

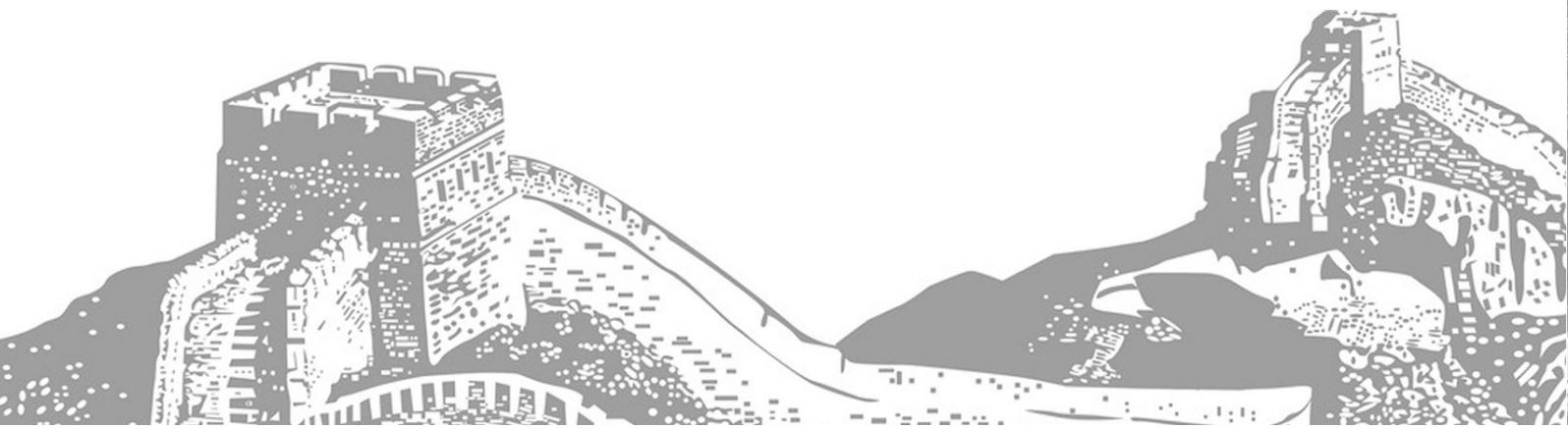


**ICME-14**  
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**The 14th International Congress on  
Mathematical Education**

**THE FIRST ANNOUNCEMENT**

**(July 31st, 2018)**







# The 14<sup>th</sup> International Congress on Mathematical Education THE FIRST ANNOUNCEMENT

(July 31<sup>st</sup>, 2018)

Hosted by Chinese Mathematical Society (CMS), organized by East China Normal University (ECNU), the 14<sup>th</sup> International Congress on Mathematical Education will be held in Shanghai, China from July 12<sup>th</sup> to 19<sup>th</sup>, 2020.

China is an ancient country with a 5 000-year history of civilization and a brilliant history of mathematics and mathematics education. In recent 100 years, the introduction of western mathematics and mathematics education and their integration with traditional Chinese culture and education have fostered new achievements in mathematics education of modern China. Shanghai, a famous metropolis in the Far East, is an engine for the economic and social development of China and a window of China's opening-up policy. In addition, it is also the cradle of modern Chinese mathematics and mathematics education and the birthplace of the Chinese Mathematical Society. East China Normal University is one of the top universities in China and takes the lead in the development of teacher education in China. The mathematics education team of ECNU has a great influence both at home and abroad. Taking consideration of all these facts, the ICME-14 hosted in Shanghai will be a grand academic congress and a great surprise for the colleagues around the world.

The International Congress on Mathematical Education (ICME) is held quadrennially under the auspices of the International Commission on Mathematical Instruction (ICMI). The aim of the Congress is to present the current states and trends in mathematics education research and in the practice of mathematics teaching at all levels. The Congress will gather a broad spectrum of participants, such as researchers in mathematics education, teacher trainers, practicing teachers, mathematicians, and others interested in mathematics education.

It is not ICMI as such which is organizing an ICME, neither in terms of the scientific nor of the practical aspects of the Congress, but all ICMEs are held under the Commission's auspices and principles. More precisely, an ICME is planned and organized mainly by two committees — the International Program Committee (IPC) and the Local Organizing Committee (LOC). The IPC is appointed by the Executive Committee (EC) of ICMI but works independently from ICMI. It designs the scientific program, selects presenters and various working teams, and oversees the progress of the Congress preparation. The practical and financial organization of an ICME is the independent responsibility of a Local Organizing Committee, again under the observation of general ICMI guidelines.

– Information source: ICMI website

## A Word of Welcome from the IPC

The International Program Committee (IPC) for ICME-14 would like to extend its warmest greetings to all readers of this First Announcement. The IPC is doing its very best to put together a rich, varied and multi-faceted scientific program for the Congress, with the aim of attracting and addressing the entire community of researchers and practitioners in mathematics education from all over the world. It is our ambition to provide nourishment for thought and inspiration for practice to the established mathematics educator of world renowned and to the novice in the field attending an ICME for the first time, and to everyone else who takes an interest in mathematics education.

In the program structure of ICME-14, we have attempted to maintain the best of the traditional components which have served to make the past ICMEs great successes, with a number of novel components and features which are intended to accommodate new needs and to address the changes that mathematics as a field of research, development, and practice is currently undergoing.

The main components of the scientific program are outlined below. Some important information is also attached. A few others are likely to be added at later stages. In this Announcement, no names of speakers or group organizers will be given. As soon as decisions have been made and invitations accepted, names will appear on the ICME-14 website. Questions and proposals concerning matters pertaining to the program should be addressed to the Chair of the IPC.

We, in the IPC, look forward to seeing you in Shanghai at ICME-14!

Jianpan Wang



Chair of the International Program Committee

### The International Program Committee

#### Chair:

1. **Jianpan Wang** (Congress Chair), China

#### Members:

2. **Jill Adler** (ex-officio member, ICMI Presidet), South Africa
3. **Abraham Arcavi** (ex-officio member, ICMI Secretary General), Israel
4. **Jiansheng Bao** (ICME-14 LOC Cochair), China
5. **Daniel Chazan**, USA
6. **Faiza Chellougui**, Tunisia
7. **Marta Civil**, USA
8. **Alicia Dickenstein** (IMU Vice-President), Argentina
9. **Yufeng Guo**, China
10. **Anjum Halai**, Pakistan/Tanzania
11. **Gabriele Kaiser** (ICME-13 IPC Chair), Germany
12. **Caroline Lajoie**, Canada
13. **Celi Espasandin Lopes**, Brazil
14. **Tomas Lowrie**, Australia
15. **Maria Alessandra Mariotti**, Italy
16. **Takeshi Miyakawa**, Japan
17. **Frode Rønning**, Norway
18. **Ewa Swoboda**, Poland
19. **Luc Trouche**, France
20. **Catherine Vistro-Yu**, Philippines
21. **Binyan Xu** (ICME-14 LOC Cochair), China
22. **Ivan Yashchenko**, Russia

## **Main Program Components**

The main academic activities in ICME-14 are as follows.

### **1. Plenary Activities, including Plenary Lectures (PL) and Plenary Panels (PP)**

Plenary Lectures or Plenary Panels on themes of current actuality and relevance to the practice of the international community of mathematics educators will be presented by experts invited by the IPC. In ICME-14 there will be four Plenary Lectures and two Plenary Panels. The themes of the two Plenary Panels are:

- PP1. Actors for mathematics teacher education: Joint actions versus conflicts
- PP2. Mathematics in global education reform: Conversations that need to happen

### **2. Survey Teams (ST)**

Survey Teams are groups entrusted to carry out a survey of the latest developments regarding a certain theme or issue of mathematics education. Emphasis is placed on identifying and characterizing important new knowledge, recent developments, new perspectives, and emergent challenges. The teams' work will be presented in a lecture at the Congress. The creation of the survey teams is intended to strengthen the emphasis on new developments and progress in the area addressed since the time of the previous ICMEs, thus giving continuity to ICME. Four Survey Teams have been organized for ICME-14:

- ST1. Survey team on research on university mathematics education
- ST2. Survey team on early childhood mathematics education (up to age 7)
- ST3. Survey team on teachers' collective work as a regular school practice for teacher development
- ST4. Survey team on the teaching and learning of mathematical modelling and interdisciplinary mathematics educations

### **3. Invited Lectures (IL)**

Invited Lectures, first renamed in ICME-13 from the original Regular Lectures, will be given by prominent researchers in mathematics education from different parts of the world on invitation from the IPC. The lectures will cover a wide spectrum of topics, themes and issues and will be given parallelly.

### **4. Topic Study Groups (TSG)**

A Topic Study Group is designed to gather a group of congress participants who are interested in a particular topic of mathematics education. Each TSG will be organized by a team of five IPC invited experts in the field. The organizing team will review, select and organize contributions, some by invitations and some by submissions by interested participants. All the accepted submissions will be invited to present in one of the three modes, including regular TSG presentation, short presentation and poster presentation.

A total of 62 topics have been decided by the IPC. As an innovative feature of ICME-14, the list of topics will be grouped into two classes running in different timeslots. Therefore, the participants are allowed to associate themselves with two TSGs (one primary and one secondary) from different classes and then expected to stay with the two groups throughout all the sessions.

The 62 TSGs are as follows. Grouping TSGs into two classes will be decided by IPC later and will be announced in the *Second Announcement*:

- TSG1. Mathematics education at preschool level
- TSG2. Mathematics education at tertiary level
- TSG3. Mathematics education for gifted students
- TSG4. Mathematics education for students with special needs
- TSG5. Teaching and learning of number and arithmetic
- TSG6. Teaching and learning of algebra at primary level
- TSG7. Teaching and learning of algebra at secondary level
- TSG8. Teaching and learning of geometry at primary level
- TSG9. Teaching and learning of geometry at secondary level
- TSG10. Teaching and learning of measurement
- TSG11. Teaching and learning of probability
- TSG12. Teaching and learning of statistics
- TSG13. Teaching and learning of calculus
- TSG14. Teaching and learning of programming and algorithms
- TSG15. Teaching and learning of discrete mathematics
- TSG16. Reasoning, argumentation and proof in mathematics education
- TSG17. Problem posing and solving in mathematics education
- TSG18. Students' identity, motivation and attitudes towards mathematics and its study
- TSG19. Mathematical literacy, numeracy and competency in mathematics education
- TSG20. Learning and cognition in mathematics (including learning science)
- TSG21. Neuro science and mathematics education/Cognitive Science
- TSG22. Mathematical applications and modelling in mathematics education
- TSG23. Visualization in the teaching and learning of mathematics
- TSG24. The role and the use of technology in the teaching and learning of mathematics at primary level
- TSG25. The role and the use of technology in the teaching and learning of mathematics at lower secondary level
- TSG26. The role and the use of technology in the teaching and learning of mathematics at upper secondary level
- TSG27. The role of the history of mathematics in mathematics education
- TSG28. Preservice mathematical teacher education at primary level
- TSG29. Preservice mathematical teacher education at secondary level
- TSG30. In-service mathematical teacher education and mathematical teacher professional development at primary level
- TSG31. In-service mathematical teacher education and mathematical teacher professional development at secondary level
- TSG32. Knowledge in/for teaching mathematics at primary level
- TSG33. Knowledge in/for teaching mathematics at secondary level
- TSG34. Affect, beliefs, and identity of mathematics teachers
- TSG35. Knowledge and practice of mathematics teacher educator
- TSG36. Research on classroom practice at primary level
- TSG37. Research on classroom practice at secondary level
- TSG38. Task design and analysis
- TSG39. Language and communication in the mathematics classroom
- TSG40. Research and development on mathematics curriculum
- TSG41. Research and development on textbooks and resources for learning and teaching mathematics
- TSG42. Research and development in assessment in mathematics education
- TSG43. Research and development in testing (national and international) in mathematics education
- TSG44. Mathematics and interdisciplinary education
- TSG45. Mathematics for non-specialist/mathematics as a service subject at tertiary level
- TSG46. Mathematical competitions and other challenging activities
- TSG47. Mathematics education in a multilingual environment
- TSG48. Mathematics education in a multicultural environment
- TSG49. Distance learning, e-learning, and blended learning of mathematics
- TSG50. Mathematics education in and for work; continuous mathematics education including adult education
- TSG51. Mathematics education for ethnic minorities
- TSG52. Ethno-mathematics
- TSG53. Equity in mathematics education
- TSG54. Social and political dimensions of mathematics education
- TSG55. The history of the teaching and the learning of mathematics
- TSG56. Philosophy of mathematics and mathematics education
- TSG57. Diversity of theories in mathematics education
- TSG58. Empirical methods and methodologies in mathematics education
- TSG59. Mathematics and creativity
- TSG60. Semiotics in mathematics education
- TSG61. International education cooperation
- TSG62. Popularization of mathematics

## 5. National Presentations (NP)

Upon applications, IPC will select a small number of countries so that the international mathematics community may gain a closer knowledge on the state and trends of mathematics education in those countries. Applications of NP should be submitted to the IPC Chair by the National Representatives of ICMI member states or academic groups representing ICMI member states, not later than January 31<sup>st</sup>, 2019. An NP could be composed of a series of oral presentations for a duration within one and a half hours, accompanied by a booth showing some objects, printing materials, videos if necessary.

## 6. Discussion Groups (DG)

A Discussion Group is designed to gather congress participants who are interested in discussing, in a genuinely interactive way, certain challenging, controversial or emerging issues and dilemmas of interest to an international or regional audience. Proposals from participants are welcome and should be submitted to the IPC chair by November 30<sup>th</sup>, 2019.

## 7. Workshops (WS)

Workshops will provide hands-on experience to participants wishing to learn or try something new. These workshops are created via proposals to the IPC. Proposals ought to be submitted to the IPC Chair by November 30<sup>th</sup>, 2019.

## 8. Thematic Afternoon (TA)

As a special feature of ICME-14, a thematic afternoon on Selected Chinese Didactic Traditions and Chinese-speaking Traditions will take place. Local Organizing Committee (LOC) will be in charge of the activity, and therefore the themes and the organizing teams are formed via proposals to the LOC. All the accepted themes will run in parallel.

## 9. Early Career Researcher Day (ECRD)

Early Career Researcher Day, first created in ICME-13, is also organized by LOC. It provides early career researchers with opportunities to develop their research competencies in various fields, establish new contacts, build networks among themselves, and meet and work with international experts in the field. The event will be held one day before the opening ceremony and attached to ICME-14, but not an integral part of ICME-14 itself. The practical scheme and the invited speakers for ECRD will be announced in the *Second Announcement*. Participants who are interested in ECRD should check the related box when registering for the Congress and will be charged additional 350 RMB for the activity.

### The Local Organizing Committee

#### Cochairs:

**Jiansheng Bao**, ECNU Math  
**Binyan Xu**, ECNU Edu

#### Secretary General:

**Yingkang Wu**, ECNU Math

#### Members:

**Yiming Cao**, Beijing Normal U.  
**Jun Chai**, ECNU Math  
**Yifei Chen**, Chinese Math. Soc.  
**Yuelan Chen**, ECNU Math  
**Jing Cheng**, ECNU Math  
**Lianghuo Fan**, ECNU Math  
**Zhigang Feng**, Shanghai Middle School  
**Yijie He**, ECNU Math  
**Hua Huang**, Shanghai Municipal Education Commission  
**Qiping Kong**, ECNU Edu  
**Honghong Li**, ECNU School of Foreign Languages  
**Di Liu**, ECNU Edu  
**Xiaoli Lu**, ECNU Math  
**Ming Ni**, ECNU Press  
**Naiqing Song**, Southwest U.  
**Shengli Tan**, ECNU Math  
**Xiaoqin Wang**, ECNU Edu  
**Jialu Wang**, ECNU Math  
**Bin Xiong**, ECNU Math  
**Yijun Yao**, Shanghai Math. Soc./Fudan U.  
**Jianyue Zhang**, People's Education Press  
**Jinyu Zhang**, ECNU Edu  
**Yan Zhu**, ECNU Edu  
**Jiachen Zou**, ECNU Edu

ECNU Math = School of Mathematical Sciences, ECNU  
ECNU Edu = Faculty of Education, ECNU

## Some Useful Information

### 1. Submissions of Proposals and Papers (Abstracts)

- *Proposals for National Presentations* should be submitted to the IPC Chair by January 31<sup>st</sup>, 2019.
- *Proposals for Discussion Groups and Workshops* should be submitted to the IPC Chair by November 30<sup>th</sup>, 2019.
- *Abstracts of Plenary Lectures, Plenary Panels, Invited Lectures, and survey reports of Survey Teams* should be submitted by lecturers or team chairs to the Congress website by March 31<sup>st</sup>, 2020.
- *ICME-14 Website for Administrations and TSG Paper Submissions* will open by June 1<sup>st</sup>, 2019. The detailed time arrangement and process for submitting and reviewing abstracts and full papers for TSGs (including short presentations and posters) will be announced in the *Second Announcement*.

### 2. The *Second Announcement*

The *Second Announcement* will be posted on June 1<sup>st</sup>, 2019.

### 3. Registration

Registration opening	By June 1 <sup>st</sup> , 2019
Early bird registration with 3500 RMB	By March 31 <sup>st</sup> , 2020
Regular registration with 3800 RMB	Between April 1 <sup>st</sup> and May 31 <sup>st</sup> , 2020
Late registration with 4000 RMB	From June 1 <sup>st</sup> , 2020
Accompanying person 1000 RMB	Any time

### 4. On the ICME-14 Solidarity Fund

Started with ICME-8, a special ICME Solidarity Fund was initiated by setting aside 10% of the total amount collected through each ICME registration fee. The total collected amount from each ICME is distributed as grants for delegates from less-affluent countries to attend the ICMEs. Priority is given to applicants from those countries who contribute to the scientific program with papers or posters. The qualification conditions and the application process and deadline, please refer to the relative notice in the website.

### 5. ICME Website and E-mail Address



Website: [www.icme14.org](http://www.icme14.org)  
E-mail: [icme14@icme14.org](mailto:icme14@icme14.org)

## 6. The Venue



Shanghai Convention & Exhibition Center of International Sourcing (SCECIS) located in Changfeng Ecological & Business Park in Putuo District, Shanghai, is selected as the venue for ICME-14. Facing Suzhou River — the mother river of Shanghai in the south, bordering on Changfeng Park in the east, SCECIS enjoys a beautiful neighborhood.

Within 0.5 kilometers of SCECIS, several business plazas such as Guosheng Center and Changfeng Joy City are ideal places for shopping and dining. A great number of restaurants in these plazas provide many choices of cuisine including the cuisine of Chinese, western, South Asia, Japanese and Korean, and so on. Western fast food like Pizza Hut and KFC are also available there. Therefore, participants from different countries can satisfy their needs for food very easily. Also within 0.5 kilometers of SCECIS, participants will find branches of many banks, to name some, Bank of China, Shanghai Pudong Development Bank (SPD), Bank of Communications, and Industrial and Commercial Bank of China (ICBC).

Therefore, SCECIS is an ideal venue for large-scale conferences.

Add: 2739 Guangfu Road West, Putuo District, Shanghai, China

