"Better Late Than Never" Perhaps that should be the motto of this newsletter. Even better, since every society and every culture has faced the problem of too many tasks and too little time, there must be many ways to express the same quasi-apology. Please send me yours, and perhaps we can have a special masthead.

Welcome to the October issue of ICIAM Dianoia. While there is not much good news, there is some, and we hope you will find something interesting in this newsletter.

Best wishes for the New Year, and keeping sending us articles. Volume 9 lies ahead.

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**ICIAM President's Update**

Owing to the COVID-19 pandemic, the 2020 ICIAM board meeting was held successfully online on September 26, 2020. At the board meeting, I reported several major activities of ICIAM since the 2019 board meeting, which include:

1) The officers had the first meeting by a telephone call on December 3, 2019. Owing to the COVID-19 pandemic, the traditional face-to-face officers’ meeting supposed to be held at Amsterdam in March 2020 was replaced by another telephone meeting on April 1, 2020. Another officers’ meeting was held online on August 11, 2020 to prepare for the board meeting.

2) Maria Esteban has replaced Barbara Keyfitz and Taketomo Mitsui as the new chair of the ISC committee, and Luis Vega has replaced Volker Mehrmann as the chair of the membership committee. The officers proposed to set up the ICIAM Dianoia Editorial Board Committee. The Board meeting approved the creation of this committee, and Barbara Keyfitz will be its first chair.

3) The scientific program committee (SPC) for ICIAM 2023 has been finalized between the officers and the chair of the SPC. The President has signed an MOU between ICIAM and JSIAM regarding ICIAM 2023. The MOU sets the License fees for ICIAM 2023 at USD 40,000 and defines the reimbursement rules for invited speakers and prize winners.
winners.

4) The officers have discussed the rules for the canvassing committee for the ICIAM prizes. According to the rules, the ICIAM past president, Maria Esteban, is the chair of the canvassing committee for the ICIAM prizes. The officers have discussed and approved the composition of the canvassing committee.

5) The president has written to member societies asking for efforts on using mathematics in the study and control of the coronavirus. At its website, ICIAM has created a page with links to pages on mathematical works for fighting the coronavirus.

6) The officers have discussed and taken up a suggestion from Jose A. Cuminato (SBMAC) to create the ICIAM Industry Prize. The new prize was approved at the Board meeting.

7) The president has signed the MOU on the establishment of a Standing Committee for Gender Equality in Science (SCGES). ICIAM is one of the founding partners of SCGES. The officers have appointed Carol S. Woodward (SIAM) as the ICIAM representative in SCGES, and Guiying Yan (CSIAM) as a deputy representative.

8) The officers have discussed how to stress the second “I” in ICIAM, and have exchanged ideas on how to promote mathematics in industry worldwide, including the possibility of creating an industry committee.

9) ICIAM has received three pre-bids for hosting ICIAM 2027. They are from Brazil (SBMAC), The Netherlands (KWG and PWN), and New Zealand (ANZIAM). Later, the Brazilian bid was withdrawn. The Board agreed to encourage both remaining bidders to prepare full bids for ICIAM 2027.

10) ICIAM has approved three applications from developing countries for 2020 meeting support. But all these conferences were cancelled or postponed due to the COVID-19.

Now, ICIAM has six prizes: the ICIAM Collatz Prize, the ICIAM Lagrange Prize, the ICIAM Maxwell Prize, the ICIAM Pioneer Prize, the ICIAM Su Buchin Prize and the ICIAM Industry Prize, see http://www.iciam.org/iciam-prizes.

Ya-xiang Yuan
ICIAM President

Ya-xiang Yuan
Ya-xiang Yuan is the current President of ICIAM (2019-2023). He is a professor at Academy of Mathematics and Systems Sciences, Chinese Academy of Sciences. His research focuses on optimization.
ICIAM Conference Support: CALL FOR APPLICATIONS

ICIAM Conference Support for Applied and Industrial Mathematics in Developing Countries

CALL FOR APPLICATIONS

ICIAM has a small budget (up to USD 10,500 per year) that is available to help organizers of conferences, workshops and research schools to include additional delegates from developing countries. Organizers of meetings, who wish to take advantage of this support, are encouraged to apply by sending an e-mail to the ICIAM Secretary (secretary@iciam.org). The level of support is USD 3,500 per conference, to be used to provide ICIAM Fellowships to selected participants from developing countries.

Applications may be submitted at any time. There are two rolling deadlines per year (30 April and 31 October); the ICIAM Officers decide on which applications to support within a month of each deadline. To allow for orderly budgeting and planning, proposals should be submitted a year in advance of the event. Preference is given to events held in developing countries, and applicants should indicate how they plan to use the fellowship funds.

Full details can be found on the ICIAM website, at


The 2020 ICIAM Officers
Ya-xiang Yuan, Maria J. Esteban, Heike Fassbender, Sven Leyffer, Wil Schilders, Luis Vega

Changing Your Society's Membership Information

Update Your Membership Information on iciam.org

ICIAM maintains a self-service membership directory at http://www.iciam.org/members. Please take this opportunity to check your membership information, and update it if appropriate. Instructions on how to update your entry or to add new information can be found in our membership FAQ, http://www.iciam.org/faq-members.

The 2020 ICIAM Officers
Ya-xiang Yuan, Maria J. Esteban, Heike Fassbender, Sven Leyffer, Wil Schilders, Luis Vega
The 2020 ICIAM Board Meeting: A Member's Report

ICIAM Board meeting. Saturday 26 September

The ICIAM Board meeting was held online, chaired by the President Ya-xiang Yuan, with the support of the secretary Sven Leyffer, who inter alia conducted the online voting, and Maria Esteban, the previous President, who organized the posting of the presentations. This meeting replaced the originally planned Board meeting that would have been hosted by the IMA and held at Strathclyde University.

The online system, Zoom, worked well with questions and comments from Board members being accepted through chat postings to Wil Schilders. On being invited to contribute, one then unmuted oneself and made the contribution. Normally, the face-to-face meetings are all-day meetings with a lunch break. The online meeting lasted 3.5 hours with a single 5 minute virtual coffee break although with a shortened agenda. It did not seem significantly shortened from previous Board meetings, but all presentations were restricted to five minutes. Of course, one missed greatly many aspects of face-to-face meetings, as personal interaction is very important in this internationally collaborative venture. There was also no scientific workshop preceding the meeting as has been the case for previous years.

The was a slight problem with the voting system. The voting questions were prepared in advance and their wording couldn't be altered because of earlier discussions, although any modifications were agreed and recorded verbally before the vote. There was also a problem with counting abstentions.

It would have been better to have a longer coffee break to actually get a coffee. The idea of using random break out rooms on Zoom for the virtual coffee break was good and worked well but again there was too little time for them.

The meeting was from 11.00 to 14.30 British summer time which was fine for Europeans but made for a very early start for North American participants and a very late ending for people from East Asia and New Zealand.

I now give a few comments on the meeting that I should emphasize are just my own. The official minutes will shortly be available from the ICIAM secretary, Sven Leyffer.

The finance report for 2019 showed a very healthy surplus, but this was because 2019 was a Congress year and, because of other support for attendees, the full $40K Conference fee was kept by ICIAM. The original proposal was to increase membership fees by 2.5% but unanimous support for a motion by Volker Mehrmann and myself resulted in a decision to keep fees unchanged for 2021. I was re-elected as auditor for next year.

There were no new applications for membership of ICIAM but the membership committee was looking at organizations who participated in ICIAM 2019.

A report was presented by Tomas Chacon on the ICIAM 2019 meeting and his slides are available on the ICIAM website. This was followed by reports on the ICIAM 2023 meeting in Tokyo from the conference organizer and the chair of the Scientific Programme Committee. The site, Waseda University, has recently built a 6,000 person arena, partially underground.

After our five minute coffee break, we discussed the ICIAM 2027 Congress. A vote was taken to increase the licence fee to 44K USD, with 22K USD to help attendees from developing countries. Since SBMAC (Brazil) had withdrawn their application to host the meeting, presentations were made by ANZIAM for a meeting in Auckland and by KWG...
for a meeting in the Hague. As both were considered potentially suitable, they were invited to submit full bids for the Board meeting in 2021 when the decision for the location of ICIAM 2027 will be taken. The plan is that a subset of officers would visit the sites during the year and, to allow time for this, given possible problems with international travel, the Board meeting was postponed until October.

The call for nominations for ICIAM Prizes would be announced by the end of this year, with membership of the Prize Committees currently under discussion. There would be an independent and separate canvassing committee to try to stimulate applications.

After much discussion over the precise wording, approval was given for a new industry prize that would be funded by JSIAM for the first four awards.

Because of COVID, there were no meetings in developing countries this year and the funds would be rolled over to be added to next year’s budget for this.

Ya-xiang repeated a call from the ISC committee for help in a range of strategic areas.

Helge Holden who was attending on behalf of IMU said that their centennial celebrations could not be held this year but it is hoped they would be possible next year. He also mentioned the setting up of an IMU committee on diversity that he felt might be of interest to ICIAM.

The next Board meeting is planned for 28-30 October, 2021 in Tokyo. The plan is that it should be a face-to-face meeting but the possibility of having a hybrid meeting with some attendees online would be pursued. Sadly, the timing will not be as convenient for European online attendance as this one was.

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Iain Duff

Iain Duff is an STFC Honorary Scientist in the Computational Mathematics Group in the Scientific Computing Department of Rutherford Appleton Laboratory. His research includes numerical linear algebra, sparse matrices, parallel computing, and more.

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Asia-Pacific Consortium of Mathematics-for-Industry (APCMfI)

Over the last decade there has been general agreement and support in the Asia-Pacific region to have regular industrial mathematics exchanges, conferences, internships, etc, which build on the activities already occurring. Over the years since the concept of an Asia-Pacific Consortium of Mathematics for Industry was first proposed, and more recently when planning to formalize such possibilities, there has been strong support and encouragement from colleagues in China, Hawaii, Korea, Malaysia and Singapore, as well as in Australia, New Zealand and Japan.
A small group, with the encouragement of various colleagues throughout the Asia-Pacific region, met in Canberra March 31 to April 2, 2014, to do the initial planning for the formation and launch of the APCMfI with the emphasis being fundamentally Mathematics-for-Industry. Those directly involved in the discussions in Canberra were (as pictured): Yasuhide Fukumoto (Japan), Zainal Aziz (Malaysia), Graeme Wake (New Zealand), Alexandra Hogan (Australia), Masato Wakayama (Japan), Frank de Hoog (Australia), Geoff Mercer (Australia) - now deceased, and Bob Anderssen (Australia).

Now, in 2020, it has 194 members across 20 countries, initially focussed on those in the GMT+8 to GMT +12 region, and most (54) are from Japan, from where this initiative was fostered and started [specifically, by the Institute for Mathematics-for-Industry (IMI) in Kyushu]. It has expanded widely. Much of the organisation and support is centred on the IMI.

Workshops, Study-Groups and Conferences are notified from the web-site https://apcmfi.org/. The most regular annual event is the Forum: Mathematics-for-Industry (FMfI), held usually in November.

The most recent international event was held in November 2019 at Massey University in Auckland, New Zealand. Altogether, there were 65 attendees, including 11 from Massey, 15 from other NZ universities, CRIs and industries, 25 from Japan, and several from other Asian countries (Thailand, Korea, Malaysia and Vietnam) and Australia. Themes are usually chosen by the host country. This time rather appropriately NZ chose “Mathematics in the Primary Industries and the Environment”. A picture of the attendees is below, with Professor Masato Wakayama, Chair of the APCMfI) second from right in the front row, and Professor Robert McKibbin (Massey University & the Director of FMfI2019), fifth from the right.

The next FMfI was to be held in Vietnam this year (2020), but owing to the current pandemic crisis, it has been deferred to 2021.

Graeme Wake

Graeme Wake is Emeritus Professor of Industrial Mathematics at Massey University, New Zealand. He is a Fellow of the Royal Society of NZ, was awarded the ANZIAM Medal in 2006, and the Marsden Medal of the NZ Association of Scientists in 1999.
Webinar: Focusing on Mathematical Models & Analysis of the COVID-19 Crisis


The event was done in collaboration with Lappeenranta University of Technology, Finland and the Department of Mathematics, Faculty of Science and Department of Statistics, Faculty of Science & Department of Applied Mathematics, Faculty of Technology and Engineering and the Institute of Interdisciplinary Studies, The Maharaja Sayajirao University of Baroda.

The webinar coordinators were Professor (Dr.) Dhanesh Patel, Director, Office of International Affairs, the Maharaja Sayajirao University of Baroda; and Dr Matti Heilio, Lappeenranta University of Technology, Lappeenranta, Finland.

The webinar was held on the ‘Zoom’ platform and was also streamed live on Facebook & YouTube.

In recent Days the COVID-19 pandemic is currently creating an important activity among applied and industrial mathematicians across the globe. Mathematical Modelling and simulation is a topic of interest in today’s scenario. Based on this we wanted to organize an International Webinar to throw some light on Covid 19 through mathematical modelling and simulation. In this webinar, since it’s a new field of research, the experts from different countries expressed their own modelling and simulation techniques in their presentation.

The Webinar received an overwhelming response with over 700 individuals from 41 countries participating.

The Participating Countries (in alphabetical order):

Algeria, Bangladesh, Bhutan, Brazil, Cameroun, Canada, China, Cote d’Ivoire, France, Gambia, Denmark, Egypt, Finland, Germany, India, Indonesia, Japan, Kenya, Kuwait, Madagascar, Malawi, Malaysia, Morocco, Nepal, Netherlands, Nigeria, Norway, Pakistan, Philippines, Poland, Rwanda, Somaliland, Soudan, South Africa, Sri Lanka, Switzerland, Thailand, Uganda, United Kingdom, and USA.

The participants included distinguished academicians, industry leaders and students.
The webinar was inaugurated by Professor (Dr.) Parimal Vyas, Honourable Vice Chancellor, The Maharaja Sayajirao University.

There were five speakers on June 17:

1. Professor (Dr.) Edwin R. van den Heuvel, Eindhoven University of Technology, The Netherlands. Title: Predictions and changes in the spread of the corona virus in different countries - data oriented approaches.

2. Professor (Dr.) Thomas Goetz, University Koblenz-Landau, Germany. Title: SIR- type models and parameter estimation for COVID-19 in Germany.

3. Professor (Dr.) Tyll Krueger, Department of Control Systems and Mechatronic, Faculty of Electronics, Wroclaw University of Technology, Poland. Title: Contact tracing and testing of strategies – insights from the MOCOS Covid-19 micro simulation model.

4. Professor (Dr.) Arni S.R. Srinivasa Rao, Director, Laboratory for Theory and Mathematical Modeling (http://spots.augusta.edu/arrao/modeling/), Department of Population Health Science: Epidemiology Medical College of Georgia, Augusta University, Georgia, United States of America. Title: Artificial intelligence framework and mathematical modeling for COVID-19 identification and spread.

5. Dr Matti Heilio, Lappeenranta University of Technology, Lappeenranta, Finland, moderated the Panel discussion and made the closing remarks.

There were an additional five speakers on June 18:
1. Professor (Dr.) Jean-Guy Caputo, INSA de Rouen, France. Title: Epidemic model on a network: analysis and applications to COVID-19.

2. Dr Betty Nannyonga, College of Natural Sciences Makerere University, Kampala Uganda. Title: Infodemic: How an Epidemic of Misinformation could lead to a High Number of Novel Corona Virus Disease Cases in Uganda.

3. Dr. Josephine Wairimu Kagunda School of Mathematics, Chiromo Campus, University of Nairobi, Kenya. Title: Predictive models of COVID-19 disease and outcomes in Kenya.

4. Professor (Dr) Uffe Hogsbro Thygesen, Technical University of Denmark, Denmark. Title: Modelling the COVID-19 Epidemic in Denmark.

5. Dr Robin Thompson , University of Oxford, Oxford, United Kingdom. Title: Mathematical modeling in the early stages of the COVID-19 Pandemic.

The closing remarks were given by the Honorable Vice Chancellor, Professor Dr. Parimal Vyas. The Maharaja Sayajirao University of Baroda, Vadodara, Gujarat, India.

Dhanesh Patel
Prof (Dr.) Dhanesh Patel is Professor of Applied Mathematics and Director of the Office of International Affairs at Maharaja Sayajirao University of Baroda, Gujarat, India. He currently serves on the Council of ECMI.
Standing Committee for Gender Equity in Science is Off to a Great Start

As noted in the July 2020 Dianoia Issue, the global project, "A Global Approach to the Gender Gap in Mathematical, Computing and Natural Sciences: How to Measure It, How to Reduce It", supported by ICSU and then ISC from 2017 to 2019, gave rise to a new Standing Committee on Gender Equity in Science. This committee, founded in June 2020 through a memorandum of understanding among 9 international unions, has as its goal the promotion of gender equity globally and across all sciences. Member organizations include:

- International Astronomical Union (IAU)
- International Council of Industrial and Applied Mathematics (ICIAM)
- International Mathematical Union (IMU)
- International Union of Biological Sciences (IUBS)
- International Union of History and Philosophy of Science and Technology (IUHPST)
- International Union of Pure and Applied Chemistry (IUPAC)
- International Union of Pure and Applied Physics (IUPAP)
- Association for Computing Machinery (ACM)
- Gender in Science, Innovation, Technology and Engineering (GenderInSITE)

The ICIAM representative is Carol Woodward (USA) and alternate representative Guiying Yan (China). The committee was formally established in September 2020 and had its first meeting on October 9, 2020. During the meeting, the Chair and Vice Chair were elected, a Communications Officer was appointed, and basic operating procedures were developed. In addition, a new website proposal was awarded, and information on on-going projects to promote gender equity among partners was given. The committee is currently developing some recommendations addressing the impacts of Covid-19 on women scientists.

For more information on the new standing committee, see the new website, https://gender-equality-in-science.org

Carol S. Woodward

Carol S. Woodward is a mathematician at Lawrence Livermore National Laboratory and is the SIAM Vice President-at-Large. Her research includes portable numerical software, time integration methods, and algebraic solvers.
European Women in Mathematics: Open Letter on Mathematicians Affected by the Pandemic

To Whom It May Concern,

The COVID-19 pandemic and ensuing full and partial lockdowns that this year swept across Europe and the world are unprecedented. Not all of the aftereffects are negative: As a group we have broadened our skills and horizons in digital teaching and online seminars. But the net impact on research and training in academia has been disastrous: Conferences were cancelled and collaborations stood still. Time slated for research splintered among the competing demands of home-schooling, eldercare, and quarantines. Networking and mentorship stalled. Common but often unaddressed mental health issues mushroomed – at a time when getting help was harder than ever.

Let us be clear about one fact:

**We did not experience the crisis equally.**

Untenured faculty lost more. Women lost more. Caregivers lost more. The more vulnerable the population, the greater the disadvantage.

No one chooses a pandemic, but now we can choose how to respond. We are writing to advocate a proactive policy to support current employees in temporary positions and future job applicants in Mathematics in light of the Corona Crisis. We focus on:

- Untenured mathematicians, because the loss of travel and training opportunities, the slow-down in research productivity, and the uncertainty of the job market is most likely to have a long-term impact on their careers.
- Women, because statistically, women shoulder more of the burden of caregiving (for children and the elderly) and domestic tasks (for which help and other supports recently disappeared).
- Parents, because the shuttering of daycares and schools left them stranded. Suddenly and unexpectedly, parents had to provide constant care for young children and home-schooling for older children.

A proactive policy should not be gender-blind:

While acknowledging the role that some men play in caregiving, we recognize that statistically, women play a significantly larger role. Hence we are concerned that we may lose talented female mathematicians during and following this crisis. Women may choose to leave their profession or reduce their hours. Women in temporary positions may choose security and “settle” for lesser positions. Young women may opt not to pursue careers in science. The COVID-19 pandemic has exacerbated existing gender inequities in mathematics and other sciences. And gender-blind measures do not correct gender inequity.

To those who say we should relax and trust the system, we remark that the system has not produced a gender-balanced representation in the sciences to date and it would be naïve to expect an automatic correction in the face of enormous burdens.

To those who say that parents should take unpaid leave if childcare has been disruptive during the pandemic, we remark there is a difference between facing challenges and being unable to satisfy one's job requirements. The vast
majority of scientists work tirelessly – far beyond their contractual obligations – to achieve their goals. The accomplishments of parents during the pandemic – for both the workplace and the home – should be recognized, not penalized.

We advocate the following proactive measures:

- We encourage universities, governments, and funding agencies to invest in extending the contracts of researchers in temporary positions to offset the loss of productivity during the crisis. We advocate that these extensions give particular consideration to women. Perhaps savings due to cancelled travel and workshops can be redirected for this purpose.

- We encourage universities and funding agencies to award release from teaching or teaching reductions to untenured mathematicians who lost significant research time to digital teaching and caregiver responsibilities, again giving particular consideration to women. In case such measures are not possible, we advocate for allocating additional support via student assistants or other resources to reduce the teaching demands on junior colleagues.

- Evaluators on Hiring, Tenure, Prize, Grant, and other committees should be reminded that the crisis has impacted individuals very differently. It should be not the years past PhD but an academic age, corrected for parental and other leaves, that is the standard quantifier measured by committee members. Women with dependent children should be automatically eligible (although not required) to subtract up to 12 months from their academic age – for the purpose of hiring, grant eligibility, tenure deadlines, etc – due to disruptions from the COVID-19 pandemic. Men with minor children or researchers involved in eldercare during the crisis will be eligible if they can demonstrate that they were responsible for caregiving.

- We advocate flexibility in deadlines and meeting times especially for women with dependent children. The disruptions of the crisis may mean that it takes longer to review an article, finish a grant application, or return galley proofs. An early afternoon meeting might not be possible. Circumstances vary and allowing open conversations about needs and constraints is a necessary condition for a healthy workplace.

These are anxious times. The lock downs may return. Europe needs more women in the sciences. Europe believes in the rights of dual-career families. Our response to the pandemic – whether swift and supportive or slow and cynical – will have broad and lasting impact. Let us shape smart policy to recruit and retain a diverse group of talented young scientists.

Sincerely,

Andrea Walther and Kaie Kubjas

the EWM Standing Committee and the EWM Working Group on the Corona Crisis


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European Women in Mathematics (EWM)

Postal address:
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Mathematical Congress of the Americas: 2021 Congress Online

The 2021 Mathematical Congress of the Americas announces:

Due to current uncertainty about the possibility of traveling, and in order to make planning ahead possible, the Steering Committee has made MCA 2021 a fully online event. The dates are

19-24 July, 2021

For more information, see the Congress Website:
