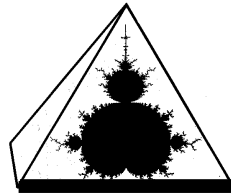


The Mathematics Education for the Future Project



Thirteenth International Conference

Mathematics Education in a Connected World

Sep 16–21, 2015, Grand Hotel Baia Verde, Catania, Sicily,
Italy

The Mathematics Education for the Future Project thanks our Major Sponsor

Autograph



Autograph: inspiring and motivating classroom software

Parallel Working Group Sessions

Thur Sep 17 9.00 - 10.30
Welcome & Douglas Butler Plenary Verga A&B

Thur Sep 17 11.15 - 12.30 Session 1 2x35min

Technology (Verga A) Gail Burrill & Mehryar Nooriafshar

Transforming Teachers' Technological Pedagogical Content Knowledge for Teaching Mathematics with Technology Through Online Professional Development

Margaret L. Niess

A Workshop on the Use of an Interactive Multimedia Environment for Learning the Basics of Network Diagram Construction in Project Management

Mehryar Nooriafshar

Problem Solving & Modelling (Verga B) Andy Begg & Albert Otto

Mathematical competence assessment: comparison of student answers facing different styles of formulating the examination questions

Genoveva Leví, Eduardo Ramos & José Antonio Carrillo

Posing Fraction Problem Scenarios: A Comparative Study of Pre-Service Teachers and Grade Five Learners

Pam Austin & Julie Hechter

Thur Sep 17 14.15 - 16.00 Session 2 3x35min

Technology (Verga A) Gail Burrill & Mehryar Nooriafshar

Visualising key concepts in Pure Mathematics using Autograph

Douglas Butler

GEOMATECH - supported by modern software GeoGebra, the Revised National Curriculum fitting mathematical and scientific development of teaching material and training of trainers - in Hungary

Ildikó-Anna Pomuczne Nagy

Fundamental Concepts of Linear Equations and Slope Explored Via Simple Technology

William R. Speer

Problem Solving & Modelling (Verga B) Andy Begg & Albert Otto

Evaluating Students' Mathematical Creative Thinking Involved in Modeling Process

Talya Gilat & Miriam Amit

A Study of the Effect of using "What if Not" Strategy in Posing Geometry Problems

Majid Haghverdi & Maryam Gholami

Border Crossing Between Problem Solving in School Mathematics and Real World through Modeling and Narrative

Murad Jurdak

Thurs Sep 17

Session 3: 16.30 - 18.15

3x35min

Technology (Verga A) Gail Burrill & Mehryar Nooriafshar

Facilitating Positive Student-Faculty Relationships in Mathematics Education Courses

Esther Billings & Lisa Kasmer

Access and Equity in Mathematics Education

Roland Pourdavood

Example of a Self-Contained e-Lecture

Axel Kilian

Problem Solving & Modelling (Verga B) Andy Begg & Albert Otto

***Nudge* and the Concept of Mathematical Learning Spaces as Learning Environments for Problem Classes**

Martin Stein

Engaging undergraduate students in a modeling course on the mathematics of (mostly Olympic) sport

John M. Stockie

Using an Explicit Teaching Approach to Develop Strategic Spirit – The Case of the Working Backwards Strategy

Yelena Portnov-Neeman & Miriam Amit

Fri Sep 18

Session 4: 9.00 - 10.30

2 x 45min

Workshops (Verga A) Brad Hansen-Smith & Angelique Seifert

Units and Unity (Workshop)

Bradford Hansen-Smith

Math Academy: A model for reaching out to underrepresented students in STEM fields (Workshop)

Elsa Medina & Amélie Schinck-Mikel

Workshops (Verga B) Hanan Innabi & Jasia Morska

A “Factory of triangles” in a multicultural class (Workshop)

Maria Piccione

How to increase the interest of studying maths (Workshop)

Elena Iurchenko

Fri Sep 18

Session 5: 11.00 - 12.30

2 x 45min & 90min

Workshops (Verga A) Brad Hansen-Smith & Angelique Seifert

Developing Leadership: Engaging School Principals in Mathematics Teaching and Learning (Workshop)

Christine Suurtamm

We have no idea how capable children are: A multimodal analysis of children’s mathematical reasoning (Workshop)

Barbara Graves

Workshops (Verga B) Hanan Innabi & Jasia Morska

Count in Icons before Tens, then Add NextTo before OnTop (Workshops)

Allan Tarp

Sat Sep 19

Session 6: 9.00 - 10.45

3 x 35min

Teacher Education (Verga A) Cheryl Lubinski & Natalya Vinogradova

Narratives of micro-politics obstructing the professional development of mathematics teachers

Clyde Felix

Lesson Study as a Tool in Field Practice for Prospective Mathematics Teachers' Training

Arne Jakobsen & C. Miguel Ribeiro

Developing Research Practitioners: Senior Projects for Pre-service Teachers

Nancy Leveille, Judith Quander, Tim Redl, Karen Orta, Karen Carlton & Jacqueline Sack

Innovation & Classroom Practice (Verga B) Ariana-Stanca Văcăretu & Ivan Meznik

Teaching about Angles and Triangles for 3rd Grade Students Using Origami

Galit Ashkenazi-Golan & Vered Gabai

School mathematics: why, what, and how?

Andy Begg

Benford's Law in the Classroom and the Courtroom

Larry G. Blaine

Sat Sep 19

Session 7: 11.15 - 13.00

3 x 35min

Teacher Education (Verga A) Cheryl Lubinski & Natalya Vinogradova

Developing a Mathematics Course for Pre-service Teachers: A Futuristic Approach

Cheryl A. Lubinski & Albert D. Otto

Design of Online Metacognitive Activity in a Post-Secondary Mathematics-for-Teachers Course

Petra Menz, Cindy Xin & Jing Li

Outreach in mathematics teacher education: Developing future educators through experiences outside of the classroom

Catherine Paolucci

Innovation & Classroom Practice (Verga B) Ariana-Stanca Văcăretu & Ivan Meznik

Building Concepts: Expressions and Equations and Beginning Algebra

Gail Burrill

Communication in Mathematics Lessons

Wolfram Eid

The Logarithmic Spiral in Geometry, Nature, Architecture, Design, and Music

Jay Kappraff

Sat Sep 19

Session 8: 14.30 - 16.15

3 x 35min

Teacher Education (Verga A) Cheryl Lubinski & Natalya Vinogradova

Mathematics teachers that can prepare learners for the transition to real-life and tertiary mathematics

M Plotz

The teaching of mathematics in undergraduate (UG) secondary initial teacher education (ITE): some students' responses to enquiry based pedagogy with transformative intentions

Hilary Povey

How Teacher Knowledge and Perceptions in Representations of Linear Functions Translate into Their Classroom Teaching

Shagufta Raja, David K. Pugalee & Alisa Wickliff

Innovation & Classroom Practice (Verga B) Ariana-Stanca Văcăretu & Ivan Meznik

Mathemagical Marvels to Liven up Lessons

Andrew Wrigley

Mathematics 'sans frontières': An experimental notation to teach mathematical operations.

David Womack

The Effect of Mathematics Reform Movements and Mathematical Discourse in Pre-service Teachers' Ability to Design Problem-posing Situations

Pamela A. Halpern

Sat Sep 19

Session 9: 16.45 - 18.30

3 x 35min

Teacher Education (Verga A) Cheryl Lubinski & Natalya Vinogradova

Visualizing Algebra

Natalya Vinogradova

Some problems of retraining teachers

Evgeny Yurchenko

Investigating the Time allocated to Teaching Mathematics in Irish Second Level Schools

Mark Prendergast & Niamh O'Meara

Statistics and Applications (Verga B) Ariana-Stanca Văcăretu & Ivan Meznik

The E and M in STEM Education: Considering Opportunities to Integrate Engineering and Mathematics

Alisa Wickliff, David K. Pugalee & Shagufta Raja

Statistics and Literary Criticism

Mike Bedwell

Statistics Education in a Connected World - Back to the Future?

Bruce Warren Stephens & Kerry Ann Dickson

Sun Sep 20

Session 10: 9.00 -10.45

3 x 35min

Comparative Education (Verga A) Liv Sissel Grønmo & Catherine Paolucci

Cultural diversity: how can it increase the complexity of teaching mathematics in multicultural class?

The case of Chinese students

Benedetto Di Paola & Giovanni Giuseppe Nicosia

Geometry: Drawing from the Islamic Tradition

Carol Bier

All-attainment teaching in one English secondary school: a challenge in a challenging school?

Colin Jackson

Research on Learning (Verga B) Miriam Amit & David Pugalee

Using Tableaus and Teacher Moves to Increase Student Discourse and Understanding

Julie A. Bradley & Robert F. Cunningham

From Research To Classroom: Proposals

Daniela Ferrarello, Maria Flavia Mammana & Mario Pennisi

An analysis of the views of mathematics of first-year students from an outcomes-based curriculum

Sonica Froneman & Trudie Benadé

Sun Sep 20

Session 11: 11.15 - 13.00

3 x 35min

Comparative Education (Verga A) Liv Sissel Grønmo & Catherine Paolucci

Is Innovation Possible? New problems on secondary level education of elementary geometry – Japanese experience

Aya Naito & Ryosuke Nagaoka

Collaborating towards teaching proficiency in Mathematics: Connecting some dots. A South African perspective

Hercules D. Nieuwoudt

The Pedagogical Aspects of Teaching Prime Numbers to Gifted Children – A classroom Experience.

S.R. Santhanam

Research on Learning (Verga B) Miriam Amit & David Pugalee

Knowledge of Assessment and its implications NOT 19 Sat

Hodaya (Liora) Hoch & Miriam Amit

A Structural Equation Model Explaining 6th Grade Mathematics Achievement Using SACMEQ III Data

Gibbs Y. Kanyongo & James B. Schreiber

An approach to assessing students' competences developed through math research

Ariana-Stanca Văcărețu

Sun Sep 20

Session 12: 14.30 - 17.00

4 x 35min

Comparative Education (Verga A) Liv Sissel Grønmo & Catherine Paolucci

Analysis of the role of learning of equation in the formation and structure of the general mathematical view in Japan –A strategy to reconstruct of mathematics education

Shiori Saito & Ryosuke Nagaoka

Analysing the effects of the introduction of the new Project Maths syllabus on beginning undergraduates' performance of basic mathematical skills in Ireland

Páraic Treacy & Fiona Faulkner

Mathematics Drama and Ethno-Mathematics

Adenegan, Kehinde Emmanuel

Assessing the Problem-Solving Proficiency of Quantitative Techniques Students at the Walter Sisuu University

Lynette Bester

(5 min) Relationship between the Volumes of a Conical Frustrum and a Square Frustrum

Samuel Olu Olagunju

(5 min) Problem solving modeling with theory of containerisation

Michael Vershima Atovigba

Research on Learning (Verga B) Miriam Amit & David Pugalee

Relationship between Formative and Summative Assessments for Elementary School Students
Chuang Wang & David K. Pugalee

Linked Learning: How does it Influence the Required Preparation of Mathematics Teachers in California?

Agnes Tuska

Mathematical Habits of Mind: Fostering or Impeding (Workshop)

Gary A. Harris

The Idea of variation in Mathematics Curriculum in Qatar

Hanan Innabi

(5 min)The Open Approach in Lesson Study- Enhancing Teachers' Knowledge of Teaching Division of Fractions.

Lloyd Munroe

Sun Sep 20 17.30 - 18.30 Special Outdoors Plenary

Working Group Leaders

Technology (Verga A)

Gail Burrill, Mehryar Nooriafshar

Problem Solving & Modelling (Verga B)

Andy Begg, Albert Otto

Workshops (Verga A)

Brad Hansen-Smith, Angelique Seifert

Workshops (Verga B)

Hanan Innabi, Jasia Morska

Teacher Education(Verga A)

Cheryl Lubinski, Natalya Vinogradova

Innovation & Classroom Practice (Verga B)

Statistics and Applications (Verga B)

Ariana-Stanca Văcăretu, Ivan Meznik

Comparative Education (Verga A)

Liv Sissel Grønmo & Catherine Paolucci

Research on Learning (Verga B)

Miriam Amit & David Pugalee

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