



Mathematics Classroom Teaching Research for All Students (M-CTRAS)

The 2024 M-CTRAS Conference
***Facilitating Effective Instruction in Inclusive Mathematics Classroom
for ALL Students***

July 7, 2024

08:00 AM Canberra, Melbourne, Sydney

AUS Eastern Standard Time

Time: 8:00-8:10 am (AEST)

Welcome Session

Time: 8:10-9:50 am (AEST)

Whole Group Session - Moderator: *Benedetto Di Paola, University of Palermo*

Plenary - *What matters in maths?: Communicating values in maths education through curriculum design*

Kristen Tripet¹ and Nadia Walker²

¹*Australian Academy of Science;*

²*BA, GDipEd (Prim), GCertPrinPrep, GCertEdRes, MEd.*

Plenary - *Mathematics knowledge as a foundation for reasoning in the age of cybersecurity threats*

Suzanna Schmeelk

College of Professional Studies, St. John's University, NY, USA

09:50-10:10 am (AEST)

Whole Group Session

Brief History of M-CTRAS

Shuhua An, California State University, Long Beach, United States

M-CTRAS Award Announcement and Call for Best Papers

Awards

Olive Chapman, University of Calgary

10:10-12:20 am/pm (AEST)

Parallel Group Topic sessions

12:20-12:30 pm (AEST)

Closing Session

13:00 pm (AEST)

Lunch Time

**Topic Session 1 - Moderator: Jonei Cerqueira Barbosa
Breakout Room 1**

Prospective teachers' perception of learning mathematical modeling for teaching

Olive Chapman; Jonei Cerqueira Barbosa

University of Calgary, Canada; Universidade Federal da Bahia, Brazil

What does strategic competence look like in mathematical activities?

Vesife Hatisaru

Edith Cowan University, Australia

From a colonized to a decolonized mathematics, from 8 to 2 competences, from non-unit to unit-numbers

Allan Tarp

MATHeCADEMY.net, Danmark

Why do Calculus students find solving optimization problems so difficult?

Rasha Abadir; Carolyn Maher

Rutgers University, USA

Towards a comprehensive theory of bureaucratic impediments to meaningful mathematics education reform

Thomas E. Ricks

Louisiana State University, USA

Inclusive mathematics education of transitional Kindergarten students

Frederick Uy

California State University, Office of the Chabcellor, USA

Collective learning for All learners: Pre-Service mathematics teachers' professional learning perspective

Xiong Wang

University of Alberta, Canada

The role of authentic stem assessment in developing elementary school girls' growth mindsets in mathematics

Kim Koh; Olive Chapman

University of Calgary, Canada

Topic Session 2 - Moderator: *Kimberly A. Powers*
Breakout Room 2

Teaching students with Mental Health Challenges in the post-pandemic school setting

Kimberly A. Powers

Assurance Learning Academy-Learn4Life, USA

Kindergarten teachers' professional development on designing and implementing embodied mathematics curriculum and instruction for young children

Su-Chiao Wu; Yu-Liang Chang

Department of Early Childhood Education, National Chiayi University, Taiwan

Improving underrepresented K-8 children's learning outcomes in inclusive classroom using asset-based pedagogy by pre-service teachers

Shuhua An; Joshua Ortega; Julianna De Joya; Aashir Ibrahim

California State University, Long Beach, USA

Current status and progress of research on conceptual understanding in mathematics: a scoping review

Haocan Sheng

Capital normal university, China

An inquiry-based perspective: How to reconcile teacher-centered, student-centered teaching?

Shao-Ying, Li

National Taitung College, Taiwan

Research on representation based mathematical visualization teaching in dynamic technology environment

Wei Xinyi; Wu Hua LiaoNing

Normal University, China

Effects of digital game-based learning on mathematics learning in primary and secondary schools: A meta-analysis

Maodong Tian; Zaiqiang Ku, Lei Ye

Huanggang Normal University, China

Evaluating explicit vocabulary instruction for students with learning disabilities: a scoping review of literature

Acer Pitas; Dennis Lee Jarvis Ybanez

University of the Philippines Open University/BCEC, Philippines

Topic Session 3 Moderator: *Suanrong Chen*
Breakout Room 3

Advancing equity in mathematics education

Lisa S. Lee

Coastline College, USA

Research on influencing factors of quality of mathematics MOOCs: From the perspective of comment text mining

Xuefen Gao; Yue Pan

Zhejiang Sci-tech University, China

Designing and implementing elementary mindset mathematics teaching and learning activities with efficacious strategies

Yu-Liang Chang; Su-Chiao Wu

Department of Education, National Chiayi University, Taiwan

What classroom critical events do chinese preservice mathematics teachers identify?

Suanrong Chen; Zijing Zhao; Jia Pang; Jinfai Cai

Yangzhou University, China; University of Delaware

Training college students grasp autonomous learning strategies to promote them growth

Hongye Wu

Huizhou University, China

A status quo survey on problem posing ability of pre-service mathematics teachers in primary school based on analysis of an international specialized course

Zhiling Wang

Hangzhou Normal University, China

Exploring the mathematical creativeness of senior high school students with learning needs in the Philippines

Christine Nicole Victorio; Jun P. Balili

National University Philippines; Ateneo de Manila University, Philippines

Modelisation in inside and outside classroom students' reality: a didactical mathematics activity in a Italian classroom

Benedetto Di Paola; Giuseppe Bianco; Michela Tartaglione

University of Palermo, Italy; I.T.I.S. "G. GALILEI", Rome, Italy

Topic Session 4 - Moderator: *Giuseppe Bianco*
Breakout Room 4

Mathematical reasoning as a foundation for all middle-school students to achieve mobile security: report of a pilot intervention

Suzanna Schmeelk; Carolyn A. Maher; Rasha Abadir; Victoria Krupnik Rutgers
St. John's University, New York City, New York, USA

K-8 teachers' understanding and using “Special Mathematics Application Problems” for Student engagement

Zhonghe Wu
National University, USA

Research on teacher-student interaction in mathematics classrooms from the perspective of educational equity

Wu Shuang
Hangzhou Normal University, China

A Study on the Teaching Practice Dilemma of high school teachers who teach Mathematical Olympiad

LEI Peiyao; SU Wenyu
Chengdu Academy of Education Sciences, China

Finding common ground through translanguaging in face-to-face and online mathematics classrooms: a project proposal

Maria Digi Anna Mance Avila; Maria Alva Q. Aberin
Ateneo de Manila University, Philippines

Applying the theory of multiple intelligences to embrace differences and innovate Primary school mathematics classroom teaching

Li Lanying; Wang Hong
Beihang University Primary School, China

The empirical research on the practical effect of integrating outstanding traditional chinese culture into interdisciplinary project-based learning

Qingchun Yu; Aidong Jin
Beijing Normal University, China; Yanbian University, Yanji, China

Values and social-cultural attitudes in mathematical practice: a survey conducted among Italian and Chinese students

Giuseppe Bianco; Benedetto Di Paola; Giada Cristiano
University of Palermo, Italy

Chair of the 2024 M-CTRAS conference

Benedetto Di Paola and Zhiling Wang

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