

# ICMI

## ICMI Newsletter

*A Newsletter from the ICMI-International Commission  
on Mathematical Instruction*

**Editors:**

Abraham Arcavi (ICMI Secretary General)  
Merrilyn Goos (ICMI Vice President)  
Lena Koch (IMU Secretariat, ICMI Administrator)

**Contact:**

[abraham.arcavi@weizmann.ac.il](mailto:abraham.arcavi@weizmann.ac.il)  
[m.goos@uq.edu.au](mailto:m.goos@uq.edu.au)  
[lena.koch@wias-berlin.de](mailto:lena.koch@wias-berlin.de)

**Graphic Design:**  
Lena Koch

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## 1. Editorial – From the desk of Zahra Gooya, Member at-large of the ICMI EC

“Don’t Make a Myth from Maryam!  
She should be remembered as a Role Model”



Credit: Stanford University

Only three years have passed since, in 2014, the mathematics world celebrated the first woman ever to win the Fields Medal- commonly known as Mathematics Nobel Prize. And now, the mathematics world is in grief of losing her.

Many young researchers around the globe have been inspired by Maryam Mirzakhani and were amazed by her humble and yet, fearless character.

Kasra Rafi from the University of Toronto wrote that in 2016, he and Maryam walked from her house at Palo Alto to Stanford’s mathematics department to attend a lecture delivered by Mikhail Gromov; in a time that Maryam’s cancer spread to her bones and liver and she was in harsh pain, knowing that the time of her flight to eternity is very near. It was amazing that, even in that situation, she restlessly walked to listen to a talk! Kasra said they had to stop “every few minutes along the walk so that she could lie down on a bench to rest” (Nature, Vol. 549, Sep. 7, 2017, p.32).

In my view, the everlasting Mirzakhani legacy was to depict the human face of mathematics and a mathematician, to say the least.

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As we may recall, one of the main goals of the World Mathematics Year -2000, was to change the public image of mathematics, which she achieved in the most prominent way. Maryam Mirzakhani never let her illness stop her from making astonishing discoveries and inventions. This eagerness to break scientific barriers continued till the last few months of her life. A unique aspect of Maryam was being an ordinary genius! Mathematics and art were both a natural beauty for her and above all, she was a caregiving mother, a wonderful wife, an excellent daughter and sister for her parents and siblings, a generous friend, a courageous mentor and teacher and of course, an inspired young researcher of mathematics. She was given a great gift of being normal; she got married and raised her daughter, spent time with her and in her very short life never postponed things for the unknown future. She was unique in combining research work and personal life together. Another legacy of Maryam's, which she left behind for all young scientists, is to encourage them to strive towards reaching their goals. To reach the peak, she sometimes ran, from time to time sat down and thought, and occasionally took only a few steps. It always seemed that she even was not in hurry when taking off with utmost speed!

She was an intuitive problem solver and "to solve problems, Mirzakhani would draw doodles on sheets of paper and write mathematical formulas around the drawings" and her daughter described her mother's work as "painting."

Numerous memorial and commemorate services have been held to honor Maryam Mirzakhani's work worldwide. In all services being held in Iran and in most of them, her parents were present, her father pleaded to everyone not to allow Maryam to become a Myth, but to be a role model instead. He argued that a "myth" is not accessible, whereas a "role model" is. Moreover, successful role models are accessible, and could inspire young people, women and men, to aspire to reach their highest potential.

Many organizations in Iran advocated to establish a prize in her name for the most talented Iranian young woman in mathematics. However, I strongly argued with my colleagues and others that Maryam Mirzakhani belongs to the world and the international mathematics community. Thus, it is not fair to make her a national hero, nor to restrict the prize based on gender. She has given much to the world at large and to women mathematicians in particular. I believe that her legacy should be the source of inspiration for all young women mathematicians around the globe.

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## 2. Towards ICME-14 in 2020 - Jill Adler, ICMI President

The ICME14 IPC had its first meeting in Shanghai earlier this month (September). We are happy to report that we had a very successful meeting.

We were warmly welcomed and generously hosted by Professor Jianpan Wang, the International Program Committee (IPC) Chair, Binjan Xu and Jiansheng Boa, Co-chairs of the Local Organizing Committee (LOC) and other colleagues. Together with other faculty, postdoctoral fellows and doctoral students in mathematics and mathematics education at the East China Normal University, they ensured we were all well looked after. The 20 member IPC worked hard over 6 days, beginning with establishing a shared view of the vision for the congress, and a visit to the conference venue. Our Congress will be in a large conference venue, with all the important facilities available.

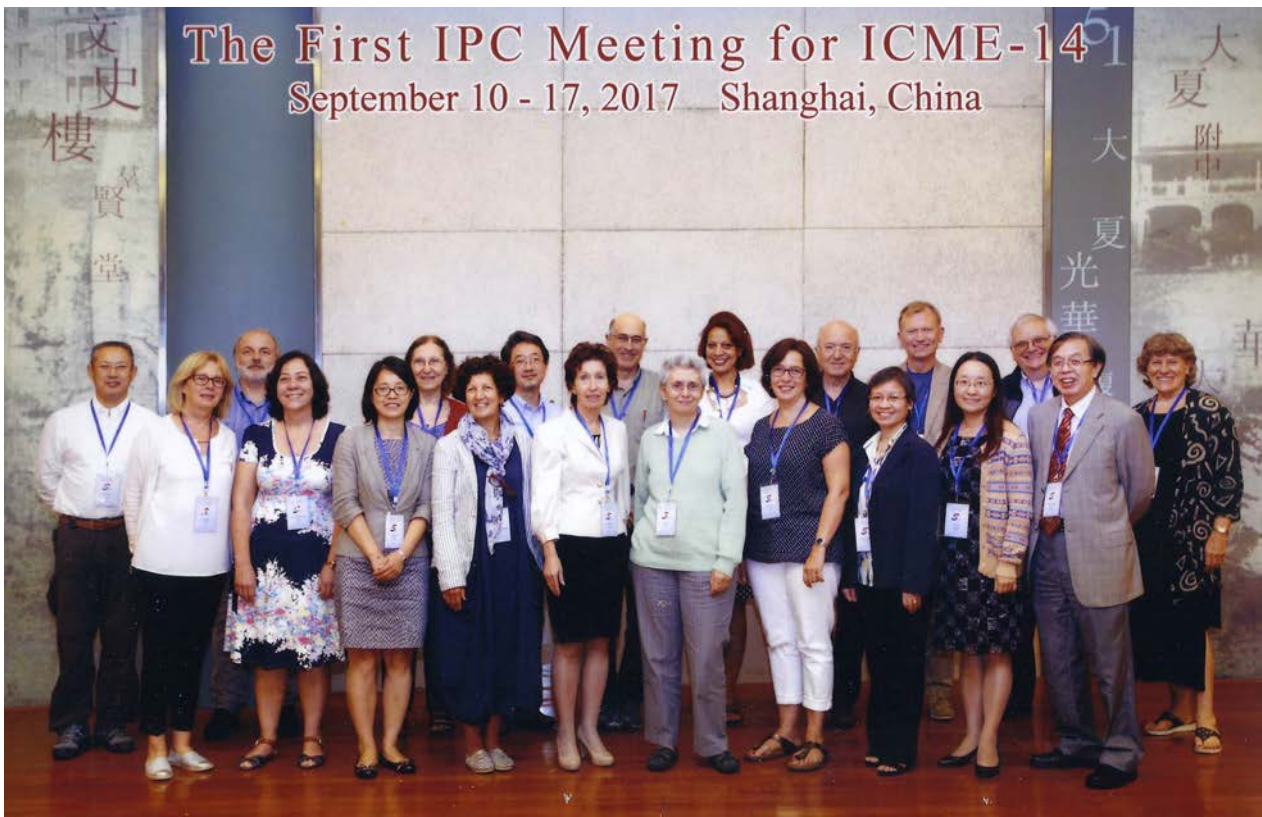
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It is substantial work to build up a program of plenary speakers as well as topics for plenary panels and survey teams and the invited speakers for these. The first days were devoted to this work, before we turned to the invited lectures (how many and who they could be), and then the Topic Study Groups, also how many, which topics and then the possible members of the teams for each one of these. In short, all the important initial work towards the program for the Congress was accomplished, and we are finalizing the agreed list of invited participants and their contact information for Professor Wang to be able to send out invitations in the next weeks.

We all learned a great deal about the process, and it seems an appropriate time to institutionalize some features of the work that to date is carried by institutional memory of previous IPC Chairs, members' participation, and executive experience. We think this would facilitate the first IPC meeting of ICME15. It is not trivial to hold a range of principles (e.g. inclusion across contexts, balance of speakers from diverse countries and across), all the time working with continuity, innovation and space for influence of the host country to construct a vision for the Congress. The conversations were thoughtful, productive and challenging as we worked our way through different ideas and interests.

We are an impressive international community, with people generously devoting their time towards a successful program in 2020. We are deeply appreciative of each IPC member, their intense participation, including preparation before arriving in Shanghai, and 'homework' on more than one evening after a long day's work.

We are very confident that ICME14 will be yet another memorable event.





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### 3. Launching ICMI Study 24

ICMI Study 24 on “School Mathematics Curriculum Reforms: Challenges and Changes” (Tentative title) has now formally been launched. The first meeting of its International Program Committee (IPC) will take place in Berlin, in November 13-15. The co-chairs of this Study are Renuka Vithal (South Africa) and Yoshinori Shimizu (Japan). In the Berlin meeting, the IPC will finalize the Discussion Document (DD, including the call for papers) which is expected to be distributed before the end of 2017. During 2018, the papers submitted will be reviewed, and invitations for the Study Conference will be issued. The Study Conference is expected to take place towards the end of 2018. Then 2019 will be devoted to the writing and production of the Study Volume, which is expected to be presented at ICME14 in 2020 in Shanghai. Stay tuned and consider submitting a paper!

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### 4. Future ICMI Studies

The ICMI Executive Committee has started to consider proposals for future ICMI Studies, and will discuss them in its 2018 annual meeting. Colleagues interested in submitting a proposal are invited to read the recently revised guidelines (September 2017) with detailed information on the nature and the process of producing an ICMI Study. The revised guidelines can be found at [http://www.mathunion.org/fileadmin/ICMI/docs/ICMI\\_Studies\\_Revised\\_Sept23\\_2017.pdf](http://www.mathunion.org/fileadmin/ICMI/docs/ICMI_Studies_Revised_Sept23_2017.pdf)

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### 5. Call for Intention to Bid to organise and host ICME15 in 2024 – Second Call

ICMI is hereby inviting its state representatives, national/regional organisations and academic institutions to consider the possibility of organising and hosting the International Congress on Mathematical Education in July/August 2024.

**At the present, ICMI is inviting a declaration of intent which should be received by December 1<sup>st</sup>, 2017. The full bid document should be submitted by November 1<sup>st</sup>, 2018.**

When considering and preparing the submission of a declaration of intent to organise and host an ICME, ICMI advises the potential candidates to consider the following information required as part of a full bid document due in November 1<sup>st</sup>, 2018:

- A statement explaining why ICME should take place in the proposed state. Please point out particular highlights but also address honestly potential weaknesses or difficulties.
- A statement asserting that the bid is presented in agreement with the ICMI Country Representative.
- A list of national and regional organisations (professional associations, universities, governmental/non-governmental organisations, others) and prominent mathematicians and/or mathematics educators who support the idea of organising and hosting the conference, and will contribute to the organisational efforts.
- A nomination of the Conference Chair and the head of the Local Organising Committee (LOC), a brief CV for each of these two persons and a personal letter of intent signed by them. Whereas all the members of the local organising committee are appointed by the organisers, the members of the International Program Committee (the IPC - in charge of the scientific components of the conference) are appointed by ICMI.

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- A statement confirming that participants from all over the world (regardless of their nationality) will be allowed freedom of entrance to the hosting state (except for the possible need of a visa).
  - A concise description of the venue (and its facilities) available to host the academic activities of the conference (expected attendance of 2500-3000 participants).
  - A description of the amount/type of accommodation which can be offered, including an adequate amount of inexpensive lodging and information about distances to the venue and availability of convenient transportation.
  - An estimate of the budget alongside a list of potential sources of funding (including intention to approach commercial, governmental or philanthropic entities). The registration fees to be collected from the participants should be within the range of the fees charged in previous ICMEs. In the preparation of the budget the following should be taken into account: personnel costs, publication costs (Proceedings, website, program, photocopies), rental of the venue, equipment, social events (reception, farewell, happy hour, excursion, coffee breaks), invited participants (travel and accommodation of plenary speakers), costs of the organisation of two IPC meetings (travel and accommodation of 15-20 members for two one-week periods), insurance and miscellaneous expenses.
  - An estimated timeline for the publication of the Proceedings.

ICMI recognises that not all states have similar conditions to mount a potentially successful bid. Nevertheless ICMI acknowledges that every bid will have its own advantages and highlights as well as its own weaknesses and difficulties. Therefore all states are encouraged to consider bidding according to the guidelines. The Executive Committee of ICMI will judiciously weigh the weak and strong points of all bids, taking into special consideration proposals from regions in which ICME has not been held in the past, and for which the conference will considerably boost mathematics education.

ICMI warmly recommends potential bidders to approach previous conference chairs in order to gain first-hand information about the character and scope of the task.

All members of the Executive Committee (EC) of ICMI, and certainly the President and the Secretary General, will be open for consultation towards the preparation of the proposal.

Please provide your letter of intent (acknowledging each of the above points) by December 1, 2017. Address the letter and/or any related question to

Abraham Arcavi, Secretary General of ICMI  
[Abraham.arcavi@weizmann.ac.il](mailto:Abraham.arcavi@weizmann.ac.il)  
[ICMI\\_Secretary-General@mathunion.org](mailto:ICMI_Secretary-General@mathunion.org)

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## 6. Donation of books and libraries

In the July 1, 2017 issue of this Newsletter, we posted an announcement regarding retiring professors (as well as prospective retirees) who are willing to donate books and in some cases their entire libraries. We announced that ICMI is willing to serve as a “matchmaker” between the potential donors and libraries in non-affluent countries willing to take in the books, and fund the mailing costs. We are happy to list the first donation of books and libraries:

### Proceedings:

PME Proceedings from 1987 to 2013.

Various proceedings of other conferences such as MES, PDME, AERA, ICME.

### Journals

*For the Learning of Mathematics* 1980-1999 and 2004 to present.

*Educational Researcher* 2001 to 2017.

*Educational Studies in Mathematics* 2000 to present

*International Journal of Science and Mathematics* from 2003 to present

*Mathematics Teaching and Learning* 1991 to present

*Research in Mathematics Education* from start to present

*British Educational Research Journal* from 2006 to 2016.

*American Educational Research Journal* from 2000 to 2016

### Books

90 mathematics education texts including Handbooks published by Kluwer, Springer, Routledge, Falmer, and Sense publications, and some historical texts.

150 texts on psychology, philosophy and sociology of education, including several on Vygotsky and related work.

Institutions or colleagues interested in receiving these books should contact the ICMI Secretary General at: [Abraham.arcavi@weizmann.ac.il](mailto:Abraham.arcavi@weizmann.ac.il) or [ICMI\\_Secretary-General@mathunion.org](mailto:ICMI_Secretary-General@mathunion.org)

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## 7. EARCOME

The 8th ICMI-East Asia Regional Conference on Mathematics Education, will be held in Taiwan on May 7-11, 2018. For more details please see <http://earcome8.math.ntnu.edu.tw>

The ICMI EC will hold its second annual meeting two days after the EARCOME.

Delegates of the five CANPs were invited to the conference and will held meetings with ICMI EC members regarding future plans to consolidate and expand the CANP activities in their regions.

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## 8. Have you read?

Following our posting in the July 1st, 2017 issue of this Newsletter regarding the issue of citation indices, we call the attention of interested colleagues to a detailed study on mathematics education journals recently published:

Williams, S.R. & Leatham, K.R. (2017) Journal quality in mathematics education. *Journal for Research in Mathematics Education*, 48(4), 369-396.

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## 9. News from International Mathematical Union (IMU)

**ICM 2018:** The Organizing Committee has released the first part of the Scientific Program for the ICM. [Registration](#) for the congress and [submission of short communications and posters](#) are now open.

### **International Day of Mathematics**

Last spring, the Executive Committee of the IMU decided to explore the possibility of UNESCO declaring an International Day of Mathematics. This would be an opportunity for communities of mathematicians and mathematics educators around the world to join forces and reach out to the general public. When members of the IMU were consulted on the matter, a large majority of IMU Adhering Organizations who responded were enthusiastic. One date stood out – March 14 – also called Pi Day as it is frequently written 3/14. At its June 2017 meeting the ICMI Executive Committee warmly endorsed this initiative and agreed to seek different ways to encourage participation. A precise proposal was written by the IMU that received the support of the International Basic Science Program at UNESCO. The next step is contacting and securing the support of the Permanent Delegations and National Commissions of UNESCO, who can make a formal recommendation. If a country wants to help by contacting its Permanent Delegation and/or National Commission, please contact Helge Holden:

[secretary@mathunion.org](mailto:secretary@mathunion.org)

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## 10. Upcoming Conferences

- 8th ICMI-East Asia Regional Conference on Mathematics Education (EARCOME), Taiwan, May 7-11, 2018, <http://earcome8.math.ntnu.edu.tw/>
  - 42nd Annual Meeting of PME, Umeå, Sweden July 3 -8, 2018, <http://www.pme42.se/>
  - 8th European Summer University on History and Epistemology in Mathematics Education, Oslo, Norway, July 20-24, 2018, <https://esu8.edc.uoc.gr/>
  - AFRICME (The Africa Regional Congress of ICMI on Mathematical Education), August 29-31, 2018, Aga Khan University, Dar es Salaam, Tanzania.  
<http://www.mathunion.org/icmi/conferences/icmi-regional-conferences/conferences-to-come/>
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