



PROCEEDINGS OF THE 47th
CONFERENCE OF THE INTERNATIONAL
GROUP FOR THE PSYCHOLOGY OF
MATHEMATICS EDUCATION

Auckland
Aotearoa New Zealand
July 17-21
2024

EDITORS

Tanya Evans
Ofer Marmur
Jodie Hunter
Generosa Leach
Jyoti Jhagroo



VOLUME 1

Plenary Lectures
National Presentation
Plenary Panel
Working Groups
Seminar
Oral Communications
Poster Presentations

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PME-47

RETHINKING MATHEMATICS EDUCATION TOGETHER

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PREFACE

Professor Jodie Hunter

Kia ora and welcome to PME-47, the 47th Annual Conference of the International Group for the Psychology of Mathematics Education. We are excited to be hosting the PME conference in Aotearoa New Zealand for the first time. We recognise the PME conference as one of the most significant annual international conferences in the field of mathematics education and are privileged to be hosting PME participants. The PME community includes researchers across all levels of mathematics education with diverse fields of interest and expertise, including cognitive, social, cultural, and emotional components of mathematics education. This year's conference has approximately 380 participants from 41 countries from all over the world. We are looking forward to the 318 presentations that will be made during the conference.

We hope that participants of PME appreciate and enjoy experiencing the bicultural heritage and nature of our country. Aotearoa is the traditional Māori name for New Zealand meaning the land of the long white cloud. This refers to the cloud formations that were used by early Pacific navigators to find land. Aotearoa New Zealand is a welcoming, diverse country with a history of Māori, European, Pacific Island, and Asian immigration. This rich blend of cultures, combined with geologically fascinating landscapes and unique flora and fauna, makes New Zealand an exciting country to explore. Aligned with the location of the conference, we selected the theme of the conference to be described as “Rethinking mathematics education together”. This theme has been chosen to emphasize mathematics education research as a shifting field of knowledge which is developed as a collective body of research. The theme has relevance both to the local Pacific/Oceania context with collectivism being one of the key cultural values of both Māori and Pacific peoples and given the ongoing focus in Aotearoa New Zealand on the development of an equitable educational system building on our bicultural heritage. The theme also connects to the broader international context with ongoing debates related to mathematics education and research and shifts in both curriculum and pedagogical practices.

We are excited to welcome distinguished international plenary speakers and panellists to deliver plenary addresses at the conference. All of the speakers represent different research backgrounds, experiences, and contexts and we are delighted to engage with varying theoretical perspectives. The program of PME 47 will include a variety of types of sessions including Research Reports, Oral Communications, and Poster Presentations, along with Working Groups, and a Seminar. A National Presentation will provide insights into both curriculum development and research studies that have been undertaken in Aotearoa New Zealand. The four volumes of the proceedings are organized according to types of presentations. Volume 1 contains the Plenary Lectures, Plenary Panel, Working Groups, Seminar, National Presentation, Oral communications and Poster Presentations abstracts. Volumes 2, 3 and 4 contain Research Reports.

PME 47 is a joint conference being hosted from colleagues at Massey University, University of Auckland, and Auckland University of Technology. Three committees have been involved in organising the conference: The International Program Committee for PME 47, the International Committee of PME together with the PME Administrative Manager, and the Local Organizing Committee. We wish to thank all of those involved in the organisation of the conference for both their time and support. We are also appreciative of all of the PME 47 participants for travelling to our country to attend the conference and for the contributions from the wider PME community in the reviewing process.

We hope that PME 47 offers new learning opportunities for all participants and an opportunity for us to rethink mathematics education together. We also look forward to both old colleagues and new colleagues connecting during the conference through existing friendships and the development of new friendships and possibilities for future work together. As expressed in a Māori proverb: “*Nau te rourou, naku te rourou, ka ora te manuhiri*” translated this means “*with your food basket and with my food basket, the people will thrive*”. Together we can create something greater than ourselves.

Jodie Hunter

PME 47 Conference Chair

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