

IMU-Net 94: March 2019

A Bimonthly Email Newsletter from the International Mathematical Union

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1. EDITORIAL: ICIAM INTERNATIONAL CONGRESS

The International Council for Industrial and Applied Mathematics ([ICIAM](#)) is a worldwide organization whose members are professional mathematical societies. Some of them, the full members, are societies devoted to the applications of mathematics, and the other ones, the associate members, are societies with a significant interest in the topic.

ICIAM organizes a large congress every four years, the last ones took place in Vancouver (2011) and Beijing (2015), this year's congress taking place in Valencia (Spain), and the next one in Tokyo (2023). The number of participants varies from congress to congress, but more than 3000 participants are always expected. ICIAM has a series of awards and recognitions, among them the five [ICIAM prizes](#) (Collatz Prize, Lagrange Prize, Maxwell Prize, Pioneer Prize and Su Buchin Prize) and the [Olga Taussky-Todd \(OTT\) Lecture](#), to be given by a woman mathematician.

Apart from the congress and the prizes, ICIAM supports the participation of mathematicians from developing countries in applied mathematics conferences and schools, is a scientific partner of the *Centre International de Mathématiques Pures et Appliquées* ([CIMPA](#)) and a scientific associate of the International Science Council (ISC). ICIAM also collaborates with IMU in activities of general interest for the mathematical community and they exchange guests for their respective council meeting and general assembly. In this direction, let us remember the joint ICMI-ICIAM study on "[Educational Interfaces between Mathematics and Industry \(EIMI\)](#)" (2013) and the [IMU/IMS/ICIAM joint Committee on Quantitative Assessment of Research](#) (2007). Currently, ICIAM takes part in the ICSU "[Gender Gap in Science](#)" project, led by the CWM Committee of the IMU.

Let us now come to the main event of this year for the ICIAM community, the [ICIAM 2019 congress](#) (Valencia, July 15-19). Its program contains on one hand the 27 invited lectures, with speakers selected by a prestigious international scientific committee chaired by A. Quarteroni. The other main part of the program will be composed of many mini-symposia proposed by colleagues from all over the world and selected by a special program committee. The congress will be opened by a ceremony where among other things the ICIAM prizes will be presented to the winners. Right after the opening ceremony the OTT lecture will be given by Professor F. Tisseur. Other events will be a public lecture and one day

dedicated to activities and talks related to the industrial applications of Mathematics, with participants from both Academia and companies.

As you see, this congress has resemblances and differences compared to the ICM. Its program has two parts, one top-down, including the invited lectures and the OTT lecture. But the bottom-up part concerned with the mini-symposia gives the congress a different flavor of community "ownership". The [ICIAM prizes](#) were already announced some months before the congress (in September of the previous year). Another difference is that often some member societies embed their annual congress in the ICIAM congress. This year this will be the case for the Spanish SEMA and for SIAM.

You are all invited to attend the [ICIAM 2019 congress](#) in the beautiful city of Valencia, and with a superb scientific program!

Maria J. Esteban (ICIAM president, Université Paris-Dauphine)

2. CEIC: NOTES AND COMMENTS

Open access is again in the news, with the breakdown of negotiations between the University of California system and Elsevier, leading to the complete cancellation of UC's Elsevier contract and therefore the inaccessibility of Elsevier journals at these universities (see <https://www.insidehighered.com/news/2019/03/01/university-california-cancels-deal-elsevier-after-months-negotiations> and <https://osc.universityofcalifornia.edu/open-access-at-uc/publisher-negotiations/uc-and-elsevier/>). The goal had been to negotiate a read and publish agreement, which combines access to subscription journals with open access to articles published under the agreement. Such agreements are becoming increasingly widespread (see <https://www.the-scientist.com/news-opinion/german-institutions-and-wiley-reach-open-access-publishing-deal-65327> for a recent example), but they still require careful negotiation. Unfortunately, the failure of the UC/Elsevier negotiations indicates the difficulty of reaching a mutually agreeable outcome. Meanwhile, negotiations continue in Germany and other countries (see <https://www.nature.com/articles/d41586-019-00492-4>). It is unclear how these negotiations will play out, but read and publish agreements offer a promising path forwards if agreement can be reached on terms and costs.

3. NEWS FROM THE INTERNATIONAL DAY OF MATHEMATICS AND CALL FOR THE THEME OF 2020

The IMU is leading the project to have [UNESCO](#) proclaim March 14 ("Pi day") as the [International Day of Mathematics \(IDM\)](#). Following the adoption of the project by the Executive Board of UNESCO in October 2018, the proclamation by UNESCO of March 14 as the International Day of Mathematics is on the agenda of the 40th General Conference of UNESCO in November 2019. Hence the IMU has already started the preparations for an official launch on March 14, 2020, of the first IDM.

At its recent meeting, the Executive Committee (EC) of IMU decided the Terms of Reference and membership of the first Governing Board for the International Day of Mathematics. The Governing Board is chaired by Christiane Rousseau. The EC also decided to accept the bid submitted by IMAGINARY (<https://imaginary.org>) for building and running the IDM website.

Each year, the IDM Governing Board will propose a non-mandatory theme for the celebration of the IDM, and the Governing Board will choose this theme in consultation with the IMU Adhering Organizations and supporting organizations.

A call for proposals of the theme of IDM 2020 is open with deadline **April 30, 2019**. Please send suggestions for a theme, together with a short justification, by email to Christiane Rousseau at <idm@mathunion.org>.

4. INSIDE IMU: OLD ICM PROCEEDINGS SOLICITED

The [IMU Archive](#), located in the [IMU Secretariat](#) in Berlin, collects all IMU related material. Unfortunately, not all ICM proceedings are present as hardcopies. A list of the missing proceedings has been compiled in a [circular letter](#). The IMU would be very grateful for receiving donations of physical copies of (some of) these early ICMs. Please contact the IMU Archivist, Ms Birgit Seeliger at archivist@mathunion.org. Shipping expenses will of course be covered.

5. WOLF PRIZE AWARDED TO LAWLER AND LE GALL

The [Wolf Prize for Mathematics 2019](#) was awarded to Prof. Gregory Lawler from Chicago University (USA), “for his comprehensive and pioneering research on erased loops and random walks” and to Prof. Jean Francois le Gall from Paris Sud Orsay University (France), “for his profound and elegant works on stochastic processes. The work undertaken by these two mathematicians on random processes and probability, which have been recognized by multiple prizes, became the stepping stone for many consequent breakthroughs”.

6. ABEL PRIZE WILL GO TO KAREN UHLENBECK

The Norwegian Academy of Science and Letters has decided to award the [Abel Prize for 2019](#) to Karen Keskulla Uhlenbeck, University of Texas at Austin (USA), “for her pioneering achievements in geometric partial differential equations, gauge theory and integrable systems, and for the fundamental impact of her work on analysis, geometry and mathematical physics. Karen Uhlenbeck’s pioneering results have had fundamental impact on contemporary analysis, geometry and mathematical physics, and her ideas and leadership have transformed the mathematical landscape as a whole.” Karen Uhlenbeck is the first woman mathematician to receive the Abel prize.

7. NEWS FROM CWM

Congratulations to Ingrid Daubeschies and Claire Voisin

On the 21st anniversary of their awards, the L'Oréal-UNESCO International Awards for Women in Science extended the scope of their awards to include mathematics. We are delighted that Ingrid Daubechies (Duke University, United States) and Claire Voisin (Collège de France) became on March 14 the first mathematicians to receive a L'Oréal-UNESCO award. They were two of the five outstanding awardees for 2019. Warm congratulations to both of them!

Read more at

<https://en.unesco.org/news/21st-edition-loreal-unesco-international-awards-women-science>

Gender Gap Project Meeting at ICTP

The Gender Gap in Science Project Final Meeting takes place at [ICTP](#), Trieste (Italy) from 4 to 8 november 2019. The registration is now open <http://indico.ictp.it/event/8731/> . Registration will be closed on August 2.

The first aim of the meeting is to report on the methodology, tools produced and results of the project and to formulate recommendations and open questions based on the results. All talks will be informed by the results of the survey, data analysis of publications, and compilation of good practices. The second aim is to present the tools of the project in an interactive way and to make it possible for attendees to learn how to use them and to answer their own questions. The program of the meeting will include computer activities and discussions in small groups. There will be a selection process due to budget limitation and the wish to ensure a geographical and thematic balance.

Results of CWM 2019 call

The CWM 2019 call for Networks and Schools received 41 applications. In the selection of grants, priority has been given to projects developing regional networks for Women in Mathematics, in Africa, Latin America, and Asia. CWM decided to support 7 events, in Argentina, Cameroon, the Dominican Republic, India, Indonesia, South Africa and Tunisia.

For more details see

<https://www.mathunion.org/cwm/events/cwm-sponsored-events/2019>

Report on CWM 2018 call

More than 1450 people (2/3 of them being women) participated in activities funded by CWM during 2018. The report of 2018 CWM grants, with detailed accounts of these activities can be found at

<https://www.mathunion.org/fileadmin/CWM/Activity%20Reports/Reportongrants2018.pdf>

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