



**Call for Papers**

# ICME13

Hamburg 2016

13th International Congress on  
Mathematical Education (ICME-13)  
24 – 31 July 2016 in Hamburg  
**2nd Announcement**



Universität Hamburg  
DER FORSCHUNG | DER LEHRE | DER BILDUNG



## Welcome to ICME -13

The Society of Didactics of Mathematics (Gesellschaft für Didaktik der Mathematik – GDM) has the pleasure of hosting ICME-13 in 2016 in Germany. The congress – to be held under the auspices of the International Commission on Mathematical Instruction (ICMI) – will take place at the University of Hamburg from Sunday, 24th July to Sunday, 31st July 2016.

Hamburg is a bustling cosmopolitan port in the north of Germany, and with 1.8 million inhabitants its second largest city. It offers a perfect environment for a challenging congress.

We invite participants from all over the world to come to Hamburg and make ICME-13 a rich experience for all. ICME-3 took place in Germany in 1976 in Karlsruhe, and we are proud to welcome mathematics educators from all over the world back to Germany. The congress attendees will experience the very special characteristics of the German mathematics education discussion, which is closely connected to European traditions of didactics of mathematics and has seen important recent developments.

The Society of Didactics of Mathematics represents the German speaking community of didactics of mathematics, bringing together mathematics education groups from Germany, Austria and Switzerland. Supported by the German Mathematical Society, the German Educational Research Association, the German Association for the Advancement of Mathematics and Science Education and the University of Hamburg we are eager to welcome ICME-13 participants to Germany.



**Gabriele Kaiser**  
University of Hamburg  
Convenor of ICME-13



**Rudolf vom Hofe**  
President of the Society of  
Didactics of Mathematics



## Table of Content

Welcome to ICME -13 .....	02
ICME Philosophy .....	04
Organising Committees .....	05
Scientific Programme, Timeline and Submission Process .....	07
Plenary Activities .....	07
Special Feature: Thematic Afternoon .....	08
Survey Teams .....	09
Invited Lectures (formerly Regular Lectures) .....	10
Topic Study Groups .....	14
Timetable .....	29
Call for Papers and Posters .....	31
Deadlines for the Submission of Papers and Posters .....	32
Deadlines for Registration .....	32
Discussion Groups and Workshops .....	32
ICMI Affiliate Organisations .....	33
ICMI Studies .....	33
ICMI Awards .....	34
National Presentations .....	34
Solidarity Grant for Participants and Application for a Grant .....	35
Accommodation .....	35
Excursions .....	36
Registration .....	36
Public Bodies Supporting ICME-13 .....	37
General Information .....	37
ICMI & IMU .....	38

Changes of the programme and further information will be communicated via the congress website [www.icme13.org](http://www.icme13.org), which is constantly updated. Please visit the website for the most recent information.



## ICME Philosophy

International Congress on Mathematical Education (ICME) is held every four years under the auspices of the International Commission on Mathematical Instruction (ICMI). It is, however, planned and organised by separate committees, which operate independently of the ICMI, namely the International Programme Committee (IPC) and the Local Organising Committee (LOC) with the Local Chair. The responsibility for the whole congress is within the Convenor of the congress.

International Congresses of Mathematics Education serve two major functions: On the one hand they provide a scholarly opportunity for discussion, debate, and the presentation of new research and theory concerning all aspects of mathematics education. On the other hand it is a meeting place for the international community of mathematics education, namely, mathematics educators at various educational levels, mathematicians, teachers, policy-makers, and resource producers. ICME always seeks to simultaneously engage in serious scholarship and inclusive participation.

The scholarly aspect of ICME is represented by the Plenary Lectures and Survey Teams, the Invited Lectures and Topic Study Groups, and other fora. The people involved are chosen due to their high level of scholarship, but also with care for representativeness. All presentations in the congress are potentially subject to review, and may be allocated a time or mode of presentation that reflects its relevance and quality.

Inclusiveness within ICME is obtained in many forms. All who wish to attend are welcome, and all who wish to present will be given an opportunity to do so in an appropriate Topic Study Group (TSG) or in an Oral Communication Session associated to the appropriate TSG or an associated Poster Session. In addition, discussions will be especially supported via Discussion Groups and Workshops, all congress participants can submit convincing proposals.

ICME organisers also make special efforts to assist those who have financial or other difficulties concerning attendance by a solidarity grant. New and inexperienced members of the ICME community are especially welcome.

It has long been recognised by ICME organisers that collaboration is the best way of advancing our understanding of any topic. Thus, there is a need to give individual voices the opportunity to be heard and the community the opportunity of hearing them, without having to conform to the deliberations of a specific group.

Another factor in inclusiveness is the issue of language. While English is the official language of the congress, ICME organisers make every effort to accommodate the fact that many participants will not have English as their first language, and that there will be significant groups of participants from other language regions. Therefore translations of the slides of the plenary lectures and of other important activities into the main congress languages will be provided. German as the language of the congress host country needs special attention, including special teacher activities run in German.



## Organising Committees

### International Programme Committee

Gabriele Kaiser (*Germany*) – Chair of IPC ICME-13, Convenor of ICME-13

Marianne Nolte (*Germany*) – Local Chair of ICME-13

Abraham Arcavi (*Israel*) – Secretary General of ICMI

Ferdinando Arzarello (*Italy*) – President of ICMI

Kiril Bankov (*Bulgaria*)

Rute Borba (*Brazil*)

George Ekol (*Uganda*)

Helen Forgasz (*Australia*)

Mellony Graven (*South Africa*)

Alain Kuzniak (*France*)

Hee-Chan Lew (*Korea*)

Johnny Lott (*USA*)

Jarmila Novotna (*Czech Republic*)

Birgit Pepin (*The Netherlands*)

Susanne Prediger (*Germany*)

Elaine Simmt (*Canada*)

John Toland (*Great Britain*) – Representative of IMU

Kalifa Traoré (*Burkina Faso*)

Behiye Ubuz (*Turkey*)

Monica Ester Villarreal (*Argentina*)

Binyan Xu (*China*)

Senior Advisor: Mogens Niss (*Denmark*)



## **Local Organizing Committee**

Marianne Nolte (*University of Hamburg*) Chair of LOC

Angelika Bikner-Ahsbahs (*University of Bremen*)

Dagmar Bönig (*University of Bremen*)

Astrid Fischer (*Carl von Ossietzky University Oldenburg*)

Aiso Heinze (*IPN – Leibniz Institute for Science and Mathematics Education at Kiel University*)

Christine Knipping (*University of Bremen*)

Ulrich Kortenkamp (*University of Potsdam*)

Günter Krauthausen (*University of Hamburg*)

Dominik Leiss (*Leuphana University Lüneburg*)

Anke Lindmeier (*IPN – Leibniz Institute for Science and Mathematics Education at Kiel University*)

Michael Neubrand (*Carl Ossietzky University Oldenburg*)

David Reid (*University of Bremen*)

Silke Ruwisch (*Leuphana University Lüneburg*), Vice President of Society of Didactics of Mathematics

Marcus Schütte (*University of Hamburg / TU Dresden*)

Björn Schwarz (*University of Hamburg*)

Jens Struckmeier (*University of Hamburg, Representative of Department of Mathematics*)

Maike Vollstedt (*University of Bremen*)

Katrin Vorhölter (*University of Hamburg*)

## **Non-profit Association for ICME-13 (VZD-ICME-13 e.V.)**

Christine Bescherer (*Ludwigsburg University of Education*)

Angelika Bikner-Ahsbahs (*University of Bremen*)

Rudolf vom Hofe (*University of Bielefeld, President of the Society of Didactics of Mathematics*)

Gabriele Kaiser (*University of Hamburg*)

Günter Krauthausen (*University of Hamburg*)

Marianne Nolte (*University of Hamburg*)

Silke Ruwisch (*Leuphana University Lüneburg, Vice President of the Society of Didactics of Mathematics*)

Rudolf Sträßler (*University of Gießen*)

Hans-Georg Weigand (*University of Würzburg*)



## Scientific Programme, Timeline and Submission Process

The International Programme Committee has created a programme that will contain, as in previous congresses, activities such as plenary lectures, panel debates and surveys, which will give an overview of the state-of-the-art within mathematics education worldwide, and in addition will provide the participants with insights into present and future major trends in mathematics education. Furthermore, the programme will provide for meetings of ICMI Study groups, Topic Study Groups and other small group activities supporting discussion of major themes in mathematics education. This will enable the conference participants to actively participate via their own contributions.

## Plenary Activities

The plenary activities are those components of the scientific program that address all congress participants at the same time.

For ICME-13 there will be six different plenary activities. After the lectures, there will be an opportunity for participants to meet and discuss with the lecturers.

The following plenary activities will take place:

**PL1** (Lecture): Deborah **Loewenberg Ball** (*USA*)  
Uncovering the Special Mathematical Practices of Teaching

**PL2** (Lecture): Bill **Barton** (*New Zealand*)  
Mathematics Education in its Cultural Context: Plus and Minus Thirty Years

**PL3** (Lecture): Berinderjeet **Kaur** (*Singapore*)  
Mathematics Classroom Studies – Multiple Windows and Perspectives

**PL4** (Lecture): Günter **Ziegler** (*Germany*)  
Elementary Geometry from a Higher Standpoint: Transformation Groups and Configuration Spaces

**P5** (Panel): International Comparative Studies in Mathematics: Lessons for Mathematics Education

Jinfa **Cai** (*Chair, USA*), Ida A.C. **Mok** (*Hong Kong*), Vijay **Reddy** (*South Africa*),  
Kaye **Stacey** (*Australia*)

**P6** (Panel): Transitions in Mathematics Education

Ghislaine **Gueudet** (*Chair, France*), Marianna **Bosch** (*Spain*), Andrea **diSessa** (*USA*),  
Oh Nam **Kwon** (*Korea*), Jianhua **Li** (*China*), Lieven **Verschaffel** (*Belgium*)



## Thematic Afternoon

As special feature of ICME-13 a thematic afternoon on Selected European Didactic and German Speaking Traditions and the Legacy of Felix Klein will take place. The following three strands will take place in parallel:

### “European Didactic Traditions”

Werner **Blum** (*Chair, Germany*), Michèle **Artigue** (*France*), Marja **van den Heuvel-Panhuizen** (*Netherlands*), Maria Alessandra **Mariotti** (*Italy*), Rudolf **Sträßer** (*Germany*)

### “German-speaking Traditions in Mathematics Education Research”

Hans-Niels **Jahnke** (*Chair, Germany*)

- Design Science: Marcus **Nührenböger** & Bettina **Rösken-Winter** (*Germany*)
- Theories in Mathematics Education: Angelika **Bikner-Ahsbals** & Andreas **Vohns** (*Germany / Austria*)
- Subject-oriented Didactics (so-called Stoffdidaktik): Lisa **Hefendehl-Hebeker** & Rudolf **vom Hofe** (*Germany*)
- Concept of General Mathematical Education and Relation to Mathematical Literacy: Rolf **Biehler** & Hans-Niels **Jahnke** (*Germany*)
- Classroom Studies: Uwe **Gellert** & Götz **Krummheuer** (*Germany*)
- Educational Empirical Research: Timo **Leuders** & Kristina **Reiss** (*Germany*)
- Mathematical Modelling: Gilbert **Greefrath** & Katrin **Vorhölter** (*Germany*)

### “Legacy of Felix Klein”

Hans-Georg **Weigand** (*Chair, Germany*), William **McCallum** (*USA*), Marta **Menghini** (*Italy*), Michael **Neubrand** (*Germany*), Gert **Schubring** (*Germany*)

## Mathematical Exhibition

A special offer during the conference will be a mathematical exhibition, organised by Albrecht Beutelspacher, the founder of the Mathematikum, the world’s first mathematical science center in Gießen, which is displaying many mathematical objects and hands-on-materials for mathematical activities.

The importance of visualising geometrical objects and the necessity of spatial intuition for successful mathematical teaching is already emphasised in Felix Klein’s ‘Elementary mathematics from an advanced standpoint’ and has been formed in special traditions of the German didactics of mathematics. Of special relevance is the so-called Modellkammer by Felix Klein, in which he built with his own students mathematical models of mathematical objects and mathematical instruments for practical exercises and which has inspired many mathematicians all over the world.





The exhibition shall contain mirrors producing optical illusions, challenging puzzles, giant soap puzzles allowing many mathematical activities. The exhibition will not only be open for conference participants but also for the public – especially students – providing insights into the attractiveness of mathematics. The exhibition will be accompanied by lectures of renowned experts from mathematics and mathematics education explaining the mathematical underpinning of the experiments. These activities will be of special interest for many teachers from Hamburg and its wider surroundings and will be an excellent possibility to close the gap between academic discussions and interests of teachers. Furthermore, this exhibition and its accompanying lectures will demonstrate to the interested public the beauty of mathematics and the challenges of teaching and learning mathematics. The exhibition will be open during the whole congress with special activities during the Get-together and lunch break.

We look forward to being able to include these new activities featuring characteristics of the German debate on mathematics education together with the usual elements of previous ICMEs to jointly form the programme of ICME-13.

### Survey Teams

Continuing the practice of recent ICMEs five Survey Teams (ST) have been appointed. Each team will work until ICME-13 to survey the state-of-the-art with respect to a certain theme or issue, with particular regard to identifying and characterising important new knowledge, recent developments, new perspectives, and emergent issues. The creation of these teams is intended to strengthen the emphasis on new developments and progress in the area of each theme or issue since the last three or four ICMEs.

The Survey Teams will have 90 minutes to present their work at ICME-13 in a kind of a sub-plenary format and will present their work in parallel.

### Distance learning, blended learning, e-learning in mathematics (including MOOC)

Marcelo C. **Borba** (*Chair, Brazil*), Mario **Sanchez Aguilar** (*Mexico*), Petek **Askar** (*Turkey*), Johann **Engelbrecht** (*South Africa*), George **Gadanidis** (*Canada*), Salvador **Llinares** (*Spain*),  
Liaison person: Mónica E. **Villarreal** (*Argentina*)

### Conceptualisations and role of competences, knowing and knowledge in mathematics education research

Mogens **Niss** (*Chair, Denmark*), Regina **Bruder** (*Germany*), Kyungmee **Park** (*Korea*), Nuria **Planas** (*Spain*), Ross **Turner** (*Australia*), Jhony Alexander **Villa-Ochoa** (*Colombia*)  
Liaison person: Jarmila **Novotna** (*Czech Republic*)

### Assistance of students with mathematical learning difficulties – How can research support practice?

Petra **Scherer** (*Chair, Germany*), Kim **Beswick** (*Australia*), Lucie **De Blois** (*Canada*), Lulu **Healy** (*Brazil / UK*), Elisabeth **Moser Opitz** (*Switzerland*)  
Liaison person: Marianne **Nolte** (*Germany*)



## Mathematics teachers working and learning through collaboration

Barbara **Jaworski** (*Chair, UK*), Olive **Chapman** (*Canada*), Cristina **Esteley** (*Argentina*), Merrilyn **Goos** (*Australia*), Masami **Isoda** (*Japan*), Marie **Joubert** (*South Africa*), Ornella **Robutti** (*Italy*)  
Liaison person: Binyan **Xu** (*China*)

## Geometry Education (including new technologies)

Nathalie **Sinclair** (*Chair, Canada*), Mariolina Bartolini **Bussi** (*Italy*), Michael **de Villiers** (*South Africa*), Alexei **Sossinsky** (*Russia*), Keith **Jones** (*UK*), Ulrich **Kortenkamp** (*Germany*), Allen **Leung** (*Hong Kong*), Kay **Owens** (*Australia*)  
Liaison person: Behiye **Ubuz** (*Turkey*)

## Invited Lectures (formerly Regular Lectures)

The invited lectures will be given by prominent researchers in mathematics education from different parts of the world who have been invited by the International Programme Committee. The lectures will cover a wide spectrum of topics, themes, and issues. The list below contains the names and countries/regions of researchers, who have accepted the invitation and given the preliminary title of the lecture. The duration of the session is 60 minutes with 45 minutes lecture time plus 15 minutes of discussion.

Glenda **Anthony** (*Massey University, New Zealand*)

Learning to practise: New directions for mathematics teacher education

Arthur **Bakker** (*University of Utrecht, Netherlands*)

Reasoning and representing: Lessons from neo-Hegelian philosophers for mathematics education

Sigrid **Blömeke** (*Centre for Educational Measurement of the University Oslo, Norway*)

The development of mathematics teachers' knowledge across the life-span and its relationship to teacher education, school context and student achievement

Faïza **Chellougui** (*University of Carthage, Tunisia*)

Difficulties of students engaged on activities related to mathematics formalism

Nancy **Chitera** (*University of Malawi, Malawi*)

There is more to the teaching and learning of mathematics than the use of local language: Mathematics teacher practices

Marta **Civil** (*University of Arizona, USA*)

Intersections of culture, language, and mathematics education: Looking back and looking ahead

Al **Cuoco** (*Education Development Center, USA*)

Learning modern algebra from early attempts to prove Fermat's Last Theorem: A course for prospective teachers

Ubiratan **D'Ambrosio** (*State University of Campinas, Brazil*)

In memoriam Paulus Gerdus



Betina **Duarte** (*UNIPE- Universidad de San Andrés, Argentina*)

Validations and reasoning in mathematics: The role of anticipation as a framework for teacher's interventions

Anthony A. **Essien** (*University of the Witwatersrand, South Africa*)

Preparing pre-service mathematics teachers to teach in multilingual classrooms: A community of practice perspective

Janete **Frant** (*Universidade Anhanguera de São Paulo, Brazil*)

From Microworlds to Clouds: Experiences in Math Classrooms

Michael **Fried** (*Ben-Gurion University of the Negev, Israel*)

History of mathematics in mathematics education: Can we restore mathematics as a liberal art?

Linda **Furuto** (*University of Hawaii at Mānoa, Hawaii*)

Equity in Ethnomathematics: Connecting Research, Pedagogy, and Promising Practices

Ann **Gervasoni** (*Monash University, Australia*)

The impact and challenges of early mathematics intervention in Australian contexts

Ines **Gomez-Chacon** (*Universidad Complutense, Spain*)

Hidden connections, double meanings: A mathematical exploration of affective and cognitive interactions in learning

Liv Sissel **Grønmo** (*University of Oslo, Norway*)

The role of algebra in school mathematics

Ansie **Harding** (*University of Pretoria, South Africa*)

The role of anecdotal story telling in teaching mathematics

Rina **Hershkowitz** (*Weizmann Institute of Science, Israel*),

Stefan **Ufer** (*Ludwig-Maximilian University Munich, Germany*)

PME is 40! Four decades of research in PME

Alena **Hošpesová** (*University of South Bohemia, Czech Republic*)

Maths in pre-school education

Luckson **Kaino** (*Kampala International University, Tanzania*)

Students' modelling experiences in systems of linear equations at secondary school level in Tanzania: Towards an understanding of solving real life problems

Elena **Kardanova** (*Novgorod State University, Russia*)

Russian mathematics teacher today

Ronnie Karsenty (*Weizmann Institute of Science, Israel*)

Professional development of mathematics teachers: Through the lens of the camera

Petar **Kenderov** (*Bulgarian Academy of Sciences, Bulgaria*)

The new interplay between education, science and innovations

Boris **Koichu** (*Technion, Israel*)

On learning for and learning through mathematical problem solving

Masataka **Koyama** (*Hiroshima University, Japan*)

Two-axis process model for teaching and learning of school mathematics



Günter **Krauthausen** (*University of Hamburg, Germany*)  
Primary mathematics education

Kyeong-Hwa **Lee** (*Seoul National University, Republic of Korea*)  
Does the answer deal with the complexities? Steering reflective modification of mathematical tasks

Roza **Leikin** (*University of Haifa, Israel*)  
How brain research can contribute to mathematics education? Focusing on mathematical creativity

Yeping **Li** (*Texas A&M University, USA*)  
The Challenge for Developing Expertise in Mathematics Teaching

Thein **Lwin** (*Thinking Classroom Foundation, Myanmar*)  
Education Reform in Burma/Myanmar

Yukihiko **Namikawa** (*Sugiyama Jogakuen University, Japan*)  
Mathematics literacy from the viewpoint of modern mathematics and its realization in teacher education

Mdu **Ndlovu** (*Stellenbosch University, South Africa*)  
Themes and paradigms in the professional development of mathematics teachers in South Africa: 2005 – 2015

Ricardo **Nemirovsky** (*San Diego State University, USA*)  
Body and expression in mathematics learning

Judith Sadja **Ngansop** (*Université au Cameroun, Cameroun*)  
Relevance of learning logical analysis of mathematical statements, at the transition between secondary and tertiary

Chi Thanh **Nguygen** (*Vietnam National University Hanoi, Vietnam*)  
Integrating ICT in curriculum at mathematics teacher education institutions: Lessons learnt from a developing country

Cynthia **Nicol** (*University of British Columbia, Canada*)  
Connecting Mathematics, Community, Culture and Place: Promise, possibilities and problems

Asuman **Oktaç** (*CINVESTAV-IPN, Mexico*)  
Learning of Linear Algebra concepts

Charles **Opolot-Okurut** (*Makerere University, Uganda*)  
Challenges of improving mathematics teaching and learning through teacher professional development in developing countries: A case study of Uganda

Mehmet Fatih **Özmantar** (*Gaziantep University, Turkey*)  
Mathematics teacher educators' knowledge sources in coming to know an effective mathematics teaching

Adrian **Paenza** (*Universidad de Buenos Aires, Argentina*)  
Challenging your intuition: Mathemagic

Arthur **Powell** (*Rutgers University, USA*)  
Social and discursive actions to promote online collaborative, mathematical practices



Janine **Remillard** (*University of Pennsylvania, USA*)

Teachers' design decisions and the role of instructional resources

Kurt **Reusser** (*University of Zurich, Switzerland*)

What video-based research tells us about effective mathematics teaching: A synthesis from international large-scale video studies

Eric **Roditi** (*Université Paris Descartes, France*)

Mathematics education and the study of teaching practices: a theoretical framework to take into account the diversity of teachers, professional norms and innovative institutional guidelines

Ruth **Rodriguez** (*Tecnologico of Monterrey, Mexico*)

Building Bridges Between Math Education and the Community of Engineers-through Modelling and Simulation

Jeremy **Roschelle** (*SRI International, USA*)

Effective and Scalable Uses of Technology for Deep Math Learning

Kenneth **Ruthven** (*University of Cambridge, United Kingdom*)

What have proved to be the significant problems in integrating new technologies into school mathematics and what needs to be done to address them

Cristina **Sabena** (*University of Turin, Italy*)

Gestures and multimodality in mathematics classroom activities: A semiotic perspective

Mamadou **Sangare** (*École Normale Supérieure de Bamako, Mali*) - Links among teaching, learning, and training of teachers in mathematics - Case study of Mali from 1960 to present

Wee Tiong **Seah** (*The University of Melbourne, Australia*)

Using the values framework to understand and improve mathematics pedagogy: Evidence from five continents

Carmen **Sessa** (*University of Buenos Aires, Argentina*)

Exploring with teachers the functional world in an enriched environment with computers

Jeppe **Skott** (*Aarhus University, Denmark*)

Teachers in the making: Towards a participatory account of early career professional identities

Alina **Spinillo** (*Cidade Universitária, Brazil*)

Number sense in children

Jorge **Soto** (*University of Chile, Chile*)

Metaphorization in the learning of mathematics

Bharath **Sriraman** (*University of Montana, USA*),

Mike **Thomas** (*University of Auckland / New Zealand*)

Building up Mathematics: The Legacy of Zoltan Dienes

Xuhua **Sun** (*University of Macau, China*)

What are the advantages of Chinese mathematics education system? Systematic variation as the most valuable Chinese mathematics education tradition

Malcom **Swan** (*University of Nottingham, United Kingdom*)

Design research in mathematics education



Yahya **Tabesh** (*Sharif University of Technology, Iran*)

Pedagogy of digital learning in mathematics education

Denis **Tanguay** (*University of Québec, Montreal, Canada*)

Teaching and learning geometry at the secondary level

Zülbiye Toluk **Uçar** (*Abant İzzet Baysal University, Turkey*)

Issues in teaching and learning fractions

Fabrice **Vandebrouck** (*Université Paris Diderot, France*)

Activity theory in French didactic

Helena **Wessels** (*Stellenbosch University, South Africa*)

Noticing in pre-service teacher education: Using research lessons as context for reflection on student thinking, learning and sense-making

Nouzha **El Yacoubi** (*University Mohammed V Rabat-Agdal, Morocco*)

Trends and challenges in improving the mathematics teachers professional development in Africa

Nada **Vondrová** (*Charles-University in Prague, Czech Republic*)

Ability to notice or professional vision of (future) mathematics teachers

Ivan **Vysotzky** (*Moscow Center of Pedagogical Skill, Russia*)

School statistics and probability in the changeable world. Principles, mistakes and perspectives

Jianyue **Zhang** (*People's Education Press, P. R. China*)

Euclidean plane geometry in Chinese middle school mathematics curriculum

Yan **Zhu** (*East China Normal University, P. R. China*)

Equity in mathematics education: What did TIMSS and PISA tell us in the last two decades?

### Topic Study Groups

A Topic Study Group (TSG) is designed to gather a group of congress participants who are interested in a particular topic in mathematics education. A Topic Study Group will serve as mini-conference and will display the progress of the discussion in the intervening years since ICME-12. Topic Study Groups will therefore promote the discussion of a variety of perspectives on the theme of the Group. The TSG will consist of high-standard discussions enabling the newcomer to get a broad overview on the state-of-the-art and allowing the experts to lead discussions at a high level. The team will provide the audience of their TSG not with a nationally framed insight into the strands of the discussion of the theme, but will give an overall overview on the international discussion as broadly as possible and allowing for insight into less well-known strands of the discussion from under-represented countries. For ICME-13, the TSG is the major arena for participation. Participants are expected to associate themselves with one TSG and to stay in that group for all sessions.



## Target groups for mathematics teaching, as reflected in educational levels and special categories of students

### TSG 1 Early childhood mathematics education (up to age 7)

Co-chairs:

Elia **Iliada** (*Cyprus*)

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Joanne **Mulligan** (*Australia*)

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Team members:

Ann **Anderson** (*Canada*)

Anna **Baccaglioni Frank** (*Italy*)

Christiane **Benz** (*Germany*)

IPC Liaison person: Mellony **Graven** (*South Africa*)

### TSG 2 Mathematics education at tertiary level

Co-chairs:

Victor **Giraldo** (*Brazil*)

victor.giraldo@ufrj.br

Chris **Rasmussen** (*USA*)

crasmussen@mail.sdsu.edu

Team members:

Irene **Biza** (*UK*)

Reinhard **Hochmuth** (*Germany*)

Azimeh **Khakbaz** (*Iran*)

IPC Liaison person: Kiril **Bankov** (*Bulgaria*)

### TSG 3 Mathematics education in and for work

Co-chairs:

Geoff **Wake** (*UK*)

Geoffrey.Wake@nottingham.ac.uk

Diana **Coben** (*New Zealand*)

dccoben@waikato.ac.nz

Team members:

Burkhard **Alpers** (*Germany*)

Keith **Weeks** (*UK*)

Peter **Frejd** (*Sweden*)

IPC Liaison person: Mellony **Graven** (*South Africa*)

### TSG 4 Activities for, and research on, mathematically gifted students

Co-chairs:

Florence Mihaela **Singer** (*Romania*)

mikisinger@gmail.com

Linda **Sheffield** (*USA*)

sheffield@nku.edu

Team members:

Matthias **Brandl** (*Germany*)

Victor **Freiman** (*Canada*)

Kyoko **Kakihana** (*Japan*)

IPC Liaison person: Marianne **Nolte** (*Germany*)



### **TSG 5 Activities for, and research on, students with special needs**

Co-chairs:

Lourdes **Figueiras** (*Spain*)

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Rose **Griffiths** (*UK*)

rnag1@le.ac.uk

Team members:

Karen **Karp** (*USA*)

Jens Holger **Lorenz** (*Germany*)

Miriam **Godoy Penteado** (*Brazil*)

IPC Liaison person: Mónica E. **Villarreal** (*Argentina*)

### **TSG 6 Adult learning of mathematics – lifelong learning**

Co-chairs:

Pradeep Kumar **Misra** (*India*)

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Jürgen **Maaß** (*Austria*)

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Team members:

Terry **Maguire** (*Ireland*)

Katherine **Safford-Ramus** (*USA*)

Wolfgang **Schlöglmann** (*Austria*)

IPC Liaison person: Mellony **Graven** (*South Africa*)

### **TSG 7 Popularization of mathematics**

Co-chairs:

Christian **Mercat** (*France*)

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Patrick **Vennebush** (*USA*)

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Team members:

James **Grime** (*UK*)

Carlota **Simões** (*Portugal*)

Jens **Struckmeier** (*Germany*)

IPC Liaison person: Johnny **Lott** (*USA*)

### **Matters and Issues pertaining to Content-related Aspects of Mathematics Curricula, across Educational Levels, and to Teaching and Learning in Relation to these Aspects**

### **TSG 8 Teaching and learning of arithmetic and number systems (focus on primary education)**

Co-chairs:

Pi-Jen **Lin** (*Chinese Taipei*)

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Terezinha **Nunes** (*UK*)

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Team members:





Shuhua **An** (*USA*)  
Beatriz Vargas **Dorneles** (*Brazil*)  
Elisabeth **Rathgeb-Schnierer** (*Germany*)  
IPC Liaison person: Rute **Borba** (*Brazil*)

### **TSG 9 Teaching and learning of measurement (focus on primary education)**

Co-chairs:

Christine **Chambris** (*France*) christine.chambris@u-cergy.fr  
Barbara **Dougherty** (*USA*) doughertyb@missouri.edu

Team members:

Insook **Chung** (*USA*)  
Silke **Ruwisch** (*Germany*)  
(Ravi) K. **Subramaniam** (*India*)  
IPC Liaison person: Johnny **Lott** (*USA*)

### **TSG 10 Teaching and learning of early algebra**

Co-chairs:

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Team members:

Swee Fong **Ng** (*Singapore*)  
Deborah **Schifter** (*USA*)  
Anna Susanne **Steinweg** (*Germany*)  
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### **TSG 11 Teaching and learning of algebra**

Co-chairs:

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Team members:

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Astrid **Fischer** (*Germany*)  
Heidi **Strømskag Måsøval** (*Norway*)  
IPC Liaison person: Behiye **Ubuz** (*Turkey*)

### **TSG 12 Teaching and learning of geometry (primary level)**

Co-chairs:

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Team members:





Imène **Ghedamsi** (*Tunisia*)  
Alejandro **González-Martín** (*Canada*)  
Günter **Törner** (*Germany*)  
IPC Liaison person: Alain **Kuzniak** (*France*)

### **TSG 17 Teaching and learning of discrete mathematics (including logic, game theory and algorithms)**

Co-chairs:

Eric **Hart** (*USA*)

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Team members:

Hans-Wolfgang **Henn** (*Germany*)

Jim **Sandefur** (*USA*)

Ahmed **Semri** (*Algeria*)

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### **TSG 18 Reasoning and proof in mathematics education**

Co-chairs:

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Team members:

Paolo **Boero** (*Italy*)

Mikio **Miyazaki** (*Japan*)

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### **TSG 19 Problem solving in mathematics education**

Co-chairs:

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Team members:

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Guido **Pinkernell** (*Germany*)

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### **TSG 20 Visualisation in the teaching and learning of mathematics**

Co-chairs:

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Team members:



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Elke **Söbbeke** (*Germany*)  
Isabel **Vale** (*Portugal*)  
IPC Liaison person: Mónica E. **Villarreal** (*Argentina*)

### **TSG 21 Mathematical applications and modelling in the teaching and learning of mathematics**

Co-chairs:

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Dominik **Leiss** (*Germany*)  
Toshikazu **Ikeda** (*Japan*)  
IPC Liaison person: George **Ekol** (*Uganda*)

### **TSG 22 Interdisciplinary mathematics education**

Co-chairs:

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Team members:

Rita Borrromeo **Ferri** (*Germany*)  
Brian **Doig** (*Australia*)  
Nicholas **Mousoulides** (*Cyprus*)  
IPC Liaison person: Helen **Forgasz** (*Australia*)

### **TSG 23 Mathematical literacy**

Co-chairs:

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Eva **Jablonka** (*UK*)  
Markus **Helmerich** (*Germany*)  
IPC Liaison person: Helen **Forgasz** (*Australia*)

**The overarching perspectives and Facets of Mathematics Education that are present across different educational Levels and different Curricula**



## TSG 24 History of the teaching and learning of mathematics

Co-chairs:

Fulvia **Furinghetti** (*Italy*)

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Team members:

Henrike **Allmendinger** (*Germany*)

Johan **Prytz** (*Sweden*)

Harm Jan **Smid** (*Netherlands*)

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## TSG 25 The role of history of mathematics in mathematics education

Co-chairs:

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Team members:

Kathleen **Clark** (*USA*)

Tinne Hoff **Kjeldsen** (*Denmark*)

Sebastian **Schorcht** (*Germany*)

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## TSG 26 Research on teaching and classroom practice

Co-chairs:

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Mary Kay **Stein** (*USA*)

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Team members:

Birgit **Brandt** (*Germany*)

Helia **Oliveira** (*Portugal*)

Lijun **Ye** (*China*)

IPC Liaison person: Binyan **Xu** (*China*)

## TSG 27 Learning and cognition in mathematics

Co-chairs:

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Team members:

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Anke **Lindmeier** (*Germany*)

Jérôme **Proulx** (*Canada*)

IPC Liaison person: Behiye **Ubuz** (*Turkey*)



### **TSG 28 Affect, beliefs and identity in mathematics education**

Co-chairs:

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Team members:

Emine **Erktin** (*Turkey*)

Maike **Vollstedt** (*Germany*)

Qiao-Ping **Zhang** (*Hong Kong*)

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### **TSG 29 Mathematics and creativity**

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Team members:

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Thorsten **Fritzlar** (*Germany*)

Dace **Kūma** (*Latvia*)

IPC Liaison person: Jarmila **Novotna** (*Czech Republic*)

### **TSG 30 Mathematical competitions**

Co-chairs:

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Jaroslav **Svrcek** (*Czech Republic*)

Peter **Taylor** (*Australia*)

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### **TSG 31 Language and communication in mathematics education**

Co-chairs:

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Team members:

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Jackeline **Rodrigues Mendes** (*Brazil*)

Marcus **Schütte** (*Germany*)

IPC Liaison person: Susanne **Prediger** (*Germany*)



### **TSG 32 Mathematics education in a multilingual and multicultural environment**

Co-chairs:

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Team members:

Guida **de Abreu** (*UK*)

Aldo **Parra** (*Colombia*)

Lena **Wessel** (*Germany*)

IPC Liaison person: Kalifa **Traoré** (*Burkina Faso*)

### **TSG 33 Equity in mathematics education (including gender)**

Co-chairs:

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Team members:

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Gelsa **Knijnik** (*Brazil*)

Laura **Martignon** (*Germany*)

Jayasree **Subramanian** (*India*)

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### **TSG 34 Social and political dimensions of mathematics education**

Co-chairs:

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Team members:

Peter **Gates** (*UK*)

Elizabeth **de Freitas** (*USA*)

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### **TSG 35 Role of ethnomathematics in mathematics education**

Co-chairs:

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Maria Elena **Gavarrete** (*Costa Rica*)

Thomas **Jahnke** (*Germany*)

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### **TSG 36 Task design, analysis and learning environments**

Co-chairs:

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Team members:

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Helmut **Linneweber-Lammerskitten** (*Switzerland*)

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### **TSG 37 Mathematics curriculum development**

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Team members:

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Iman **Osta** (*Lebanon*)

Jeremy **Hodgen** (*UK*)

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### **TSG 38 Research on resources (textbooks, learning materials etc.)**

Co-chairs:

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Team members:

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Sebastian **Rezat** (*Germany*)

Jana **Visnovska** (*Australia*)

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### **TSG 39 Large scale assessment and testing in mathematics education**

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Stefan **Ufer** (*Germany*)

Pauline **Vos** (*Norway*)

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#### **TSG 40 Classroom assessment for mathematics learning**

Co-chairs:

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Team members:

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Natalie **Sayac** (*France*)

Stanislaw **Schukajlow** (*Germany*)

IPC Liaison person: Elaine **Simmt** (*Canada*)

#### **TSG 41 Uses of technology in primary mathematics education (up to age 10)**

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Silke **Ladel** (*Germany*)

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#### **TSG 42 Uses of technology in lower secondary mathematics education (age 10 to 14)**

Co-chairs:

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Team members:

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Yiming **Cao** (*China*)

Michela **Maschietto** (*Italy*)

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#### **TSG 43 Uses of technology in upper secondary mathematics education (age 14 to 19)**

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Team members:

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Hans-Stefan **Siller** (*Germany*)

Michal **Tabach** (*Israel*)

IPC Liaison person: George **Ekol** (*Uganda*)



#### **TSG 44 Distance learning, e-learning, blended learning**

Co-chairs:

Rúbia **Barcelos Amaral** (*Brazil*)

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IPC Liaison person: Johnny **Lott** (*USA*)

### **TEACHER KNOWLEDGE AND EDUCATION**

#### **TSG 45 Knowledge in/for teaching mathematics at primary level**

Co-chairs:

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Team members:

Hedwig **Gasteiger** (*Germany*)

Sara **Hershkovitz** (*Israel*)

Soo Jin **Lee** (*Korea*)

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#### **TSG 46 Knowledge in/for teaching mathematics at secondary level**

Co-chairs:

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Nils **Buchholtz** (*Germany*)

Charalambos **Charalambous** (*Cyprus*)

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#### **TSG 47 Pre-service mathematics education of primary teachers**

Co-chairs:

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Team members:

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Caroline **Lajoie** (*Canada*)

David **Pugalee** (*USA*)

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### **TSG 48 Pre-service mathematics education of secondary teachers**

Co-chairs:

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Björn **Schwarz** (Germany)

IPC Liaison person: Mónica E. **Villareal** (Argentina)

### **TSG 49 In-service education and professional development of primary mathematics teachers**

Co-chairs:

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Team members:

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Christoph **Selter** (Germany)

Akihiko **Takahashi** (USA)

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### **TSG 50 In-service education, and professional development of secondary mathematics teachers**

Co-chairs:

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Team members:

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Konrad **Krainer** (Austria)

Sitti **Patahuddin** (Australia)

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### **Meta-issues concerning Mathematics Education itself, as a Field of Practice, and as a Discipline of Research**

### **TSG 51 Diversity of theories in mathematics education**

Co-chairs:

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Team members:



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Steve **Lerman** (*UK*)  
Takeshi **Miyakawa** (*Japan*)  
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## **TSG 52 Empirical methods and methodologies**

Co-chairs:

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Paul **Cobb** (*USA*)  
Christine **Knipping** (*Germany*)  
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## **TSG 53 Philosophy of mathematics education**

Co-chairs:

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Regina **Möller** (*Germany*)  
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## **TSG 54 Semiotics in mathematics education**

Co-chairs:

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## Timetable 2016 – from Sunday, July, 24th to Wednesday, July, 27th

Time	Sunday	Monday	Tuesday	Wednesday	
	July, 24th	July, 25th	July, 26th	July, 27th	
09.00 – 10.00	<b>Registration</b>	09.30 Opening ceremony	Plenary lecture	Plenary lecture	
10.30 – 11.30			Invited lectures	Invited lectures	
11.30 – 12.00			Coffee break	Coffee break	Coffee break
12.00 – 13.30			Plenary panel	Topic Study Groups (TSG)	Topic Study Groups (TSG)
13.30 – 15.00			Lunch	Lunch	Lunch
15.00 – 16.00			Lectures of the ICMI awardees	Oral communications	Thematic afternoon
16.00 – 16.30			Coffee break	Coffee break	Coffee break
16.30 – 18.00			Discussion groups / Oral communications	Survey teams / ICMI Studies	Thematic afternoon
18.00 – 19.00			Poster presentation	Poster presentation	
18.00 – 20.00		Welcome Reception	Get-together	Get-together	Get-together (18.30 – 20.30)
20.00 – 21.00					
		General assembly ICMI (9.30 – 17.00)			

On the internet, you will find the timetable on one page:  
<http://www.icme13.org/files/timetable.pdf>



## Timetable 2016 – from Thursday, July, 28th to Sunday, July, 31st

Time	Additional teacher activities			
	Thursday July, 28th	Friday July, 29th	Saturday July, 30th	Sunday July, 31st
09.00 – 10.00	<b>Excursion</b>	Plenary lecture	Plenary lecture	Invited lectures
10.30 – 11.30		Invited lectures	Invited lectures	Plenary panel
11.30 – 12.00		<i>Coffee break</i>	<i>Coffee break</i>	
12.00 – 13.30		Topic Study Groups (TSG)	Topic Study Groups (TSG)	Closing ceremony
13.30 – 15.00		<i>Lunch</i>	<i>Lunch</i>	<i>Farewell gathering</i>
15.00 – 16.00		Oral communications	Oral communications	
16.00 – 16.30		<i>Coffee break</i>	<i>Coffee break</i>	
16.30 – 18.00		Discussion groups / Workshops / Oral communications	ICMI affiliate organisations / National presentations	
18.00 – 19.00		Poster presentation	Poster presentation	
18.00 – 20.00		Get-together	Get-together	
20.00 – 21.00				

On the internet, you will find the timetable on one page:  
<http://www.icme13.org/files/timetable.pdf>



## Call for Papers and Posters

Participants are invited to submit presentations in the form of papers or posters at ICME-13. All participants can only submit either a paper or a poster due to the expected high number of contributions. Conference participants can serve as subordinated authors of other papers or posters in maximally two other cases. All submissions have to be assigned to one Topic Study Group, which has to be chosen at the beginning of the submission process.

All submissions will be peer-reviewed. Depending on their quality and their alignment with the planned structure of the selected Topic Study Group the papers will be presented either within the regular sessions of the Topic Study Groups or in Oral communication sessions attached to the selected Topic Study Group. Posters cannot be displayed within the regular sessions of the Topic Study Groups due to restrictions of the rooms, but will be jointly presented in evening sessions attached to the selected Topic Study Group.

This structure strengthens the role and importance of the Topic Study Groups. It will allow high-standard discussions giving an overview on the current state-of-the-art and will enable all interested participants to present their work at ICME-13 and receive feedback from the academic audience.

### The submission process will be organised as follows:

- Paper submission to a selected Topic Study Group, 4 pages maximum.
- Poster submission to a selected Topic Study Group containing a 1 page description of the planned poster, not the poster itself.

An ICME-13 template is available at the website ([http://icme13.org/proposals\\_and\\_paper\\_submission](http://icme13.org/proposals_and_paper_submission)) and must be used. The submission process will be done via Conftool, which requires an account already for the submission process.

The authors of the papers selected for presentation within the regular sessions of the Topic Study Groups will be invited to extend their paper to 8 pages. All the other papers will remain unchanged.

All papers of both lengths and the posters will be displayed at a part of the website connected to the selected TSG and only registered participants of this TSG have access to these papers. This procedure allows intensive discussions of all papers and promotes in-advance-reading. However, it clarifies the status of the paper as unpublished papers describing work in progress.

An extensive publication programme concerning the Topic Study Groups is offered by Springer Publisher allowing the publication of selected and extended papers presented at ICME-13.

As preparation of the work of the Topic Study Groups materials will be made available in advance for the congress participants, either in published form as ICME-13 Topical Survey or as more informal material displayed at the ICME-13 website.



## Deadlines for the Submission of Papers and Posters

1 <sup>st</sup> Sept. – 1 <sup>st</sup> Oct. 2015	Submission of papers
1 <sup>st</sup> Sept. – 1 <sup>st</sup> Oct. 2015	Submission of posters by those intending to apply for the solidarity fund
10 <sup>th</sup> – 20 <sup>th</sup> December 2015	Decisions on acceptance of papers or posters sent out
1 <sup>st</sup> Oct. – 22 <sup>nd</sup> Dec. 2015	Application to solidarity fund from researchers of less-affluent countries
12 <sup>th</sup> – 20 <sup>nd</sup> January 2016	Decisions on funding sent out
1 <sup>st</sup> – 31 <sup>st</sup> January 2016	Submission of posters (by those not applying for the solidarity fund)
22 <sup>nd</sup> – 28 <sup>st</sup> February 2016	Decisions on acceptance of posters sent out

## Deadlines for Registration

1 <sup>st</sup> Nov. – 31 <sup>st</sup> Dec. 2015	First bird registration with 370 €
1 <sup>st</sup> January – 31 <sup>st</sup> March 2016	Early bird registration with 390 € conference fee
1 <sup>st</sup> April – 31 <sup>st</sup> May 2016	Regular registration with 430 € conference fee
1 <sup>st</sup> June 2016 onwards	Late registration with 450 € conference fee

## Discussion Groups and Workshops

Discussion groups are 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. Workshops aim for an even deeper interaction with a specific topic emphasising activities of the participants. The focus of Discussion Groups and Workshops should be distinct from the subjects covered in the Topic Study Groups (TSG) (see list of TSGs at ICME-13). The Discussion Group will meet two times with 90 minutes meeting time, the Workshops will meet once with 90 minutes working time.

Each participant of ICME-13 can submit a proposal either for a Discussion Group or a Workshop.

### A proposal should include:

1. Description of the background and expertise of the proposed organisers
2. Detailed description of the topic theme including anticipated aims and a rationale for the topic
3. Key questions and issues for the Discussion Group or the Workshop to consider
4. A precise description of the anticipated structure.
  - For Discussion Groups: a description of how the time will be used to manage the discussion during the two sessions, taking into account that there will be no oral presentations in a Discussion Group except brief introductions by the organisers of the group to provide the background and framework for the discussion.
  - For Workshops: a description of how the time will be used in order to allow maximal participation of all workshop participants.

Please send the proposal to the congress assistance under [assistance.icme13@uni-hamburg.de](mailto:assistance.icme13@uni-hamburg.de)





## Deadlines

1 <sup>st</sup> Sept. – 1 <sup>st</sup> Oct. 2015	Submission of proposal for Discussion Group or Workshop
1 <sup>st</sup> November 2015	Notification on decision
1 <sup>st</sup> February 2016	Only for Discussion Groups: Submission of progress report to convenor of ICME-13
1 <sup>st</sup> May 2016	Online submission of final version of the programme of the Discussion Groups and the Workshops

## ICMI Affiliate organisations

The ICMI Affiliate organisations, which are officially affiliated to ICMI, are allocated one 90 minutes timeslot for their meetings during ICME-13.

### Mathematical Education Societies:

**CIAEM:** Inter-American Committee on Mathematics Education

**CIEAEM:** International Commission for the Study and Improvement of Mathematics Teaching

**ERME:** European Society for Research in Mathematics Education

**MERGA:** Mathematics Education Research Group of Australasia

**HPM:** The International Study Group on the Relations between the History and Pedagogy of Mathematics

**ICTMA:** The International Study Group for Mathematical Modelling and Applications

**IOWME:** The International Organization of Women and Mathematics Education

**MCG:** The International Group for Mathematical Creativity and Giftedness

**PME:** The International Group for the Psychology of Mathematics Education

**WFNMC:** The World Federation of National Mathematics Competitions

## ICMI Studies

A major ICMI programme is the series of ICMI Studies. This set of activities was launched in the mid-1980s and has acquired a growing importance and influence on the field. It contributes to a better understanding and resolution of the challenges that face multidisciplinary and culturally diverse research and development in mathematics education. Each Study focuses on a topic or issue of prominent current interest in mathematics education. Built around an international conference, it is directed towards the preparation of a published volume intended to promote and assist discussion and action at the international, regional or institutional level. Several ICMI studies, which have already held their study conference, will present their results.



### **ICMI Awards**

The Executive Committee of the International Commission on Mathematical Instruction (ICMI) has created three awards in mathematics education research:

- The Hans Freudenthal Award, for a major programme of research on mathematics education during the past 10 years
- The Felix Klein Award, for a lifelong achievement in mathematics education research
- The Emma Castelnuovo Award for Excellence in the Practice of Mathematics Education

At the opening ceremony of ICME-13, five ICME awards will be formally presented: the Felix Klein Award and the Hans Freudenthal award from 2013 and 2015 and the Emma Castelnuovo award from 2015.

### **National Presentations**

A National Presentation is an activity during which representatives of a given country will make a presentation on the state and trends in mathematics education in that country.

ICME-13 will give several countries the opportunity to present themselves.



### **Solidarity grant for participants and application for a grant**

One of the aims of the ICME congresses is to have a balanced representation from all over the world among the presenters as well as among the general participants. In order to achieve this goal ICMI has instigated a general policy of forming a solidarity fund established by setting aside 10% of the registration fees for grants. These grants assist delegates from non-affluent countries to attend the ICMEs.

An autonomous and anonymous Grant Committee, appointed by the IPC of ICME-13, will distribute the funds amongst the successful applicants. Priority will be given to applicants from less-affluent countries who contribute to the scientific programme with a paper or a poster.

Grants will be given mainly as partial support to registration fee, accommodation, and travel costs. All potential applicants are advised to apply for funding from other sources as well.

### **Application for the ICME-13 solidarity grant**

Participants who consider themselves eligible for an ICME-13 grant are encouraged to send a grant application to the Grants Committee.

Applications should be sent between the 1st October 2015 – 22nd December 2015 only in electronic form as one pdf-file including:

- Name, complete home address, e-mail-address
- Current institute, academic position
- Paper or poster submitted
- Academic CV
- List of publications
- Current financial situation
- Optional: letter of recommendation by PhD-supervisor

Please send your pdf-file to: [grant.icme13@uni-hamburg.de](mailto:grant.icme13@uni-hamburg.de)

### **Accommodation**

A wide range of accommodation will be available for ICME-13 participants. Hamburg offers more than 50,000 beds in 350 hotels, boarding houses and youth hostels with an increasing availability of accommodation in the lower price segment. There are more than 50 hotels in 5\* and 4\* categories, and all major hotel chains at different price levels are represented.

All hotels can be reached easily via public transportation, for which Hamburg is quite famous. Hamburg has four underground-lines (called U-Bahn), six suburban train lines (called S-Bahn), many bus lines operating very frequently, and even public ferries crossing the Alster lakes or the Elbe river. Amongst the European metropolitan areas Hamburg was placed fifth in 2009 based on the punctuality and service of its public transportation system. Supplementing the public transportation system are more than 3,500 taxis. Participants travelling with their own car may use the parking lot under the CCH (Congress Center Hamburg) with a day-ticket (15 EUR per day).



A list of recommended hotels, for which pre-bookings until a certain deadline have been made in advance, will be displayed at the website in due course. It is expected that the congress participants book the hotels on their own without further assistance by the congress organisers.

### **Excursions**

Thursday, July 28th, 2016 is reserved for the excursions included in the registration fee. The excursions aim at showing congress participants and accompanying persons the beauty of Hamburg as metropolis at the waterfront. Further information will be provided in due course at the congress website.

### **Registration**

Online registration is available at the ICME-13 website, [www.icme13.org](http://www.icme13.org) Registration is valid only when accompanied by confirmation of payment. Payment has to be made in Euro (€).

Note: 10% of the registration fee is directed to the Solidarity Fund. Further contributions are welcome and can be indicated upon registration.

### **Registration Fee for participants includes**

- Booklet with the final programme
- Admission to scientific programme activities
- Admission to social program activities
- Excursion on Thursday, July 28th 2016

### **Registration Fee for accompanying persons includes**

- Admission to social programme activities like Get-together
- Excursion on Thursday, July 28th 2016

### **Confirmation of registration and letter of invitation**

Confirmation of registration will be sent to you by e-mail.

An invitational letter will be sent out on request to participants of the congress if needed for VISA- or funding raising purposes. The letter will include the activities for which the participant is invited. Please include your complete postal address (no post-box), if you need an originally signed letter.

Please address your request to the following e-mail-address:  
[support.icme13@uni-hamburg.de](mailto:support.icme13@uni-hamburg.de)

We strongly encourage you to make use of this offer, but please approach ICME-13-organisers early enough. We are willing to support you as strongly as possible.



## **Payment**

For registration, payment can be made online via credit card or by bank transfer. All European participants are strongly encouraged to use bank transfer, which will save the costs for the credit cards. It will not be possible to pay with checks.

## **Public Bodies Supporting ICME-13**

The ICME-13 organisation is happy to thank for their important support in many ways the following organisations:

The Society of Didactics of Mathematics  
University of Hamburg  
The German Mathematical Society  
German Educational Research Association  
German Association for the Advancement of Mathematics and Science Education  
Deutsche Telekom Stiftung / German Telekom Foundation  
Robert Bosch Stiftung / Robert Bosch Foundation  
BWF / Hamburg Department of Science and Research  
BMBF / Federal Ministry of Education and Research  
Hamburg Convention Bureau

## **General Information**

### **Website ICME-13: [www.icme13.org](http://www.icme13.org)**

Please visit the official ICME-13 website for further information. There you will find a lot of useful information about the important aspects of the upcoming congress. The website is being constantly updated in order to keep all participants and interested researchers informed.

### **Congress period and congress venue**

The congress is to be held on July 24-31, 2016 in Hamburg / Germany.

All the congress activities will take place at the University of Hamburg and Congress Center Hamburg (Germany).

### **Congress language**

The official congress language is English. However, translation of the slides of the plenary lectures and other important activities into the main participants' languages will be provided.

### **Visa**

Visitors from many countries can enter Germany without a visa, but may not stay for longer than 90 days. However, visitors from some countries must obtain an entry visa ahead of time. For a list of countries whose citizens need a visa in order to enter Germany see the website of the German Foreign Office at:

[http://www.auswaertigesamt.de/EN/EinreiseUndAufenthalt/Visabestimmungen\\_node.html](http://www.auswaertigesamt.de/EN/EinreiseUndAufenthalt/Visabestimmungen_node.html)



## **Health insurance**

Congress participants should make sure that their health insurance will cover their travel and stay in Germany. Your insurance agent should be able to provide this information.

## **Weather**

In July you may expect warm days with an average temperature around 20°C, bright sunshine or scattered showers.

## **Tourist Information**

Further tourist information about Hamburg and Germany can be found at:

<http://www.hamburg-tourism.de/en/>

<http://www.english.hamburg.de/>

<http://www.germany.travel/en/index.html>

At our website we will offer you more links to places of interest.

## **ICMI & IMU**

The International Commission on Mathematical Instruction (ICMI) was first established at the International Congress of Mathematicians held in Rome, in 1908, with Felix Klein as its first president, and in 1952 as an official commission of the International Mathematical Union (IMU). As a commission, ICMI is defined by two constituent components: the Executive Committee (EC) of ICMI, elected by the General Assembly of the ICMI for a four-year term, and the ICMI Representatives of the member states.

The members of ICMI are neither individuals nor organizations, agencies, etc., but countries. Member states are of two categories: all countries members of IMU are automatically members of ICMI and, in addition, ICMI may, with the approval of the Executive Committee of IMU, co-opt on an individual basis, as so-called non-IMU members, countries which for some reason or another are unable to join the IMU. There are currently 72 member states of ICMI. Each member state, whether an IMU country or not, is entitled to appoint a National Representative.

From the very beginning, the international journal *L'Enseignement Mathématique*, founded in 1899 by Henri Fehr and Charles Laisant, was adopted as the official organ of ICMI - which it is still today. ICMI also publishes, under the editorship of the Secretary, a Bulletin appearing twice a year. Starting with Bulletin No. 39, December 1995, the ICMI Bulletin is accessible on the internet.

As a scientific union, IMU is a member organization of the International Council of Scientific Unions, ICSU. This implies that ICMI, through IMU, is to abide to the ICSU statutes, one of which establishes the principle of non-discrimination. This principle affirms the right and freedom of scientists to associate in international scientific activities regardless of citizenship, religion, political stance, ethnic origin, sex, and suchlike. Apart from observing general IMU and ICSU rules and principles, ICMI works with a large degree of autonomy.



## ICMI Executive Committee

President

Ferdinando **Arzarello** (*Università de Torino, Italy*)

Vice Presidents

Cheryl E. **Praeger** (*The University of Western Australia, Australia*)

Angel **Ruiz** (*Universidad de Costa Rica, San José, Costa Rica*)

Secretary-General

Abraham **Arcavi** (*Weizmann Institute of Science, Israel*)

## Members-at-Large

Catherine P. **Vistro-Yu** (*Ateneo de Manila University*), Jean-Luc **Dorier** (*Université de Genève*),

Roger **Howe** (*Yale University*), Yuriko **Yamamoto Baldin** (*Universidade Federal de São Carlos*),

Zahra **Gooya** (*Shahid Beheshti University*)

## Ex officio Members

Bill **Barton** (*Past President of ICMI, The University of Auckland*), Shigefumi **Mori** (*President of IMU,*

*Kyoto University*), Helge **Holden** (*Secretary of IMU, Norwegian University of Science and Technology (NTNU)*)

## Former ICMEs

ICME-1	1969	Lyon	France
ICME-2	1972	Exeter	UK
ICME-3	1976	Karlsruhe	Germany
ICME-4	1980	Berkeley	USA
ICME-5	1984	Adelaide	Australia
ICME-6	1988	Budapest	Hungary
ICME-7	1992	Québec	Canada
ICME-8	1996	Sevilla	Spain
ICME-9	2000	Tokyo	Japan
ICME-10	2004	Copenhagen	Denmark
ICME-11	2008	Monterrey	México
ICME-12	2012	Seoul	Korea

