15th International Congress on Mathematical Education

7-14 July 2024 • ICC Sydney, Australia

Come and be counted

ICME15

Early Career Researcher Program

Sunday 7 July	Early Career Researcher Day
Monday 8 July	11:00 – 11:30 | Morning tea with Journal Panel from the ECR Day
Tuesday 9 July	No activities
Wednesday 10 July	11:00 – 11:30 | Morning tea with Awardees and Keynote presenters
Thursday 11 July	No activities
Friday 12 July	10:30 – 11:00 | Morning tea with both Plenary Panels
Saturday 13 July	12:30 – 2:00 | Head out for lunch together
Sunday 14 July	No activities

15th International Congress on Mathematical Education

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Come and be counted

Early Career Researcher Workshop Day

Sunday 7th July 2024

University of Technology Sydney (UTS)
Level 3 Building 6 (enter via Harris Street)
702 Harris Street Ultimo Sydney

Program Overview

8:15 – 9:00am	Registration
9:00 – 10:00am	Session 1: Welcome and keynote
10:00 – 10:30am	Morning tea
10:30 – 11:30am	Session 2: Methodology Workshops
11:45 – 12:45pm	Session 3: Themes Workshops
12:45 – 1:45pm	Lunch
1:45 – 2:45pm	Session 4: Journal Panel
3:00 – 4:00pm	Session 5: Building Academic Careers Workshops

Session 1 – Keynote

9:00am – 10:00am | Guthrie Theatre 330; Level 3 Room 28

Welcome to Country	
Welcome from ICME15	Professor Kim Beswick, Chair of the ICME-15 LOC
Keynote	Professor Hamsa Venkat, Dublin City University

Finding anchors amidst change in a career journey

There is common acceptance of increasing pressures on early career academics over time: pressures to publish, to manage large teaching loads, to mentor postgraduate students and colleagues, and amidst all of these pressures, to remain committed to the development of mathematics education on the ground. In this presentation, I will share details of the opportunities that have allowed me to retain a sense of an anchoring commitment to mathematics education development on the ground amidst a career that has involved geographical dislocations - across England, South Africa and Ireland, alongside research across secondary, primary and early childhood phases of mathematics education in schools.

Biography *– Hamsa Venkat holds the Naughton Chair in Early Years/Primary STEM Education at Dublin City University. Her own background is in mathematics education research, with a particular focus on primary mathematics over the last 15 years. She has focused particularly on intervention studies that seek to produce improvements in mathematics teaching and learning.*

Hamsa began her career as a high school mathematics teacher in London comprehensive schools. She has worked in mathematics education research and teacher education across England and South Africa prior to her move to Ireland.

Session 2 – Methodology Workshops

10:30am – 11:30pm

Design Research *Professor Michelle Stephan*	Level 3 Room 51
Child Task-Based Interviews *Associate Professor Jenni Way*	Level 3 Room 53
Mixed Methods *Professor Nils Buchholtz*	Level 4 Room 7
Analysing Classroom Interaction *Professor Jenni Ingram*	Level 3 Room 56
Participatory Action Research *Professor Peter Grootenboer*	Level 4 Room 40b
Video-Based Research *Dr Esther Chan and Dr Carmel Mesiti*	Level 4 Room 40a
Survey Design and Analysis *Professor Emerita Helen Forgasz*	Level 4 Room 40c
Rasch Analysis *Associate Professor Percival Matthews*	Level 6 Room 106
Quantitative Analysis *Professor Kim Koh*	Level 6 Room 116

Abstracts

Introduction to design-based research | Professor Michelle Stephan

This session is intended for early career researchers who are interested in learning about Educational Design-Based Research (DBR). Participants will learn about the variety of educational challenges that DBR can suitably address, contrast DBR with traditional research designs, and understand the basic theory of DBR. We will examine short research cases to determine if DBR is an appropriate research approach and discuss how to set up a DBR project. Time permitting, participants will share any potential research ideas to determine if DBR is the appropriate approach. This session is not intended for researchers who have already participated on Design Research Teams.

Child Task-Based Interviews | Associate Professor Jenni Way

Individual task-based interview can be used as either as an overarching methodological approach or as one data collection technique within various other methodologies. It has evolved from clinical psychology and is primarily used to gain insights into children's thinking through interpreting their responses to carefully designed mathematical tasks. We will consider some aspects of task and interview design through a practical activity.

Mixed methods | Professor Nils Buchholtz

The methodological trench warfare between qualitative and quantitative research, which can also be observed in mathematics educational research, seems to have found a promising solution in the emergence of the discussion about mixed methods as an integration of different research perspectives. Best-practice examples of current research designs from a wide variety of fields show that a mix of methods through a meaningful combination of different qualitative and quantitative research methods meets with broad acceptance in the scientific community. In particular, the promised richness of the research results makes mixed methods appear to be an extremely profitable methodological orientation for initial research projects. However, it is often overlooked that a successful combination of different research methods is quite difficult to realize, as results obtained with different research methods often cannot be related to each other without restrictions. The same applies here, of course: Form follows function. When starting a research project in the field of mathematics education, it is therefore important to consider whether the intended research questions can be answered with the help of a combination of different research methods, and if and how a successful mix of methods can be realized, considering the available resources. The workshop aims to clarify relevant criteria for planning, conducting and evaluating the integration of different research methods in research projects in mathematics education and to recognize the opportunities and limitations of mixed methods.

Analysing classroom interaction | Professor Jenni Ingram

Classroom interactions are a rich source of data, but they are also complex, messy and situated. There is now an extensive range of frameworks and perspectives used that focus on analysing mathematics classroom interactions, focusing on the quantity, quality, and nature of these

interactions at different grain sizes. In this workshop, we will look at some of these frameworks and other approaches to analysing classroom interactions, and they can be used to address different research questions and foci. We will also look at how the underlying theoretical basis of these different approaches and the importance of this when using these approaches in your own research.

Critical participatory action research | Professor Peter Grootenboer

Action Research is a methodology that is widely used in various ways and forms across educational settings. In this workshop we will look at Critical Participatory Action Research (CPAR) and how it can be employed to facilitate meaningful research and development in mathematics education. CPAR is not a neutral or passive form of research – it involves intentionally and proactively creating evidence-based change for improved outcomes for all, and it can be particularly effective when undertaken in conjunction with teachers and students. In the workshop we will discuss and investigate the theoretical and philosophical underpinnings of CPAR and look at some practical examples of how it has been employed.

Video-based research | Dr Esther Chan and Dr Carmel Mesiti

Video is a versatile and flexible research tool which can serve a variety of research paradigms and research purposes. This interactive workshop will cover different uses of video as a tool in educational research, particularly in classroom research. Our main goal for this workshop is to make visible the choices that are involved in the employment of video in research and draw attention to the consequences of these choices. Example studies will be provided to illustrate the different methodological decisions and techniques related to the use of video for research from data generation, analysis, to reporting. Data from mathematics classroom research will be used to stimulate discussion regarding the affordances and constraints of video as a research tool.

Survey design and analysis | Professor Emerita Helen Forgasz

In the quest for valid and reliable research, a sound understanding of the principles underpinning the selection of data gathering instruments, the design of the instruments, as well as the knowledge needed for the appropriate analysis and interpretation of the data gathered are essential. Well-designed surveys can be powerful data gathering tools. A wealth of information is provided when the survey is well-designed, and data gathered are appropriately analysed and interpreted. There are, however, limitations and constraints on what can be achieved with surveys and what conclusions can be drawn from the data gathered and analysed. Poor survey design and inaccurate data analyses can lead to misleading or false conclusions. In this interactive session, the basics of survey research will be introduced. What is a survey? When should a survey be included in a research design? What are the advantages of doing so? How are good surveys designed? What should be included in a survey to ensure that the data gathered are useful? What makes for good survey items? To whom should surveys be administered? How should the data from survey items be analysed, and how should the analysed data be interpreted? What are the limitations of surveys?

Rasch Analysis | Associate Professor Percival Matthews

This workshop will provide an introductory overview of the Rasch model. A member of the item response theory (IRT) family, the Rasch model provides several advantages over classical test theory (CTT). One key advantage is that, whereas CTT models are expressed only at the whole-test level, Rasch models provide information at both the test and individual item levels. The Rasch model estimates both respondent skill and item difficulty simultaneously, yielding the probability that a respondent at a given skill level will answer a particular item correctly. In this sense, the Rasch model functions much like a probabilistic Guttman scalogram. We will review some basics of the Rasch model and discuss one application in the realm of measuring children's developing knowledge of mathematical equivalence. Finally, we will discuss the potential for using the Rasch model more broadly as part of a rigorous construct modelling approach.

Quantitative Analysis | Professor Kim Koh

This workshop aims to support early career researchers in quantitative data analysis. The facilitator will provide an overview of the design and development of quantitative data collection tools such as surveys, questionnaires, and tests. Examples of descriptive and inferential statistical analyses from both real and hypothetical datasets will be demonstrated. Participants will engage in dialogues and hands-on activities to help them plan and select appropriate statistical methods for the data analysis in their own research. At the end of the workshop, participants will learn how to: design effective quantitative data collection tools, plan and outline the procedures for collecting and analysing quantitative data, consider the issues of reliability and validity of their quantitative data, and structure the methodology section of their dissertations, grant proposals, or manuscripts.

Session 3 – Theme Workshops

11:45am – 12:45pm

Theoretical aspects of mathematics education *Professor David Wagner*	Level 3 Room 22
Gender diversity and sexuality in maths education *Dr Jennifer Hall*	Level 3 Room 51
Embodied Learning Methods in Mathematics *Dr Anna Shvarts*	Level 3 Room 56
Sustainability and climate in mathematics education *Professor Richard Barwell*	Level 4 Room 7
Professional development of mathematics teachers *Professor Alf Coles*	Level 3 Room 53
Task Design *Professor Geoff Wake*	Level 4 Room 40b
Early childhood mathematics education *Professor Esther Levenson*	Level 4 Room 40a
Decolonizing Methodologies *Dr Tony Trinick*	Level 4 Room 40c
Inclusivity and diversity in mathematics education *Dr Barbara Clarke*	Level 6 Room 106
Technology in mathematics education *Professor Karen Hollebrands*	Level 6 Room 116

Abstracts

Theoretical aspects of mathematics education | Professor David Wagner

Everyone performs theory, whether or not they are aware of it. What sets researchers apart is our ability to identify and articulate the theory that underpins our work. This interactive workshop will be shaped by your experiences and questions as Dave engages you in critical reflection on your theory work. What is theory? Why do we need to address theory in our research reporting? How do we critique theories? Dave has a personal story to share about his growing critique of a theory he has used extensively, leading him to use it with greater care than previously! In addition to drawing you into discussion, Dave will draw on his experiences as a theorist and researcher, but also as an editor of Educational Studies in Mathematics, to discuss the kinds of questions reviewers and examiners typically raise about theory in our manuscripts. Come to this session with your questions and concerns about theory, and be prepared to discuss possible responses to the questions of other participants.

Gender diversity and sexuality in mathematics education | Dr Jennifer Hall

In this workshop, participants will have the opportunity to enhance their understandings of gender and sexuality research in mathematics education. To situate the discussions and activities, Jennifer Hall will begin by providing a brief historical overview of the topic. Then, she will share examples to highlight challenges and benefits involved in conducting such research, drawing on her experience in the field, working in both Canada and Australia. Participants will be encouraged to share their own experiences, and will engage in practical activities to develop their expertise in this domain.

Embodied Learning | Professor Anna Shvarts

Embodied approaches to cognition and learning turn our attention to students' bodies – a universal context and source for understanding that is always available. They also pave away from considering mathematical concepts as grounded in mental representations somewhere in the head (or in cognitive structures). At the workshop, we will explore how we can theorize mathematical concepts from an embodied perspective and how we can foster students' conceptual understanding through technology-enhanced interactions. Participants will work with (multi)-touch screens to discover mathematical concepts through movements and reflect on the learning process and the design of technologies. The workshop concludes by discussing how such technologies can be used in a classroom and the opportunities that they provide for diverse groups of students. (Kindly, bring your tablets or touchscreen computers to the workshop (participants will be grouped around available devices).

Sustainability and climate in mathematics education | Professor Richard Barwell

Let us assume that there are multiple situations of rapid change occurring in the Earth's planetary ecosystem, that these situations are related to the presence and activities of humans, and that they are likely to make life more challenging and more inequitable in the future. What are the implications for us as mathematics educators? What research questions could we be posing? What mathematics are we talking about? What epistemological challenges might we

face? What might this uncertain future mean for how we do research and how we communicate about it? These and related questions will be explored through case studies relating to climate change and biodiversity.

Professional development of mathematics teachers | Professor Alf Coles

In this session we will explore actively how it is possible to learn from viewing video recordings of mathematics lessons. We will discuss the complexities of observation and how it is we can come to view a classroom (as depicted on a video) in a manner which allows the possibility for learning and growth. The work we do together will then be placed in the context of other research into the professional development of mathematics teachers. There will be space for reflection on the implications for each of our research practices.

Designing tasks for pedagogical and didactical research in mathematics education | Professor Geoff Wake

This workshop will explore the design of tasks as central to many research studies that seek to understand cognitive and social theories of learning. Based on recent examples that have been used in a large study involving detailed qualitative work in lesson study as well as large scale randomised controlled trials, we will consider more generally the crucial role that tasks can play in the learning of mathematics. Their role in theories of change (of teaching practice and learner outcomes) will be considered.

Early childhood mathematics education | Professor Esther Levenson

Mathematics educators and researchers agree that mathematics can and should be included in the preschool and kindergarten curriculum. Research has also shown that the home environment is instrumental in supporting early mathematics learning. This talk will discuss questions such as, who are the people involved in early mathematics learning, what do we know about them so far (e.g., their knowledge, beliefs, and self-efficacy for engaging young children with mathematics), and what are some open questions. We will also discuss cultural differences regarding learning and teaching young children and how this might affect research regarding early years mathematics. For example, some countries have a mandated mathematics curriculum for preschool, while others have none. How might this affect teacher education and professional development for mathematics education? How might culture impact the debate on instruction versus play in preschool? We know that young children are creative in their play. Can we also promote mathematical creativity? Participants will be encouraged to share their experiences and dilemmas regarding research in these areas and how as a community we can promote mathematics learning amongst young children.

Decolonizing Methodologies: Research and Indigenous Peoples in mathematics education | Dr Tony Trinick

The decolonizing research theory, articulated by Linda Tuhiwai Smith and other scholars, emerged as a critical response to the historical and ongoing impacts of colonialism on indigenous peoples and their knowledge systems. This workshop explores the application of this theory to mathematics education for Indigenous peoples, highlighting several crucial aspects. Historically, colonialism led to the exploitation of indigenous lands, resources, and people,

resulting in the marginalization and oppression of indigenous communities. Colonial powers often dismissed indigenous knowledge systems, including mathematical knowledge, as inferior, imposing Western epistemologies and systematically devaluing indigenous worldviews and methodologies. Traditional Western research paradigms in mathematics education frequently treated indigenous students and communities as subjects rather than equal partners, perpetuating negative stereotypes and inaccuracies. Moreover, there has been a lack of ethical consideration for the impacts of educational research on indigenous communities, including data misuse and disrespect for cultural practices and intellectual property.

Decolonizing research theory advocates for recognizing and validating indigenous ways of knowing, being, and doing, particularly in mathematics education. It emphasizes the legitimacy and value of indigenous mathematical epistemologies and calls for embracing multiple research approaches, including indigenous methodologies. The theory highlights the importance of education and research led by, with, and for indigenous communities, prioritizing indigenous voices and ensuring that educational practices benefit these communities. Additionally, it supports developing research and educational skills within indigenous communities, fostering autonomy and self-determination. Decolonizing research aims to address and rectify historical injustices and ongoing inequities faced by indigenous peoples in mathematics education, acknowledging and redressing harms caused by colonial educational practices. It seeks to promote healing and reconciliation by fostering respectful and mutually beneficial educational relationships.

Inclusivity and diversity in mathematics education | Dr Barbara Clarke

How do we enhance our understanding of diverse learners in mathematics education? What aspects of methodology might be productive but also what might limit the opportunities for students to “show what they know”? What do we look for when studying inclusive classrooms? In this workshop some experiences will be shared to explore these and other related questions. Participants will be encouraged to share their insights, experiences and questions.

Technology in mathematics education | Professor Karen Hollebrands

We have been researching the design and use of technology within mathematics education for over 50 years. There is now a vast field of published studies that focus on the humans involved (learners, teachers, parents, designers, policy makers etc.), the digital tools (from devices to applications, learning platforms and professional learning environments), and the cultural contexts in which technologies are applied. Consequently, there is much to read and make sense of! In this workshop, we'll begin to explore this research landscape, and stop to look at a few landmark ideas and methods that you are likely to come across. Please come with an internet connected digital device and be prepared to discuss your own research ideas and approaches.

Session 4 – Journal Panel

1:45pm – 2:45pm | Guthrie Theatre 330; Level 3 Room 28

Mathematics Education Research Journal *Dr James Russo*	
International Journal of Science and Mathematics Education *Professor Fou-Lai Lin*	
Journal of Mathematical Behavior *Associate Professor Irene Biza*	
Journal for Research in Mathematics Education *Professor Pat Herbst*	
Educational Studies in Mathematics *Professor Dave Wagner*	
ZDM *Professor Stanislaw Schukajlow*	
Panel Chair:	*Associate Professor Naomi Ingram*

Biographies

Dr James Russo

Having completed his PhD in 2017, James is interested in three interrelated goals for primary mathematics education: effective, student-centred pedagogies to be embraced across all Australian primary classrooms; mathematics learning to be effectively differentiated, in a manner that is both inclusive and well targeted to student learning needs; and for mathematics to be enjoyable to learn and teach.

James's professional purpose is to shift the educational system further towards all three of these goals, starting with better supporting teachers. His major research interest relating to working towards these three goals is in learning design and its implementation in classrooms. This includes looking at issues such as:

- **Task design:** What is the role of challenging tasks, games and narrative-rich problem-solving tasks as pedagogical approaches to support effective, differentiated and enjoyable mathematics instruction? How are these pedagogies actually utilised in classrooms?
- **Lesson structure:** How does how the lesson is organised interact with the student learning experience, including their changing emotional states as the lesson unfolds? How can differentiation be effectively built into the structure of a lesson? How does shifting from individual work to collaborative work impact the student learning experience?
- **Sequencing learning:** How can we effectively sequence learning with effective pedagogies (e.g., challenging tasks, mathematical games)? How does the student emotional experience track across several, interconnected learning experiences?

Professor Fou-Lai Lin

Fou-Lai Lin, Professor Emeritus, Department of Mathematics, National Taiwan Normal University (NTNU). He established and was the founding editor-in-chief of International Journal of Science and Mathematics Education (IJSME) during 2002~2013. He is the coordinator of a long-term practice-based research program Just Do Math (JDM). To resolve the negative phenomena, low interest and low confidence in learning mathematics of Taiwan students. The goal of JDM (2013~) is set to provide opportunities for students to Love math, to Fully Engaged in learning math, to learn math in an Easier way, and to learn it Better. JDM expect to develop a learning environment in which all levels of learners (students, teachers and educators) are learning driven by interesting rather than by examination. He is acting as the president of the Yuan T. Lee Foundation, Science Education for all.

Associate Professor Irene Biza

Dr Irene Biza is Associate Professor of Mathematics Education at the School of Education and Lifelong Learning at the University of East Anglia, Norwich, UK. Irene has MSc and PhD in Mathematics Education and BSc in Mathematics. She worked for several years as mathematics teacher and development officer in Greece before getting a Lectureship in Mathematics Education at Loughborough University (2010) and then at the University of East Anglia (2013).

Irene's research focuses on the mathematical learning at the post-compulsory level, use of digital resources and mathematics teachers' discourses. She is co-leader of the MathTASK, a collaborative research and development programme in the UK, Brazil and Greece on mathematics teachers' pedagogical and mathematical discourses. Irene is Associate Editor of the Journal of Mathematical Behavior and member of the editorial board of several journals such as Educational Studies in Mathematics, Research in Mathematics Education and International Journal of Research in Undergraduate Mathematics Education. She is the leader of the TWG14: University Mathematics at the 14th Congress of the European Society for Research in Mathematics Education (CERME14) and Executive member of the British Society for Research into Learning Mathematics (BSRLM). More details about Irene and her publications can be found at: https://research-portal.uea.ac.uk/en/persons/irene-biza

Professor Patricio Herbst

Patricio Guillermo (Pat) Herbst is a professor of education and mathematics and the Editor in Chief of the Journal for Research in Mathematics Education. His scholarship is concerned with the study of professional practices in contexts that are framed by social and technical demands, with the work of mathematics teachers, balancing demands from students' needs, the discipline of mathematics, and schooling institutions as a prime example of one of those professional practices. One of Herbst's focal concerns has been the work teachers do in high school geometry classrooms to engage students in reasoning and proving; this work has served as the basis to develop theory, methods, and technological tools for the study of the work of teaching and the knowledge involved in teaching. These ideas have been influential to contribute to technologically-mediated, practice-based teacher education. All of those activities are carried out in the context of the GRIP, a research and development laboratory that Herbst has maintained since 2001; the GRIP is a vibrant environment, including professional researchers, technicians, and graduate and undergraduate students. In the GRIP, students can apprentice in research and develop their scholarship as they contribute to questions that pertain to the analysis of teachers' work and teaching knowledge. Herbst teaches a course on mathematics instruction to prospective secondary teachers, courses on research on mathematics instruction and mathematical thinking and learning to doctoral students in mathematics education, and a course on the representation of professional practice for Masters' students. He did undergraduate studies in mathematics in Argentina, where he also taught high school and college level mathematics. He received his MA and PhD from the University of Georgia, and has been on the U-M faculty since 1999.

Professor David Wagner

David Wagner is a professor in mathematics education and Associate Dean of Education at the University of New Brunswick. He serves as Co-Editor-in-Chief of Educational Studies in Mathematics and on the Editorial Board of the book series Studies on Mathematics Education and Society. He is interested in human interaction in mathematics and mathematics learning and the relationship between such interaction and social justice. This inspires his research which has focused on identifying storylines in mathematics education by listening to accounts of experiences from students and teachers, on teaching approaches that support sustainability, identifying positioning structures in mathematics classrooms by analyzing language practice, on

ethnomathematical conversations in Indigenous communities, and on working with teachers to interrogate authority structures in their classrooms. He has taught Grades 7–12 mathematics in Canada and eSwatini.

Professor Stanislaw Schukajlow

Stanislaw Schukajlow studied Mathematics, Physics, and Education in Germany and Ukraine. Since 2013, he has held a professorship in Mathematics Education at the University of Münster, Germany. Stanislaw Schukajlow is a member of the editorial boards of leading journals in mathematics education and education such as Educational Studies in Mathematics and Learning and Instruction. He also serves as an associate editor of ZDM – Mathematics Education. He edited special issues on Emotions and Motivation, Word Problems, and mathematical Modelling in Educational Studies in Mathematics, Mathematical Thinking and Learning, and ZDM – Mathematics Education. His research interests include strategies, motivation, emotions, and teaching methods for mathematical modeling problems. More information can be found at www.schukajlow.de.

Session 5 – Building Academic Careers Workshops

3:00pm – 4:00pm

Becoming a Thoughtful Researcher through Actively Seeking External Support *Professor Jinfa Cai*	Level 3 Room 22
Quality Criteria for Qualitative Research Papers *Professor Jonei Cerqueira Barbosa*	Level 3 Room 51
Scientific Writing *Professor Stanislaw Schukajlow*	Level 3 Room 56
Developing an Academic Profile *Professor Mellony Graven*	Level 4 Room 7
Developing a Track Record *Professor Berinderjeet Kaur*	Level 6 Room 116
Developing a Research Agenda *Professor Janette Bobis*	Level 4 Room 40
Writing and reviewing academic papers *Professor Despina Potari*	Level 6 Room 106

Abstracts

Professor Jinfa Cai | Becoming a Thoughtful Researcher through Actively Seeking External Support

In this workshop, we will discuss the ways to become a thoughtful researcher in mathematics education. Most importantly, we will discuss the kinds of external support we should seek to learn to be a thoughtful researcher. Being a thoughtful researcher, we will focus on the following: (1) Addressing each aspect of the research process: planning a study, conducting a study, and reflecting on the results; (2) Framing the entire research process as a coherent experience; and (3) Providing the concepts against which you can evaluate every decision you make. For external support, we will focus on the following: (1) Language editing, (2) Responding to the reviews; and (3) Establishing a line of research. We will use specific hands-on activities to illustrate and discuss each issue.

Professor Jonei Cerqueira Barbosa | Quality Criteria for Qualitative Research Papers

Qualitative research has a significant influence on Mathematics Education, as evidenced by its prevalence in papers published in the field. This type of research can be informed by various epistemological perspectives that can shape the procedures used in the study and how it is presented. Hence, the authors should incorporate all aspects of the research into their writing to fulfill the requirements of consistency, credibility, and integrity. Furthermore, qualitative research acknowledges the researcher's role in shaping the study, which requires the use of reflexivity to examine the study report. One of the main challenges authors face is meeting these requirements considering the word limit in a paper. This workshop will address this challenge by providing clues on how to craft papers in a way that meets the necessary criteria by considering the following guiding queries:

- What is the epistemological perspective of the study and its effects on research design, especially how has the qualitative method been conducted?
- How are the different dimensions of the research articulated?
- To what extent are all the steps in the research (including research report crafting) clear and transparent?
- How do authors report and reflect on their positions within the research (including fieldwork)?

This workshop is structured around these topics, encouraging participants to think of how to achieve the standards of consistency, credibility, integrity, and reflexivity when writing qualitative research papers.

Professor Stanislaw Schukajlow | Scientific Writing: Consistency, Novelty, Methodology, and What Else?

Scientific writing is at the core of research work, and it is of crucial importance for an academic career. In the talk, we will discuss the writing process for peer-reviewed scientific journals and discuss how authors can react to the corresponding reviews and comments by the editor.

Professor Mellony Graven | Developing an Academic Profile

In this workshop we will engage with various ways in which you can develop your academic profile as an Early Career Researcher. We will engage with: developing a publication record across multiple audiences; maximising the impact off your research; becoming a fully participating member of key conference and journal communities, and developing research partnerships.

Professor Berinderjeet Kaur | Developing a Track Record

As an early career researcher, one is often pulled in many directions. During this workshop, I will share my research and academic work trajectories over the past four decades. These trajectories were shaped by intentional and unintentional activities. This will provide food for thought and facilitate young academics in framing their plans to guide their work in the coming years.

Professor Janette Bobis | Developing a Research Agenda

When applying for an academic position or a promotion, it is anticipated that researchers of all levels of experience will outline their research agenda—a statement indicating their focus and plan for guiding their work for several years to follow. In reality, it is common for early career researchers to experience some confusion post-PhD about the shape and direction of their research agenda. In this workshop, we will discuss what a research agenda is, why it is important to have one and explore ways in which you can develop your own research agenda post-PhD.

Professor Despina Potari | Writing and reviewing academic papers in mathematics education research

In this session, I will discuss issues related to the quality of research in mathematics education. My particular focus will be on the writing and reviewing processes that young researchers encounter at the beginning of their careers. We will explore different types of papers in relation to specific academic journals, addressing important characteristics related to structure, content, and quality. Participants will work in groups to analyze examples of reviews and identify the valued characteristics of a research paper within the mathematics education research community.