



14<sup>th</sup> International Congress on Mathematical Education

# Early Career Researcher Day (ECRD) Program Booklet

by

The ECRD Program Organization Team

Asian Center for Mathematics Education/School of Mathematical Sciences

East China Normal University

Shanghai, China

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## General Introduction

Early Career Researcher Day (ECRD), first created in ICME-13, is also organized by the Local Organization Committee (LOC) of ICME-14. The event will be held on the day of, but before, the opening ceremony, and is attached to ICME-14, though it is not an integral part of ICME-14 itself. The ICME-14's ECRD Program Chair is **Prof. Dr. Lianghuo Fan**, Director of Asian Centre for Mathematics Education/School of Mathematical Sciences, East China Normal University, Shanghai, China.

### General Aims

1. To provide the participants (early career researchers) with opportunities to develop their research competencies in related fields.
2. To provide the participants with opportunities to establish new contacts and build new networks.
3. To provide the participants with opportunities to work with and learn from internationally renowned scholars and experts in related fields.

### Focuses

1. Research conceptualization and methods.
2. Writing research proposals and implementing research projects.
3. Research publications.

### Program Organization Team

Leader: **Lianghuo Fan**

Assistant Leader: **Fenghua Zhang**

Team Member: **Shuhui Li (Coordinator), Fangchun Zhu (Coordinator), Jietong Luo, Sicheng Xie, Guangchao Zhang**

### Acknowledgements

The program organization team wish to thank the team assistants: **Jinhua Chen, Mengshu Chen, Qiuyu Chen, Min Jin** (Nanjing Bole Middle School), **Kunli Li** (The High School Affiliated to Renmin University of China), **Lingzhu Li, Na Li, Shang Li** (Duke Kunshan University), **Yuxiang Sun, Jiali Tang, Yisu Wang, Yikun Zang, Ying Zhan**, and **Mengjiao Zhu** for their help at various stages, especially at the final stage.

The program organization team are also grateful to the ICME-14 Advisory Committee: **Lianghuo Fan** (Chair; East China Normal University, China), **Ferdinando Azarello** (University of Torino, Italy), **Jinfa Cai** (University of Delaware, USA), **Bernard Hodgson** (University of Laval, Canada), **Peng Yee Lee** (National Institute of Education, Singapore), **Frederick Leung** (University of Hong Kong, China), and **Anna Sfard** (University of Haifa, Israel) for their support and advice, especially at the early stage of preparation.

Note: All the program organization team members and the assistants, unless otherwise indicated, are from **Asian Centre for Mathematics Education/School of Mathematical Sciences, East China Normal University, Shanghai, China**.

## Program Schedule

(Note: All times are local Shanghai time, i.e., UTC+8)

### ***Parallel Workshops: Research conceptualization and methodology***

**8:30–12:00**

**Coffee & Tea Break: 10:00-10:30**

#### **Workshop 1: Qualitative Research Methodology**

**Venue: W201**

**Presenter:** Marcelo Borba (São Paulo State University, Brazil)

**Co-presenter:** Liliane Xavier Neves (Universidade Estadual de Santa Cruz, Brazil)

#### ***Abstract***

Qualitative Research is concerned with a deep understanding of a given phenomenon. It privileges the use of methods such as interview, participant observation and videotaping. Qualitative research was born in Anthropology, as they developed the notion of field work (living in the culture for longer periods) in contrast with short visits. This change in method led to understandings that, for example, people outside of Europe had developed mathematics. Authors who developed research in ethnomathematics have shown innumerable examples of mathematics developed in different cultures. Field work and qualitative research have come to mathematics education as an attempt to develop studies that were not based on result of tests, on countable things. Usually, large studies, based on national or international tests, focus on just student performance in those tests and not on process of learning, ways that students solve problems or culture of learning in schools. Currently, students and teachers producing videos have been part of the school scenario, in particular during and after the pandemic, influencing the teaching and learning processes. Qualitative studies may use video to record the interaction of students and teacher in order to analyze them further and understand different ways mathematics may be produced by collectives of students-teacher-and-media. We will show how mathematics historically, in different settings has been developed with artifacts such as compass, paper and pencil, voice and more recently computers. We will show some examples and will focus on the analysis of mathematical videos produced by undergraduate students. In this workshop we will show how we analyzed mathematical videos. We will discuss how this kind of analysis is important, in particular after 2020, in order to gain a deeper understanding of the way students (and teachers) think mathematically as they produce videos that will be posted on public platforms such as YouTube.

*Chair: Dr. Sophie Shuhui Li; On-site assistant: Miss Yikun Zang*

#### **Workshop 2: Design-based Research**

**Venue: W215**

**Presenter:** Andreas Stylianides (University of Cambridge, UK)

**Co-presenter:** Gabriel Stylianides (University of Oxford, UK)

#### ***Abstract***

Design experiment methodology, or design-based research as it is often also called, is a methodology for carrying out studies of educational interventions and can involve application of both qualitative and quantitative methods of data analysis. This methodology has been developed to address issues central to the study of learning, especially in relation to promoting academically important but difficult-to-achieve learning goals. Design experiments frequently involve the development, testing, and refinement of interventions and respective theoretical models, and the examination of their practical application in the “messy environments” of actual classroom settings.

In this session we will do the following:

- examine key features of design experiments;
- compare design-based research with action research;
- consider two interventions from a design experiment that we conducted in our research and use them as contexts to exemplify key features of the methodology;
- discuss broader issues related to generalizability, confounding of variables, objectivity versus bias, and bridging theory and practice; and
- discuss other examples of design-based research from participants' own areas of interest (including their own projects, if they relate to this methodology).

To make the most out of the session, you are encouraged (but not required) to read the following paper prior to the session:

Cobb, P., Confrey, J., diSessa, A., Lehrer, R., & Schauble, L. (2003). Design experiments in educational research. *Educational Researcher*, 32(1), 9–13.

If you do not have access to this paper through your library network, you are welcome to find and read another relevant paper on the topic. A point of caution is that not all researchers agree on a definition of design-based research or the key features of this methodology. More readings will be recommended during the session.

*Chair: Miss Jietong Luo; On-site assistant: Miss Shang Li*

### Workshop 3: Mixed Methods

**Venue: W301**

**Presenter:** Susan Prediger (TU Dortmund University & IPN Leibniz-Institute for Science and Mathematics Education, Germany)

**Co-presenter:** Kirstin Erath (Institute for Mathematics, Martin Luther University Halle-Wittenberg, Germany)

#### *Abstract*

Mixed-methods research designs become more and more popular in mathematics education research. But what is mixed-methods and when does it make sense to engage in this challenging research design?

We start the workshop with a brief overview on mono-methodological research designs and their advantages and disadvantages in order to introduce mixed-methods research a possibility of overcoming weaknesses and limitations by deliberately intertwining different types of methods. Following Leuders and Schulz (2019) different prototypical mixed-methods research designs are presented, illustrated by research projects and discussed with the participants with respect to the relation between generating and validating hypotheses, overviews and deeper insights, as well as methodological challenges. Then, we derive quality criteria for mixed-methods designs and initiate the participants' work on relating their own existing or planned research to the presented prototypes.

*Chair: Dr. Fangchun Zhu; On-site assistant: Miss Ying Zhan*

### Workshop 4: Video-Based Research

**Venue: W315**

**Presenter:** Ida Mok (University of Hong Kong, Hong Kong SAR, China)

**Co-presenter:** Wenjun Zhao (Beijing Normal University, China)

#### *Abstract*

Video study has been used widely as a tool for research instrument. The first session of the workshop will present the insights brought about by video studies in international comparative studies of classroom research drawing upon examples from TIMSS Video Study (a follow-up study of Trends in International

Mathematics and Science Study (TIMSS)) and the Learner's Perspective Study; and studies with focus on specific aspects in mathematics classroom, such as, contents, pedagogies and discourse.

The second session of the workshop will focus on practical issues of video study, for instance, how to find an analysis angle, how to develop a coding scheme, how to carry out the coding process, how to check the reliability and how to interpret the results. Three examples will be presented with each focus on different aspects. These examples are mainly from two international project - MIST (Middle School Mathematics and the Institutional Setting of Teaching) project and the Alignment project. MIST project is a joint project of Beijing Normal University and Vanderbilt university, which aimed to examine what it took to improve the quality of mathematics teaching and learning at a district level through comparing classroom instruction, teacher networks, school leadership, etc. in four big cities in U.S. and China. Alignment Project aimed to analyse the valued and performed learning outcomes documented in three educational settings, namely Australia, China and Finland, with respect to curriculum, instruction, standards and assessment, and to critically review the alignment of these four essential elements within each of the three sites and for both mathematics and science.

The first sharing will focus on how to identify an angle for video analysis, as videos contain much information. Aiming to examine the alignment between the implementation of a reformed instruction model (the DJP model) and the reform directions, the study chose duration and quality of student participation as the perspective. The presenter will share in detail why they chose student participation, how they defined and developed the coding scheme for student participation, how they used Nvivo software to conduct the coding, as well as how they interpreted and presented the results.

The second sharing will introduce how to develop a comprehensive coding scheme based on existing frameworks in the literature. The presenter developed a coding scheme to analyze verbal questions initiated by the teacher based on the IRF (initiation-response-follow-up) framework. The limitation of existing frameworks will be discussed and the process of refining them to develop a new one will be explained. The presenter will demonstrate how to carry out the analysis manually and how to check and improve interrater reliability. Lastly, the benefit of examining teachers' practices over a unit of consecutive lessons rather than a single lesson will be discussed.

The third sharing will talk about the analysis of types and attitudes of teacher's verbal feedback in 24 video lessons. Details of how to construct and refine coding scheme through consulting experts in the field and how to define coding units will be shared. Rich examples will be illustrated in the presentation.

Furthermore, various kinds of hands-on activities will be facilitated to make sure participants can try out how to carry out the coding, how to dealing with the differences of coding results among raters, and how to refine the coding scheme, etc. This workshop can equip participants with necessary strategies and skills in carrying out video studies.

*Chair: Miss Sicheng Xie; On-site assistant: Miss Mengjiao Zhu*

## **Workshop 5: Large-Scale Assessments**

**Venue: W203**

**Presenter:** Christian Bokhove (University of Southampton, UK)

### ***Abstract***

In recent years, International Large-scale Assessments (ILSAs) like the Trends in Mathematics and Science Study (TIMSS) and the Programme for International Student Assessment (PISA) have become more and more influential on countries' mathematics education policies and curricula. In this workshop you will learn about the background of these two studies (including limitations), the way they conduct their studies, and some ways in which their data can be analyzed.

Specifically, the workshop will offer:

- **8:30 – 9:15** An in-depth overview of the role of TIMSS and PISA (plus some other studies) in policy-making, including strengths, critiques and limitations.
- **9:15 – 10:00** In-sight in the so-called ‘complex sampling design’ of these studies and what this means for data analyses.
- **10:00 – 10:30** Break
- **10:30 – 12:00** Hands-on demonstration (during which you can ‘click along’) of analyzing TIMSS and PISA in the statistical packages R and Rstudio ([www.rstudio.com](http://www.rstudio.com)). This will include some basic R knowledge, relatively simple statistical analyses including descriptive statistics, and some pointers to more advanced statistical techniques.

Chair: Miss Na Li; On-site assistant: Miss Mengshu Chen

### Workshop 6: Naturalistic Paradigm and Ethnographic Methods

Venue: W211

**Presenter:** Judit Moschkovich (University of California, Santa Cruz, USA)

#### *Abstract*

This session will provide an introduction to integrating a naturalistic paradigm and ethnographic methods into research in mathematics education. The session will address methodological issues specific to designing and conducting research in mathematics education that is framed by a naturalistic paradigm and uses ethnographic methods. The workshop will include a combination of lecture, small group discussions, and other activities to address the following questions:

- 1) What is a naturalistic paradigm? What principles guide research studies using a naturalistic paradigm? How can a naturalistic paradigm be combined with other research approaches to explore questions about mathematical thinking and learning?
- 2) What are ethnographic methods? What is the difference between doing “an ethnography” and using ethnographic methods? How can researchers use ethnographic methods to investigate aspects of mathematical thinking and learning? What are central methodological concepts related to ethnographic methods?
- 3) Why use ethnographic methods for research in mathematics education? How can researchers learn to use ethnographic methods for research in mathematics education?

A naturalistic paradigm is not the methods used or the place where data are collected but by a theoretical stance and a set of research principles (Moschkovich, 2019; Moschkovich & Brenner, 2000). The theoretical stance can be summarized as the assumption that meaning is socially constructed and negotiated in practice. The research principles include considering multiple viewpoints, studying cognition in context, and connecting theory generation and verification. These principles derive in large part from ethnography, a methodology (not a collection of methods) closely connected to the theoretical principles of anthropology, such as the centrality of the concept of culture (Spindler & Spindler, 1987). In the presentation part of the session, I will review the main principles for using a naturalistic paradigm, describe two studies framed by this paradigm that integrated ethnographic and cognitive methods, discuss important issues to consider when using ethnographic methods, describe how ethnographic methods can be integrated in complementary ways into research design, and examine what this integration can contribute to mathematics education research. The session will also include small group discussions grounded in a video clip and other activities.

#### **References:**

Moschkovich, J. N. (2019). A naturalistic paradigm: An introduction to using ethnographic methods for research in mathematics education. In G. Kaiser & N. Presmeg (Eds.). *Compendium for Early Career*

*Researchers in Mathematics Education*. Dordrecht: Springer.

Moschkovich, J.N. and Brenner, M. (2000). Integrating a naturalistic paradigm into research on mathematics and science cognition and learning. In R. Lesh & A. Kelly (Eds.). *Handbook of Research Design in Mathematics & Science Education*. New Jersey: Lawrence Erlbaum Associates, Inc: New Jersey, 457–486.

Spindler, G. & Spindler, L. (1987). Ethnography: An anthropological view. In G. Spindler (Ed.), *Education and cultural process*, (pp. 151–156). Prospect Heights, IL: Waveland.

Chair: Miss Lingzhu Li; On-site assistant: Miss Qiuyu Chen

### Workshop 7: Argumentation Analyses

Venue: W303

**Presenter:** Christine Knipping (University of Bremen, Germany)

**Co-presenter:** Fiene Bredow (University of Bremen, Germany)

#### Abstract

Proving processes in mathematics classrooms follow their own peculiar rationale, which raises the question of how to reconstruct and analyse the complex argumentative structures that arise in classroom discussions. In this workshop we will describe a method of analysis of argumentation processes in the mathematics class. At the beginning of the workshop, we will explain our understanding of arguments and argumentations and its relevance for the mathematics class. The method and methodology we use to reconstruct arguments builds on Toulmin's theory of argumentation (Toulmin, 1958) and allows the description of both local arguments and global argumentation structures.

A three-stage process is followed (Knipping & Reid, 2015, 2019): i) reconstructing the sequencing and meaning of classroom talk; ii) analysing local arguments and global argumentation structures; and iii) finally comparing these argumentation structures and revealing their rationale. The second stage involves two moves, first analysing local arguments on the basis of Toulmin's functional model of argumentation (1), and second analysing the global argumentative structure of the proving process (2). We provide an example for the use of the method to analyse a transcript from a mathematics classroom.

#### References:

Knipping, C., & Reid, D. (2015). Reconstructing Argumentation Structures: A Perspective on Proving Processes in Secondary Mathematics Classroom Interactions. In A. Bikner-Ahsbabs, C. Knipping, & N. Presmeg (Eds.), *Approaches to Qualitative Research in Mathematics Education* (S. 75–101). Springer Netherlands. [https://doi.org/10.1007/978-94-017-9181-6\\_4](https://doi.org/10.1007/978-94-017-9181-6_4)

Knipping, C., & Reid, D. A. (2019). Argumentation Analysis for Early Career Researchers. In G. Kaiser & N. Presmeg (Eds.), *Compendium for Early Career Researchers in Mathematics Education* (S. 3–31). Springer International Publishing. [https://doi.org/10.1007/978-3-030-15636-7\\_1](https://doi.org/10.1007/978-3-030-15636-7_1)

Toulmin, S. E. (1958). *The Uses of Argument*. Cambridge University Press.

Chair: Miss Jiali Tang; On-site assistant: Mr. Jinhua Chen

### Workshop 8: Participatory Action Research

Venue: W313

**Presenter:** Julie Amador (University of Idaho, USA)

#### Abstract

The workshop on participatory action research will support attendees to become familiar with action research, consider examples of action research, and focus on ways they may integrate action research into their own agendas. The workshop will be structured around four main focal sections: (a) introduction to action research, including participatory action research, (b) examples of action research, including those in

research literature as well as those of the workshop facilitator, (c) planning action research, including consideration of action research projects that attendees could take up, and (d) resources for action research. Attendees will have the opportunity to share and discuss ideas with others at the session. They will also leave the session with organized notes to support their future plans for implementing action research in their varied contexts. The following describes each of the four sections of the workshop in greater detail.

### I. Introduction to Action Research

The first section of the workshop will focus on action research in general, as well as participatory action research. The intent of this section of the workshop is to provide an introduction and overview of action research.

#### Focus on Action Research (What is it?) and Research on Action Research (What is known?)

The session will begin with an overview of action research and what action research may entail at both a K-12 level and from a higher education perspective. A second focus will be on what has been learned from action research studies specific to mathematics education. Emphasis will be placed on different kinds of action research, the evolution of action research, and various purposes of conducting action research.

#### Participatory Action Research Overview

The affordances of participatory action research will be discussed, with a focus on five aspects of the process that are unique. Based on the work of Kemmis and colleagues (2014), features unique to participatory action research include (a) consideration of practices ‘from within’, (b) shared language, (c) participation in the practice conducted, (d) development of communities of practice, and (e) transformation of practice to meet the changing needs and times.

### II. Examples of Action Research

The second section of the workshop will focus on examples of action research, both those from research literature as well as personal examples from the workshop facilitator. The intent of this section of the workshop is to provide opportunities for consideration of various action research projects that may be pertinent to participants. Participants will have time to critique the examples provided and consider how they may relate to their own contexts.

#### Examples from Existing Research Studies

Examples of action research from research literature will be discussed and critiqued. These include example of Kemmis, McTaggart, and Nixon (2014), Brydon-Miller and Maguire (2009), and Raygoza (2016). An emphasis will be placed on examples that occur in an education context, and primarily with mathematics education contexts.

#### Example of Action Research with K-12 Teacher Leaders

This part of session on participatory action will focus on an example action research project in which the workshop facilitator designed and led, focused specific on mathematics education. This part of the workshop is purposely designed to support participants to become more familiar with: a) conducting action research, b) collecting data from action research, c) analyzing action research data, and d) learned lessons from engaging in action research. The intent is to draw a translation between research studies on action research broadly and mathematics education contexts in which action research can occur (see Amador, Wallin, & Keehr, 2019).

### III. Planning and Conducting Action Research

The third section of the workshop will focus on supporting participants to consider how they may implement action research, including participatory action research, in their contexts.

#### Planning Action Research

In this part of the workshop, participants will have independent think time and group work time to consider action research projects they may implement. Time will be allocated for whole-group discussion,

small-group discussions, and individual think time. Time will be spent focusing on and refining research questions that could be asked, possible data collection and analysis techniques, and the overall intent of the action research. The purpose of this section is to learn from others who may have experience with action research and to explore future research endeavors that may align with the research trajectories of attendees.

#### IV. Resources for Action Research

The fourth and final part of the workshop will focus on resources for action research. This will include a time for conversation about resources attendees use or are with which they are familiar. The workshop facilitator will share resources that have been used specifically for action research about mathematics education topics and will highlight journal articles, books, and websites that may be of particular interest for attendees. The workshop will conclude with conversations around next steps for conducting action research based on the examples, conversation, and resources provided.

*Chair: Miss Yisu Wang; On-site assistant: Mr. Yuxiang Sun*

### Workshop 9: Methods of Textbook Research

**Venue: W107**

**Presenter:** Sebastian Rezat (University of Paderborn, Germany)

#### *Abstract*

Mathematics textbooks are complex and multifaceted objects. They contain different genres of texts, pictures, and tasks. They are usually aligned with an official curriculum. In presenting their mathematical content, textbooks mediate a certain vision of mathematics, they follow didactical approaches, pedagogical principles, and convey societal values and norms. Textbooks are used by teachers, students, parents, tutors, reformers, politicians with different intentions, for different goals, and in different ways. This use causes effects. In the first place, it affects instruction, learning and achievement. All this occurs in different social and cultural contexts and changes over time. Consequently, there are many different issues related to mathematics textbooks, their content, their development, their use, and their effects that can be subject to scientific research.

Therefore, mathematics textbooks and curriculum resources have been the object of research in mathematics education 1) themselves, 2) as depended variable, i.e. how they are affected by factors in their development and production, and 3) as independent variable, i.e. how they affect their use, teaching and learning mathematics and mathematics achievement (Fan, 2013; Rezat & Sträßer, 2015). Related to each of these three perspectives, particular qualitative and quantitative methods have been developed and applied in order to produce valid scientific insights into different aspects of textbooks and curriculum resources.

The workshop will provide an overview of methods applied in research on mathematics textbooks and curriculum resources systematized according to the three research perspectives mentioned above. These methods will be illustrated based on a sample of paradigmatic studies in each area. A particular focus will be put on the interdependency of research focus and question, theoretical framework, and methods. Advantages and shortcomings of different methodological approaches will be discussed.

#### **References:**

- Fan, L. (2013). Textbook research as scientific research: towards a common ground on issues and methods of research on mathematics textbooks. *ZDM–The International Journal on Mathematics Education*, 45(5), 765-777. doi:10.1007/s11858-013-0530-6.
- Rezat, S., & Sträßer, R. (2015). Methodological issues and challenges in research on mathematics textbooks. *Nordic Studies in Mathematics Education*, 20(3-4), 247-266.

*Chair: Miss Ying Zhan; On-site assistant: Mr. Min Jin*

**Lunch & Break****12:00–13:30****Plenary Session: Academic writing and academic publishing****13:30–15:15**

Presentation of 8 major journals<sup>1</sup> in mathematics education by their editors.

**Moderator: Professor Jinfa Cai** (University of Delaware, USA)

**Venue: W201****Educational Studies in Mathematics**

**Editors-in-Chief:** Arthur Bakker, David Wagner

*Educational Studies in Mathematics* presents new ideas and developments of major importance to those working in the field of mathematics education. It seeks to reflect both the variety of research concerns within this field and the range of methods used to study them. It deals with methodological, pedagogical/didactical, political and socio-cultural aspects of teaching and learning of mathematics, rather than with specific programmes for teaching mathematics. The emphasis is on high-level articles which are of more than local or national interest. All contributions to this journal are peer reviewed.

**Journal for Research in Mathematics Education**

**Editor:** Patricio Herbst; Jinfa Cai\*

An official journal of the National Council of Teachers of Mathematics (NCTM), *JRME* is the premier research journal in mathematics education and is devoted to the interests of teachers and researchers at all levels – preschool through college. *JRME* is a forum for disciplined inquiry into the teaching and learning of mathematics.

\*Immediate past editor

**Journal of Mathematical Behavior**

**Editors-in-Chief:** Carolyn A. Maher, Louise Wilkinson

The *Journal of Mathematical Behavior* is an international, double blind peer reviewed journal concerned with the learning and teaching of mathematics. The journal welcomes research from diverse methodologies and paradigms as well as high-quality systematic reviews and meta-analyses, and focuses on research about learning and teaching of mathematics at all ages, in both formal and informal learning settings.

**Journal of Mathematics Teacher Education**

**Editor-in-Chief:** Despina Potari

The *Journal of Mathematics Teacher Education (JMTE)* is devoted to research that seeks to improve the education of mathematics teachers and develop teaching methods that better enable mathematics students to learn. The journal covers all stages of the professional development of mathematics teachers and teacher-educators. It serves as a forum for examining institutional, societal, and cultural influences that impact on teachers' learning and ultimately their students' learning.

**Mathematical Thinking and Learning**

**Editor:** Lyn English; **Associate Editor:** Heather Johnson

This journal seeks high-quality articles that address one or more of the following topics: interdisciplinary studies on mathematical learning, reasoning or thinking, and their developments at all ages, technological advances and their impact on mathematical thinking and learning, studies that explore the diverse processes

<sup>1</sup> Note: the information provided below about each journal is mainly based on the official website of the journal.

of mathematical reasoning, among others. In addition to receiving research articles, the journal invites articles that present theoretical and philosophical analyses of issues related to the previous topics.

**Mathematics Education Research Journal**

**Editor-in-Chief:** Peter Grootenboer

*MERJ* is an international journal that specifically targets and/or draws on significant ideas and developments in mathematics education from the Australasian region. The journal encourages the publication of studies that are of significant interest and value to the international research communities. As such it promotes a forum for the publication of high-quality empirical research and theoretical/philosophical papers that contribute to the knowledge of mathematics education.

**Research in Mathematics Education**

**Editor (Presenting at ECRD):** Jenni Ingram

*Research in Mathematics Education* is an international English language journal, publishing original refereed articles on all aspects of mathematics education. Papers should address the central issues in terms which are of relevance across educational systems and informed by wider thinking in the field. *Research in Mathematics Education* is the official journal of the British Society for Research into Learning Mathematics.

**ZDM Mathematics Education**

**Editor-in-Chief:** Gabriele Kaiser

*ZDM Mathematics Education* is one of the oldest mathematics education research journals in publication. The journal surveys, discusses, and builds upon current research and theoretical-based perspectives in mathematics education. All the papers published in the journal's seven annual themed issues are strictly by invitation. The journal targets readers from around the world in mathematics education research who are interested in current developments in the field.

**Coffee & Tea Break**

**15:15–15:45**

**Parallel Interactive Discussions**

**15:45–16:30**

The participants will meet journal editors (in separate rooms) and have interactive discussions with them.

No.	Journal	Editor/Editor-in-Chief	Chair & On-site Assistant	Venue
1	<i>Educational Studies in Mathematics</i>	Arthur Bakker	Chair: Jietong Luo On-site Assistant: Shang Li	W201
2	<i>Journal for Research in Mathematics Education</i>	Jinfa Cai	Chair: Shuhui Li On-site Assistant: Yikun Zang	W215
3	<i>Journal of Mathematics Teacher Education</i>	Despina Potari	Chair: Sicheng Xie On-site Assistant: Mengjiao Zhu	W301
4	<i>Mathematical Thinking and Learning</i>	Lyn English	Chair: Lingzhu Li On-site Assistant: Qiuyu Chen	W315
5	<i>Mathematics Education Research Journal</i>	Peter Grootenboer	Chair: Jiali Tang On-site Assistant: Jinhua Chen	W203
6	<i>Research in Mathematics Education</i>	Jenni Ingram	Chair: Na Li On-site Assistant: Jinhua Chen	W211
7	<i>ZDM Mathematics Education</i>	Gabriele Kaiser	Chair: Fangchun Zhu On-site Assistant: Ying Zhan	W303

**Panel Discussion****16:30–18:00**

In this session, three world-renowned scholars in mathematics education, who are all recipients of the Felix Klein or Hans Freudenthal Awards, will share their research and publication work (results, methods, experiences, etc.) with early career researchers, have a dialogue/discussion with the participants, and answer questions specifically about their research work or generally about mathematics education research.

**Moderator: Professor Lianghuo Fan** (East China Normal University, China)

**Venue: W201**

**Panelists:**

**Prof. Alan H. Schoenfeld** (University of California, Berkeley, USA; Recipient of the 2011 Felix Klein Award)

Alan Schoenfeld is the Elizabeth and Edward Conner Professor of Education and Affiliated Professor of Mathematics at the University of California at Berkeley. Professor Schoenfeld's main focus of current research is on Teaching for Robust Understanding.

**Prof. Gert Schubring** (Bielefeld University, Germany; Recipient of the 2019 Hans Freudenthal Award)

Gert Schubring is Professor at Bielefeld University, Germany and recipient of the 2019 Hans Freudenthal Award. His research and development work on the history of mathematics has changed significantly in the last two decades: the history of mathematics is now related to a considerable extent in terms of application in mathematics teaching, especially in mathematics lessons in schools.

**Prof. Anna Sfard** (University of Haifa, Israel; Recipient of the 2007 Hans Freudenthal Award)

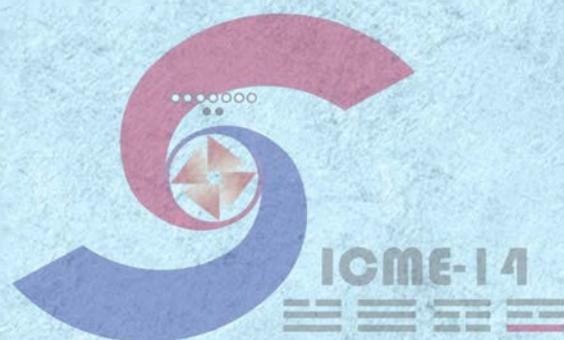
Anna Sfard is Emerita Professor at the University of Haifa. She conducts research and teaches in the domain of learning sciences, with a particular focus on the relation between thinking and communication.



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