodation only. The conference organizers must send the application form at least five months in advance. Deadlines:
>   February 1, 2018 (Decisions will be made by March 30, 2018)
>   April 1, 2018 (Decisions will be made by May 30, 2018)
>   June 1, 2018 (Decisions will be made by July 30, 2018)
>   August 28, 2018 (Decisions will be made by October 15, 2018)
>   October 1, 2018 (Decisions will be made by November 30, 2018)
>   November 1, 2018 (Decisions will be made by December 15, 2018)

Volunteer Lecture Program. This program is partially funded by the American Mathematical Society and the US National Committee for Mathematics, through Friends of IMU, USA. Universities in a developing country, with a mathematics degree programs that are in need of and interested to host a lecturer for intensive 3-4 weeks mathematics courses, at the advanced undergraduate or master level, can apply to obtain complete support for the visit of a volunteer lecturer. Deadlines:
>   March 25, 2018 for lectures starting from June 1, 2018.
>   June 30, 2018 for lectures starting from September 1, 2018.
>   September 30, 2018 for lectures starting from December 1, 2018.

December 15, 2018 for lectures starting from March 1, 2019.

The deadlines for applications to the rest of the programs will be announced in this Newsletter in due time. For more information, please visit our website http://www.mathunion.org/cdc

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4. INITIATIVES FUNDED BY CWM

The Committee for Women in Mathematics (CWM) received 55 applications for its 2018 call of which it approved 10. Most of the grants are devoted to developing regional networks for Women in Mathematics, in Africa, Latin America, and Asia.

Often the initiatives take the form of a meeting with both a mathematical part and a career development part. This is the case for two regional meetings of the African Women in Mathematics Association (AWMA), one taking place in Addis Ababa (Ethiopia) for East-Africa and one taking place in Ibadan (Nigeria) for West Africa, and also for the second Central Asia Women in Mathematics Association meeting taking place in Uzbekistan. The focus of the support given to the Indian Women in Mathematics association is for the participation of women from the South Asian Association for Regional Co-operation at their meeting at Shiv Nadar University in Uttar Pradesh. The first workshop of "*Women in mathematics in the Balkan region*" taking place in Skopje (Macedonia) will involve several neighbouring countries. A Workshop in El Salvador (supported by the Vice Minister of Science and Technology and the ICSU Regional Office of Latin America and the Caribbean) entitled "*Why Mathematics? : Encouraging girls to pursue the dream of becoming teachers or researchers in this discipline* " will be focussed on less developed Central American countries such as Guatemala, Honduras, Nicaragua, the Dominican Republic, El Salvador and Panama. An activity inspired by the series of meetings "Women in ..." (see for example "Women in numbers") held at the Banff International Research station, is going to take place for the first time in South America, in Uruguay.

The African Women in Mathematics Association will also be writing portraits of African women mathematicians, both to post on AWMA website and to publish as a booklet to be used for promoting mathematics among young African women.

Two further events are taking place in Europe, an ICTP school in Trieste (Italy) on Dynamical Systems, with all female organizers and lecturers, and the European Women in Mathematics General Meeting taking place in Graz (Austria). In both cases the CWM grant will be used to support the attendance of women from developing countries.

The remaining part of the budget will be used to support (WM)^2, the first World Meeting for Women in Mathematics taking place on 31 July 2018 as a satellite event of ICM Rio. See https://www.worldwomeninmaths.org/.
In particular, women from all over the world who are supported by the Open Arms program have been invited to attend (WM)^2, with no registration fee.
Submissions of scientific mathematical posters to (WM)^2 is possible until 30 March. The organisers also welcome thematic posters on women in mathematics (description of past or future activities, statistical data on women in mathematics, etc.), to be submitted before 30 March.

Marie-Françoise Roy (Chair of the IMU Committee for Women in Mathematics)

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5. ICM 2018

The Scientific Program Subcommittee has published "Program at a glance", a summarized version of all the activities of ICM 2018. Among the highlights are the Emmy Noether Lecture given by Sun-Yung Alice Chang and the Abel Lecture given by Sir Michael Francis Atiyah.

The ICM 2018 Satellite Events Subcommittee has approved a great variety of conferences and workshops of the highest scientific level as official ICM Satellite Meetings.

The deadline for submission of abstracts of short communications and posters was extended to March 5. The deadline for early advanced registration (reduced registration fee) is April 27.

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6. INSIDE IMU: NEW WEBSITE ONLINE

As advertised in the editorial of the previous IMU-net 86, a completely revamped version of the IMU website is now online. Friendly remarks and suggestions for improvements are solicited and should be sent to webmaster@mathunion.org.

Among the many entries you find IMU Bulletin No. 68, reporting about the IMU activities in 2016.

Bangladesh has been approved as new Associate Member of the IMU. Brazil has been approved as full member of group V of the IMU. Both decisions will be effective as of February 1, 2018.

Morocco has applied for full membership in group I of the IMU. The Executive Committee unanimously recommended the application which is now put to vote among the Adhering Organizations.

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7. REMINDER: 6th HEIDELBERG LAUREATE FORUM

The deadline for applications for participation in the 6th Heidelberg Laureate Forum that takes place in Heidelberg, Germany, in the week September 23-28 this year is February 9, 2018.

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8. NOUZHA EL YACOUBI ELECTED NEW PRESIDENT OF AMU

Nouzha El Yacoubi was elected in July 2017 as President of the African Mathematical Union (AMU) for the period 2017-2021. She is the first woman in this position.

This nomination is the crowning achievement of a brilliant career of research and service. In particular, Nouzha El Yacoubi had been the first woman Secretary General of AMU in 2004-2009 and she has chaired the AMU Commission on Pan African Mathematics Olympiads from 1995 to

2009.

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9. **SUBSCRIBING TO IMU-NET**

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

In both cases you will get 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.

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