

SUNDAY, JULY 13, 2003

12:00–16:00
REGISTRATION

ROOM
CONVENTION CENTER

17:00–18:00
CULTURAL PRESENTATION
CHURCH
& CONFERENCE OPENING

KAWAIAHA‘O

18:00–19:00
PLENARY LECTURE 1
CHURCH

KAWAIAHA‘O

Nainoa Thompson
Navigating Between Theory And Practice

19:00–20:30
RECEPTION

KAWAIAHA‘O CHURCH HALL

08:00–09:30

PAGE ROOM

WORKING SESSIONS I

<i>WS1 Embodiment In Mathematics: Metaphor And Gesture</i> Edwards, Laurie & Janete Bolite Frant	1-173 301A
<i>WS2 Exploring Alternative Interpretations Of Classroom Data</i> Breen, Chris & Markku Hannula,	1-174 301B
<i>WS3 Models And Modeling Working Session</i> Lesh, Richard, Helen Doerr, Lyn English, & Margret Hjalmarson	1-175 304A
<i>WS4 Researching The Teaching And Learning Of Mathematics In Multilingual Classrooms</i> Barwell, Richard, Anjum Halai, & Mamokgethi Setati	1-176 304B
<i>WS5 Symbolic Cognition In Advanced Mathematics</i> Hegedus, Stephen	1-177 305A
<i>WS6 The Complexity Of Learning To Reason Probabilistically</i> Stohl, Hollylynne & James Tarr	1-178 305B
<i>WS7 The Design And Uses Of Curriculum Materials</i> Li, Yeping	1-179 306A
<i>WS8 The Role Of Syntax And Technology In The Development Of Algebraic Reasoning In The Early Grades (K-8)</i> Olive, John, Maria Blanto; & Jim Kaput	1-180 306B
<i>WS9 Understanding Learning Through Teaching In The Mathematics Classroom</i> Cockburn, Anne & Fran Lopez-Real	1-181 308A
<i>WS10 Videopapers: An Emerging Way To Publish And Conduct Research And Classroom Analysis</i> Cogan-Drew, Daniel & Ricardo Nemirovsky	1-182 308B

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REFRESHMENTS

10:00–11:00

PLENARY LECTURE 2

Jo Boaler	1-3 310
<i>Studying And Capturing The Complexity Of Practice: The Case Of The Dance Of Agency</i>	

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11:35–12:15		
RESEARCH REPORTS 1		
Daniel Siebert & Steven R. Williams <i>Students' Understanding Of Zn</i>	4-167	301A
Joseph F. Wagner <i>The Context Sensitivity Of Mathematical Generalizations</i>	4-363	301B
Rossana Falcade & Colette Laborde <i>Function And Graph In DGS Environment</i>	3-237	303A
Alice Alston & Carolyn A Maher <i>Modeling Outcomes From Probability Tasks: Sixth Graders Reasoning Together</i>	2-25	303B
Lena Licon Khisty, Hector Morales & Kathryn Chval <i>Beyond Discourse: A Multimodal Perspective Of Learning Mathematics In A Multilingual Context</i>	3-133	304A
Angelika Bikner-Ahsbabs <i>A Social Extension Of A Psychological Interest Theory</i>	2-97	304B
Jane M. Watson & Ben A Kelly <i>Statistical Variation In A Chance Setting</i>	4-387	305A
Markku S. Hannula <i>Locating Fraction On A Number Line</i>	3-17	305B
Luciano Meira & Monica Correia <i>The Emergence Of Mathematical Goals In A Recreational Practice</i>	3-277	306A
Adalira Saenz-Ludlow <i>An Interpreting Game In A Third Grade Classroom</i>	4-79	306B
Youngyoul Oh <i>Applying Theory Of Planned Behavior Model On Studying Teachers' Change In Mathematics Instruction</i>	3-405	307A
Silvia Alatorre & Olimpia Figueras <i>Interview Design For Ratio Comparison Tasks</i>	2-17	307B
Armando Solares, Eugenio Filloy & Teresa Rojano <i>Two Meanings Of The 'Equal' Sign And Senses Of Comparison And Substitution Methods</i>	4-223	308A
Roberta Y. Schorr & Sylvia Bulgar <i>The Impact Of Preparing For The Test On Classroom Practice</i>	4-135	308B
Kay Owens <i>Facilitating the Teaching of Space Mathematics: An Evaluation</i>	1-339	309

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Rebecca C. Ambrose, Randolph Philipp, Jennifer Chauvot & Lisa Clement <i>A Web-Based Survey to Assess Prospective Elementary School Teachers' Beliefs About Mathematics and Mathematics Learning: An Alternative to Likert Scales</i>	2-33	313A
Manuel Santos, Evelyn Aguero, Alexander Borbon & Cristhian Paez <i>Students' Use Of Technology In Mathematical Problem Solving: Transforming Technological Artifacts Into Mathematical Tools</i>	4-119	313B

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LUNCH

(FIRST TIMERS' MEETING—to be held in Room 312)

13:05–13:45

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Marilyn Carlson, Nanci Smith & Joni Persson <i>Developing And Connecting Calculus Students' Notions Of Rate-Of-Change And Accumulation: The Fundamental Theorem Of Calculus</i>	2-165	301A
Arthur B. Powell & Carolyn A. Maher <i>Heuristics of Twelfth-Graders Building Isomorphisms</i>	4-23	301B
Gilah C. Leder, David G. Pederson & Graham H. Pollard <i>Mathematics Competitions, Gender, And Grade Level: Does Time Make A Difference?</i>	3-189	303A
Judit Moschkovich <i>What Counts As Mathematical Discourse?</i>	3-325	303B
Richard Barwell <i>Attention To Mathematical Structure During Participation In A Mathematics Classroom Task By Learners Of English As An Additional Language (EAL)</i>	2-65	304A
Tony Brown <i>Mathematical Identity In Initial Teacher Training</i>	2-151	304B
Sarah B. Berenson & Rod Nason <i>Using Instructional Representations Of Ratio As An Assessment Tool Of Subject Matter Knowledge</i>	2-89	305A
Christina Misailidou & Julian Williams <i>Measuring Children's Proportional Reasoning, The "Tendency" For An Additive Strategy And The Effect Of Models</i>	3-293	305B
Franco Favilli, M. Luisa Oliveras & Margarida Cesar <i>Bridging Mathematical Knowledge From Different Cultures: Proposals For An Intercultural And Interdisciplinary Curriculum</i>	2-365	306A

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Sandra Crespo & Cynthia Nicol <i>Learning To Investigate Students' Mathematical Thinking: The Role Of Student Interviews</i>	2-261	307A
Peter Sullivan, Robyn Turner Harrison, Judy Mousley & Robyn Zevenbergen <i>Being Explicit About Aspects Of Mathematics Pedagogy</i>	4-267	307B
Analucia Schliemann, David Carraher, Barbara Brizuela, Darrell Earnest, Anne Goodrow, Susanna Lara-Roth & Irit Peled <i>Algebra In Elementary School</i>	4-127	308A
Howard Tanner & Sonia Jones <i>Self-Efficacy In Mathematics And Students' Use Of Self-Regulated Learning Strategies During Assessment Events</i>	4-275	308B
Lisa Clement, Jennifer Chauvot, Randolph Philipp & Rebecca Ambrose <i>A Methodological Approach For Developing Rubrics For Research Purposes</i>	2-221	313A
Michele Cerulli & Maria Alessandra Mariotti <i>Building Theories: Working In A Microworld And Writing The Mathematical Notebook</i>	2-181	313B

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BREAK

13:50–14:50

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Helena Müller & Dirk Wessels <i>Types and levels of spatial representation in the data tasks of Grade 4-7 students</i>	1-245	301A
Tara-Lynn Scheffel, Cornelia Hoogland, Daniel Jervis & George Gadanidis <i>Mathematics As An Aesthetic Experience</i>	1-250	301A
Bridget Arvold <i>Taking, Playing, and Making the Role of Secondary Mathematics Teachers</i>	1-201	301A
William E. Geeslin <i>Exploring Fourth Grade Students' Probabilistic Reasoning In A Game Situation Based On Binomial Trials</i>	1-223	301B

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Stephen Lerman, GuoRong Xu, Anna Tsatsaroni <i>Developing Theories Of Mathematics Education Research: The PME Story</i>	1-242	301B
Tonya Gau, Laurie Rubel, Marian Slaughter & Laura Grandau <i>Teacher Beliefs And Practices Regarding The Black-White Mathematics Achievement Gap</i>	1-221	303A
Jesse Solomon <i>On Culture, Race And Being Explicit In Mathematics Teaching</i>	1-252	303A
Peter Winbourne <i>Tracking Beginning Teachers' Developing Expertise Within The Practice Of Primary School Mathematics Teaching</i>	1-263	303A
George Booker & Janeen Lamb <i>The Impact Of Teachers' Understanding Of Division On Students' Division Knowledge</i>	1-207	303B
Maria A. Droujkova <i>The Role Of Metaphors In The Development Of Multiplicative Reasoning Of A Young Child</i>	1-213	303B
Olimpia Figueras & Alicia Martinez Hernandez <i>Construction Of Personal Symbol Systems</i>	1-216	303B
Jing Chung & Tien-Chen Chu <i>The Formation Of Discussion Culture In Mathematics Classrooms</i>	1-211	304A
Penina A. Ogolla <i>Changing Teachers' Pedagogical Beliefs</i>	1-247	304A
Barba Patton & Estella de los Santos <i>Strategies Used By A Beginning Middle-School Mathematics Teacher Seeking Certification</i>	1-248	304A
Jeanette Berman, Lorraine Graham & Ted Redden <i>Defining Students' Instructional Needs In Numeration Using Dynamic Assessment</i>	1-204	304B
Anne Goodrow & Analucia D. Schliemann <i>Linear Function Graphs And Multiplicative Reasoning In Elementary School</i>	1-224	304B
Masataka Koyama <i>Research On The Process Of Understanding Mathematics: Ways Of Measuring Area Of Trapezoid</i>	1-239	304B

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Zahra Gooya <i>Mathematics Teachers' View Of Teaching Geometry In Iran</i>	1-225	305A
Susan Nickerson <i>Changing Instructional Practice And The Classroom Community</i>	1-246	305A
Leicha Bragg <i>The Relationship Between Games, Learning, And Student Responses</i>	1-208	305B
Eric Hsu & Megan Moore <i>Online Teacher Communities: Measuring Engagement, Responsiveness And Refinement</i>	1-231	305B
Daniel Krupanandan <i>Problem Solving The Challenge Facing South African Mathematics Teachers</i>	1-240	305B
Robert P.Hunting <i>The Role Of Fingers In Pre-schoolers' Mathematical Problem Solving</i>	1-233	307A
Ji-Won Son <i>The Usefulness Of Performance Assessment In Students' Understandings Of Fractions In Korea</i>	1-253	307A
Ian Thompson <i>An Investigation Of The Relationship Between Young Children's Understanding Of The Concept Of Place Value And Their Competence At Mental Addition</i>	1-255	307A
Corvell George Cranfield <i>How Grade 12 Students Understand And Solve Geometric Problems</i>	1-212	307B
Pessia Tsamir & Luciana Bazzini <i>Students' Solutions To Similarly Structured Inequalities</i>	1-258	307B
Avikam Gazit <i>Carpenter, Tractors And Microbes For Developing Mathematical Thinking: How Do 10th Grade Students & Preservice Teachers Solve Challenging Problems?</i>	1-222	307B

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Patricio Herbst <i>Enabling Students' Interaction With Diagrams While Making And Proving Reasoned Conjectures</i>	1-229	306A
Gabriele Kaiser <i>Learning Mathematics Within The Context Of Linguistic And Cultural Diversity – An Empirical Study</i>	1-236	306A
Michael N. Fried & Miriam Amit <i>The Usefulness And Limitations Of Incommensurability In Analyzing 8th Grade Students' Understanding Of Algebra</i>	1-218	306B
Karen F. Hollebrands <i>Eighth Grade Students' Understandings Of Geometric Transformations In The Context Of A Dynamic Software Environment</i>	1-230	306B
Tami S. Martin & Sharon Soucy McCrone <i>The Teaching and Learning of Geometric Proof: An Emerging Theory</i>	1-244	306B

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REFRESHMENTS

15:10–16:40

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<i>RF1 Perceptuo-Motor Activity and Imagination in Mathematics Learning</i> Ricardo Nemiroskvy & Marcelo Borba (Co-ordinators)	1-105	312
<i>RF2 Equity, Mathematics Learning and Technology</i> Colleen Vale, Gilah Leder & Helen Forgasz (Co-ordinators)	1-137	313A

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08:00–09:30

DISCUSSION GROUPS I

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<i>DG1 Examining Theses</i>	1-185	301A
Forgasz, Helen & Kathleen Hart (A Continuation From PME26)		
<i>DG2 Facilitating Conceptual Change In Mathematics</i>	1-186	301B
Pehkonen, Erkki & Kaarina Merenluoto (From PME26)		
<i>DG3 Fostering The Mathematical Thinking Of Young Children: Pre-K-2</i>	1-187	304A
Hunting, Robert & Catherine Pearn		
<i>DG4 Integrated Mathematics And Science: Setting A Research Agenda</i>	1-188	304B
Marrongelle, Karen & Brian Keller		
<i>DG5 Integrating Equity And Complex Social Problems In Mathematics Teacher Education</i>	1-189	305A
Mesa, Vilma & Shari Saunders		
<i>DG6 Research On Gender And Mathematics From Multiple Perspectives</i>	1-190	305B
Becker, Joanne & Ferdinand Rivera		
<i>DG7 Semiotic And Socio-Cultural Evolution Of Mathematical Concepts</i>	1-191	306A
Saenz-Ludlow, Adalira & Norma Presmeg		
<i>DG8 Stochastic Thinking, Learning And Teaching</i>	1-192	306B
Shaughnessy, Michael & Jane Watson (From PME26)		
<i>DG9 The Messy Work Of Studying Professional Development: The Conversation Continues</i>	1-193	308A
Brown, Catherine, Rebecca McGraw & Fran Arbaugh		
<i>DG10 The Rise And Fall Of Mathematics Education Research</i>	1-194	308B
Teppo, Anne		
<i>DG11 The Role Of Mathematics Education In Social Exclusion: Reviewing The Interface Between Psychological And Sociological Research Paradigms</i>	1-195	309
Gates, Peter, Tansy Hardy, Robyn Zevenbergen, Mike Askew, & Stephen Lerman		

09:30–10:00

REFRESHMENTS

10:00–11:00

PLENARY LECTURE 3

Barbara J. Dougherty & Joseph T. Zilliox	1–17	310
<i>Voyaging from Theory to Practice in Teaching and Learning: A View from Hawai‘i</i>		

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11:30–11:35 BREAK

11:35–12:15 RESEARCH REPORTS 3

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<i>The Role Of Representation In Teacher Understanding Of Function</i>		
Nadá Stehliková	4-251	301B
<i>Emergence Of Mathematical Knowledge Structures. Introspection.</i>		
Ann C. Howe & Sarah B. Berenson	3-87	303A
<i>High Achieving Girls In Mathematics: What's Wrong With Working Hard?</i>		
Marja van den Heuvel-Panhuizen	4-323	303B
<i>On The Search For Gender-Related Differences In Dutch Primary Mathematics Classrooms</i>		
Lyn D. English & Helen M. Doerr	2-357	304A
<i>Perspective-Taking In Middle-School Mathematical Modelling: A Teacher Case Study</i>		
Marie Hofmannová, Jarmila Novotná & Zuzana Hadj-Moussová	3-71	304B
<i>Attitudes Of Mathematics And Language Teachers Towards New Educational Trends</i>		
Wim Van Dooren, Dirk De Bock, An Hessels, Dirk Janssens & Lieven Verschaffel	4-331	305A
<i>Remedying Secondary School Students' Illusion Of Linearity: A Teaching Experiment</i>		
Sylvia Bulgar	2-157	305B
<i>Using Research To Inform Practice: Children Make Sense Of Division Of Fractions</i>		
Vivi Nilssen	3-381	306A
<i>Mentoring Teaching Of Mathematics In Teacher Education</i>		
Catherine A. Brown & Yusuf Koc	2-145	306B
<i>An Examination Of How People With Diverse Background Talk About Mathematics Teaching And Learning Both Face-To-Face And On-Line</i>		
Immaculate Namukasa	3-357	307A
<i>Collective Learning Structures: Complexity Science Metaphors For Teaching</i>		

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David W. Carraher & Darrell S. Earnest <i>Guess My Rule Revisited</i>	2-173	308A
Rossella Garuti, Carlo Daputo & Paolo Boero <i>Evolution Of Forms Of Representation In A Modelling Activity: A Case Study</i>	2-413	308B
Martin A. Simon <i>Logico-Mathematical Activity Versus Empirical Activity: Examining A Pedagogical Distinction</i>	4-183	309
Helen J. Forgasz <i>Equity And Beliefs About The Efficacy Of Computers For Mathematics Learning</i>	2-381	313A
Liz Bills, Janet Ainley & Kirsty Wilson <i>Particular and general in early symbolic manipulation</i>	2-105	313B

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LUNCH ON THE BUSES

13:05–22:00

EXCURSION

POLYNESIAN CULTURAL CENTER

WEDNESDAY, JULY 16, 2003

08:00–09:30

MEET WITH PLENARY SPEAKERS

OR

WORKING SESSIONS II

<i>WS1 Embodiment In Mathematics: Metaphor And Gesture</i>	1-173	301A
Edwards, Laurie & Janete Bolite Frant		

<i>WS2 Exploring Alternative Interpretations Of Classroom Data</i>	1-174	301B
Breen, Chris & Markku Hannula,		

<i>WS3 Models And Modeling Working Session</i>	1-175	304A
Lesh, Richard, Helen Doerr, Lyn English, & Margret Hjalmarson		

<i>WS4 Researching The Teaching And Learning Of Mathematics In Multilingual Classrooms</i>	1-176	304B
Barwell, Richard, Anjum Halai, & Mamokgethi Setati		

<i>WS5 Symbolic Cognition In Advanced Mathematics</i>	1-177	305A
Hegedus, Stephen		

<i>WS6 The Complexity Of Learning To Reason Probabilistically</i>	1-178	305B
Stohl, Hollylynne & James Tarr		

<i>WS7 The Design And Uses Of Curriculum Materials</i>	1-179	306A
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<i>WS8 The Role Of Syntax And Technology In The Development Of Algebraic Reasoning In The Early Grades (K-8)</i>	1-180	306B
Olive, John, Maria Blanto; & Jim Kaput		

<i>WS9 Understanding Learning Through Teaching In The Mathematics Classroom</i>	1-181	308A
Cockburn, Anne & Fran Lopez-Real		

<i>WS10 Videopapers: An Emerging Way To Publish And Conduct Research And Classroom Analysis</i>	1-182	308B
Cogan-Drew, Daniel & Ricardo Nemirovsky		

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REFRESHMENTS

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BREAK

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RESEARCH REPORTS 4

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Maria Blanton, Despina A. Stylianou & Manuela David <i>The Nature Of Scaffolding In Undergraduate Students' Transition To Mathematical Proof</i>	2-113	301B
Iliada Elia, Athanasios Gagatsis & Leonidas Kyriakides <i>Young Children's Understanding Of Geometric Shapes: The Role Of Geometric Models</i>	2-349	303A
Steven Nisbet <i>Getting Organised: The Role Of Data Organisation In Students' Representation Of Numerical Data</i>	3-389	303B
Michael T. Battista <i>Levels Of Sophistication In Elementary Students' Reasoning About Length</i>	2-73	304A
Jorge Tarcisio da Rocha Falcao, Claudia Roberta de Araujo, Fernanda Andrade, Izabel Hazin, Jorge Costa do Nascimento & Monica Maria Lins Lessa <i>Affective Aspects On Mathematics Conceptualization: From Dichotomies To An Integrated Approach</i>	2-269	304B
Dirk De Bock, Wim Van Dooren, Elke De Bolle, Dirk Janssens & Lieven Verschaffel <i>Secondary School Students' Improper Proportional Reasoning: The Role Of Direct Versus Indirect Measures</i>	2-293	305A
Catherine Sophian & Samara Madrid <i>Goal Sketches In Fraction Learning</i>	4-231	305B
Judith A. Mousley <i>Mathematical And Pedagogical Understanding As Situated Cognition</i>	3-333	306A
Norma Presmeg & Jeff Barrett <i>Lesson Study Characterized As A Multi-Tiered Teaching Experiment</i>	4-47	306B
Alan Gil delos Santos & Michael O. J. Thomas <i>Representational Ability And Understanding Of Derivative</i>	2-325	307A
Barbara M. Brizuela & Analucia Schliemann <i>Fourth Graders Solving Equations</i>	2-137	307B

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Elizabeth Warren <i>Young children's understanding of equals: A longitudinal study</i>	4-379	308A
Hanna Haydar <i>Daring To Ask The Hard Questions: The Effect Of Clinical Interview Training Upon Teachers Classroom Questioning</i>	3-33	308B
Stephen J. Hegedus & James Kaput <i>The Effect Of A Simcalc Connected Classroom On Students' Algebraic Thinking</i>	3-47	309
Carolyn Kieran & Jose Guzman <i>The Spontaneous Emergence Of Elementary Number-Theoretic Concepts And Techniques In Interaction With Computing Technology</i>	3-141	313A

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LUNCH

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RESEARCH REPORTS 5

Darina Jirotkova & Graham H Littler <i>Student's Concept Of Infinity In The Context Of A Simple Geometrical Construct</i>	3-125	301A
Elena Nardi & Paola Iannone <i>Mathematicians On Concept Image Construction: 'Single Landscape' vs 'Your Own Tailor-Made Brain Version'</i>	3-365	301B
Paul White & Michael Mitchelmore <i>Teaching Angles By Abstraction From Physical Activities With Concrete Materials</i>	4-403	303A
Peter Grootenboer <i>The Affective Views Of Primary School Children</i>	3-1	303B
Irit Peled & Juhaina Awawdy Shahbari <i>Improving Decimal Number Conception By Transfer From Fractions To Decimals</i>	4-1	304A
Rosetta Zan & Pietro Di Martino <i>What Does 'Positive' Attitude Really Mean?</i>	4-451	304B
Cinzia Bonotto <i>Investigating The Mathematics Incorporated In The Real World As A Starting Point For Mathematics Classroom Activities</i>	2-129	305A
Dor Abrahamson <i>Text Talk, Body Talk, Table Talk: A Design Of Ratio And Proportion As Classroom Parallel Events</i>	2-1	305B

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Ilana Lavy & Atara Shriki <i>Pre-Service Teachers' Transition From "Knowing That" To "Knowing Why" Via Computerized Project-Based-Learning</i>	3-181	306B
Anibal Cortes <i>A Cognitive Model of Experts' Algebraic Solving Methods</i>	2-253	307A
Tom J. Cooper & Elizabeth Warren <i>Open-Ended Realistic Division Problems, Generalisation And Early Algebra</i>	2-245	307B
Jose Guzman, Nadine Bednarz & Fernando Hitt <i>Theoretical Model of Analysis Of Rate Problems In Algebra</i>	3-9	308A
Haralambos Sakonidis & Anna Klothou <i>Assessment Practices In School Mathematics: Acting And Debating</i>	4-103	308B
Dave Pratt & Ian Davison <i>Interactive Whiteboards And The Construction Of Definitions For The Kite</i>	4-31	313A
Sarah M. Davis <i>Knowledge Sharing Systems: Advantages Of Public Anonymity And Private Accountability</i>	2-285	313B

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BREAK

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POSTER PRESENTATIONS 1

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Solange Amorim Amato & Anne Watson <i>Improving Student Teachers' Understanding Of Multiplication By Two-Digit Numbers</i>	1-270
Babette M. Benken <i>Investigating The Complex Nature Of Mathematics Teaching: The Role Of Beginning Teachers' Perceptions In Their Practice</i>	1-275
Angelika Bikner-Ahsbahr <i>Insight Into A Theory About Interest-Dense Situations In Maths Classes</i>	1-276
Sang Sook Choi-Koh <i>Students' Development In Exploration Using A Hand-Held Calculator</i>	1-277
Kathryn B. Chval <i>Calculator Keystrokes: Tools For Thought And Communication</i>	1-279

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Valery A. Gusev & Ildar S. Safuanov <i>The structure of mathematical abilities</i>	1-291	
Heather Kelleher & Cynthia Nicol <i>Learning To Learn From Students: Teacher Learning In The British Columbia Early Numeracy Project</i>	1-297	
Hari P. Koirala <i>Student Created Mathmagic And Their Relationship To School Algebra</i>	1-298	
Konrad Krainer & Gertraud Benke <i>Students As Teachers, Teachers As Researchers</i>	1-299	
Oh-Nam Kwon, Kyoung-Hee Cho, Mi-Kyung Ju, Kyung-Hee Shin & Jung-Sook Park <i>Students' Conceptual Understanding And Attitudes In RME-Based Differential Equations Class</i>	1-300	
Michal Mashiach-Eizenberg <i>Inter-Relations Between Control Processes And Successful Solutions Of Combinatorial Problems</i>	1-303	
Rebecca McGraw <i>The Process Of Facilitating Mathematics Discussions</i>	1-304	
Joyce Mgombelo & Florence Glanfield <i>Using Manipulatives As Generative Mechanisms For Explaining Mathematics Phenomena</i>	1-305	
Kay Dianne Owens, Rex Matang & Wilfred Kaleva <i>Ethnomathematics In Papua New Guinea: Practice, Challenges and Opportunites for Research</i>	1-310	
John Pegg, Lorraine Graham, Howard Doran & Anne Bellert <i>An Analysis Of Long-Term Effects Of An Intervention Program Designed To Enhance Basic Numeracy Skills For Low-Achieving Middle-School Students</i>	1-313	
Axelle Person, Michelle P. Longest, Sarah B. Berenson, Joan J. Michael & Mladen A. Vouk <i>Relationship Between Proportional Reasoning And Achievement for Early Adolescent Girls</i>	1-315	

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Luisa Rosu <i>Learning From Ancient People...</i>	1-320	
Pavel Satianov & Miriam Dagan <i>One Problem - Ten Models And Cumulative Cognitive Affect</i>	1-323	
Maria Tereza Carneiro Soares <i>Oral And Written Practice At Initial Teaching Mathematics: Teachers' Knowledge And The Creation Of Didactic Situations</i>	1-324	
Paola Sztajn <i>Developing A Mathematics Education Community In An Elementary School</i>	1-326	
Wen-Huan Tsai <i>Supporting Teachers In Building Classroom Discourse Centered On Mathematics</i>	1-327	
Hasan Unal & Eric Jakubowski <i>A Technology Tool To Support Teachers In Motivational Dimension Of Math Lessons</i>	1-329	
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Lisa Warner & Daniel Ilaria <i>The Interplay Between Teacher Questions And Flexible Mathematical Thought</i>	1-331	
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Erh-Tsung Chin <i>Mathematical Proof As Formal Procept In Advanced Mathematical Thinking</i>	2-213	301B
Ildar S. Safuanov & Valery A. Gusev <i>Thinking in images and its role in learning mathematics</i>	4-87	303A
Keith Weber <i>A Procedural Route Toward Understanding The Concept Of Proof</i>	4-395	303B
Günter Törner <i>Obstacles for mental representations of real numbers: Observations from a case study</i>	4-307	304A
Erkki Pehkonen, Anu Nurmi, Markku Hannula & Hanna Maijala <i>On Pupils' Self-Confidence In Mathematics: Gender Comparisons</i>	3-453	304B
Allen Leung <i>Dynamic Geometry And The Theory Of Variation</i>	3-197	305A
Glenda Anthony <i>'Sensing': Supporting student understanding of decimal knowledge</i>	2-41	305B
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JeongSuk Pang <i>Student-Centered Teaching Practices In Korean Elementary Mathematics Classrooms</i>	3-445	306B
Florence Mihaela Singer <i>From Cognitive Science To School Practice: Building The Bridge</i>	4-207	307A
Kylie Thompson, Annette Baturo & Tom Cooper <i>Effective teaching with virtual material: Years Six and Seven case studies</i>	4-299	307B
Luis Radford, Serge Demers, Jose Guzman & Michele Cerulli <i>Calculators, Graphs, Gestures And The Production Of Meaning</i>	4-55	308A
Truus Dekker & Els Feijs <i>Scaling Up Strategies For Change</i>	2-317	308B
Chronis Kynigos & Georgos Psycharis <i>13 Year-Olds' Meanings Around Intrinsic Curves With A Medium For Symbolic Expression And Dynamic Manipulation</i>	3-165	313A

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Nitsa Cohen <i>Curved Solids Nets</i>	2-229	303A
Nadia Douek & Michel Pichat <i>From Oral To Written Texts In Grade 1 And The Approach To Mathematical Argumentation</i>	2-341	303B
Carolyn Vela & Michael O. J. Thomas <i>Computers In The Primary Classroom: Barriers To Effective Use</i>	4-347	304A
Tracey Smith <i>Connecting Theory And Reflective Practice Through The Use Of Personal Theories</i>	4-215	304B
Stephen Hwang & Jinfa Cai <i>A Perspective For Examining The Link Between Problem Solving And Problem Posing</i>	3-103	305A
Cecilia Monteiro <i>Prospective Elementary Teachers' Misunderstandings In Solving Ratio And Proportion Problems</i>	3-317	305B
Rebecca McGraw, Fran Arbaugh , Kathleen Lynch & Catherine A. Brown <i>Mathematics Teacher Professional Development As The Development Of Communities Of Practice</i>	3-269	306A
Razia Fakir Mohammad <i>A Co-Learning Partnership In Mathematics Lower Secondary Classroom In Pakistan: Theory Into Practice</i>	3-309	306B
Lisa Warner, Lara J. Alcock, Joseph Coppola Jr. & Gary E. Davis <i>How Does Flexible Mathematical Thinking Contribute To The Growth Of Understanding?</i>	4-371	307A
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Margaret P. Sinclair	4-191	313A
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<i>“Spontaneous” Mental Computation Strategies</i>		
Carmel Diezmann		309
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<i>Ethnomathematics Digital Library</i>	
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Joanne Rossi Becker	1-273
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<i>How To Summarize What We've Learned: Two Types Of Summary In Mathematics Learning</i>		
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<i>Making Sense (Literally!) Of Students' Mathematics Experience</i>		
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<i>Considerations Of Veteran Mathematics Teachers As They Prepare Their Lessons</i>		
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<i>Questioning In Action, An Inherent Attribute Of Teaching Mathematics In The Future</i>		
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Paolo Boero, Nadia Douek & Rossella Garuti <i>Children's Conceptions Of Infinity Of Numbers In A Fifth Grade Classroom Discussion Context</i>	2-121	303B
Areti Panaoura & George Philippou <i>The Construct Validity Of An Inventory For The Measurement Of Young Pupils' Metacognitive Abilities In Mathematics</i>	3-437	304A
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Ron Tzur <i>Teacher And Students' Joint Production Of A Reversible Fraction Conception</i>	4-315	305B
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Laura R. Van Zoest & Jeffrey V. Bohl <i>The Value Of Wenger's Concepts Of Modes Of Participation And Regimes Of Accountability In Understanding Teacher Learning</i>	4-339	306B
Gaye Williams <i>Empirical Generalisation As An Inadequate Cognitive Scaffold To Theoretical Generalisation Of A More Complex Concept</i>	4-419	307A

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Mariana Saiz <i>Primary Teachers' Conceptions About The Concept Of Volume: The Case Of Volume – Measurable Objects</i>	4-95	308B
Morten Misfeldt <i>Mathematicians' Writing</i>	3-301	313A
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Cristianne Butto & Teresa Rojano <i>Early Introduction To Algebraic Thinking: An Experience In The Elementary School</i>	1-209	301A
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Lisser Ejersbo <i>Developing The Reflective Competencies Of The Mathematics Teacher</i>	1-214	301B
Lynn C..Hart <i>The Voice Of The Student: Elementary Students' Beliefs And Self-Efficacy About Mathematics</i>	1-227	301B
Marianna Tzekaki, Maria Kaldrimidou & Haralambos Sakonidis <i>A Typology Of Teachers' Interventions In Students' Mathematical Work In The Classroom</i>	1-260	301B
Hui-Yu Hsu <i>An Experimental Study of the Effects of Portfolio Assessment and Paper-and-Pencil Test on Mathematical Concepts, Mathematical Communicating Capability, and Mathematical Learning Attitude</i>	1-232	303A
Elizabeth B.Uptegrove <i>Understanding Pascal's Triangle</i>	1-261	303A
Seok-Il Kwon & Mi-Ai Park <i>A Historic-Genetic Approach To Teaching The Meaning of Proof</i>	1-241	303B

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Nancy Whitman & Claire Okazaki <i>What "=" Means</i>	1-262	304A
Jennifer M.Young-Loveridge <i>Becoming A Part-Whole Thinker: The New Zealand Early Numeracy Project</i>	1-265	304A
Johann Engelbrecht & Ansie Harding <i>The Impact of Web-Based Undergraduate Mathematics Teaching On Developing Academic Maturity</i>	1-215	304B
Elizabeth Jakubowski & Hasan Unal <i>A Critical Examination Of A Community College Mathematics Instructor's Beliefs And Practices</i>	1-235	304B
Robin L.Rider <i>The Effect Of Multi-Representational Methods On College Students' Success In Intermediate Algebra</i>	1-249	304B
Nadine Bezuk & Jane Gawronski <i>Increasing Content And Pedagogical Knowledge Of Practicing Elementary Teachers</i>	1-206	305A
Dale Havill & Eric Benson <i>Arabic Students' Probability Judgments</i>	1-228	305A
Noriyuki Inoue <i>The Significance Of Interpretive Activity In Problem Solving: Less Is More As A Design Principle</i>	1-234	305A
Hollylynne Stohl <i>Prospective Teachers' Development In Teaching With Technology</i>	1-254	305B
Nermin Tosmur & Behiye Ubuz <i>Professional Engineer's View On University Mathematics And Mathematics Education</i>	1-257	305B
Lara Alcock & Adrian Simpson <i>Logical Consequences Of Procedural Reasoning</i>	1-200	306A
Jan Bezuidenhout <i>How Can Students' Ability To Deal Effectually With Calculus Symbolism Be Enhanced?</i>	1-205	306A

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Babette M.Benken & Bridget Arvold <i>Transforming Mathematics Teacher Education</i>	1-203	307A
John Francisco <i>Students' Epistemological Ideas in Mathematics</i>	1-217	307A
Ok-Kyeong Kim & Joy Whitenack <i>K-3 Teachers' Learning Of Questioning</i>	1-237	307A
Anne Berit Fuglestad <i>Developing Students' ICT Competence</i>	1-219	307B
Po-Hung Liu <i>College Students' Views of Mathematics And Behavior</i>	1-243	307B
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Talli Nachlieli & Anna Sfard <i>The Activity Of Defining</i>	3-349	301B
Jya-Yi Wu Yu, Fou-Lai Lin & Yuan-Shun Lee <i>Students' Understanding Of Proof By Contradiction</i>	4-441	303A
Kaarina Merenluoto <i>Abstracting The Density Of Numbers On The Number Line – A Quasi-Experimental Study</i>	3-285	303B
Bernadette Baker, Maria Trigueros & Laurel Cooley <i>Thematization Of The Calculus Graphing</i>	2-57	304A
Iasonas Lamprianou & Thekla Afantiti Lamprianou <i>The Probabilistic Thinking Of Primary School Pupils In Cyprus: The Case Of Tree Diagrams</i>	3-173	304B

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Kathryn Irwin <i>Multiplicative Strategies Of New Zealand Secondary School Authors</i>	3-111	305B
Len Sparrow & Sandra Frid <i>Using An Empowerment Professional Development Model To Support Beginning Primary Mathematics Teachers</i>	4-237	306A
Andrea McDonough & Doug Clarke <i>Describing The Practice Of Effective Teachers Of Mathematics In The Early Years</i>	3-261	306B
Lyndon Martin & Jo Towers <i>Collective Mathematical Understanding As An Improvisational Process</i>	3-245	307A
Janet Ainley <i>Generalizing the context and generalising the calculation</i>	2-9	307B
Kathy M. C. Ivey <i>Effective vs. Efficient: Teaching Methods Of Solving Linear Equations</i>	3-117	308A
Masakazu Okazaki <i>Characteristics Of 5th Graders' Logical Development Through Learning Division With Decimals</i>	3-413	308B
Jeremy Roschelle, Phillip Vahey, Deborah Tatar, Stephen Hegedus & Jim Kaput <i>Five Key Considerations For Networking In A Handheld-Based Mathematics Classroom</i>	4-71	309
Hanlie Murray <i>The Relative Influence Of The Teacher In Third Grade Mathematics Classrooms</i>	3-341	313A
Charalambos Charalambous, Leonidas Kyriakides & George Philippou <i>Testing A Comprehensive Model For Measuring Problem Solving And Problem Posing Skills Of Primary Pupils</i>	2-205	313B

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Mirko Maracci <i>Difficulties In Vector Space Theory: A Compared Analysis In Terms Of Conceptions And Tacit Models</i>	3-221	303A
John Olive <i>Nathan's Strategies For Simplifying And Adding Fractions In Third Grade</i>	3-421	303B
Terry Wood & Betsy McNeal <i>Complexity In Teaching And Children's Mathematical Thinking</i>	4-435	304A
Hari P. Koirala <i>Secondary School Mathematics Preservice Teachers' Probabilistic Reasoning In Individual And Pair Settings</i>	3-149	304B
Oh NamKwon, Kyoung Hee Cho, Kyung Hee Shin & Jeong Sook Park <i>Social Transformation of Students' Conceptual Model: Analysis of Students' Use of Metaphor for Differential Equations</i>	3-157	305B
Cynthia Nicol & Sandra Crespo <i>Learning In And From Practice: Pre-Service Teachers Investigate Their Mathematics Teaching</i>	3-373	306A
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Kay McClain <i>Supporting Teacher Change: A Case From Statistics</i>	3-253	307A
Dave Hewitt <i>Notation Issues: Visual Effects And Ordering Operations</i>	3-63	307B
Robyn Pierce, Lynda Ball & Kaye Stacey <i>Recognising Equivalent Algebraic Expressions: An Important Component Of Algebraic Expectation For Working With CAS</i>	4-15	308A
Francis Lopez-Real & Nirmala Rao <i>Early Mathematics Teaching: The Relationship Between Teachers' Beliefs And Classroom Practices</i>	3-213	308B
Fulvia Furinghetti & Domingo Paola <i>To Produce Conjectures And To Prove Them Within A Dynamic Geometry Environment: A Case Study</i>	2-397	313A

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PMENA ANNUAL GENERAL MEETING

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SHERATON WAIKIKI

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<i>DG2 Facilitating Conceptual Change In Mathematics</i> Pehkonen, Erkki & Kaarina Merenluoto (From PME26)	1-186	301B
<i>DG3 Fostering The Mathematical Thinking Of Young Children: Pre-K-2</i> Hunting, Robert & Catherine Pearn	1-187	304A
<i>DG4 Integrated Mathematics And Science: Setting A Research Agenda</i> Marrongelle, Karen & Brian Keller	1-188	304B
<i>DG5 Integrating Equity And Complex Social Problems In Mathematics Teacher Education</i> Mesa, Vilma	1-189	305A
<i>DG6 Research On Gender And Mathematics From Multiple Perspectives</i> Becker, Joanne & Ferdinand Rivera	1-190	305B
<i>DG7 Semiotic And Socio-Cultural Evolution Of Mathematical Concepts</i> Saenz-Ludlow, Adalira & Norma Presmeg	1-191	306A
<i>DG8 Stochastical Thinking, Learning And Teaching</i> Shaughnessy, Michael & Jane Watson (From PME26)	1-192	306B
<i>DG9 The Messy Work Of Studying Professional Development: The Conversation Continues</i> Brown, Catherine, Rebecca McGraw & Fran Arbaugh	1-193	308A
<i>DG10 The Rise And Fall Of Mathematics Education Research</i> Teppo, Anne	1-194	308B
<i>DG11 The Role Of Mathematics Education In Social Exclusion: Reviewing The Interface Between Psychological And Sociological Research Paradigms</i> Gates, Peter, Tansy Hardy, Robyn Zevenbergen, Mike Askew, & Stephen Lerman	1-195	309

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PLENARY LECTURE 5 **310**

Toshiakaira Fujii
Probing Students' Understanding Of Variables Through Cognitive Conflict: Is The Concept Of A Variable So Difficult For Students To Understand?

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<i>Metaphors As Vehicles Of Knowledge: An Exploratory Analysis</i>		
Ernesto Sanchez & Ana Isabel Sacristan	4-111	303A
<i>Influential Aspects Of Dynamic Geometry Activities In The Construction Of Proofs</i>		
J. Michael Shaughnessy, Dan Canada & Matt Ciancetta	4-159	303B
<i>Middle School Students' Thinking About Variability In Repeated Trials: A Cross-Task Comparison</i>		
Inaqui de Olaizola & Manuel Santos Trigo	2-309	304A
<i>Towards A Redefinition Of The Mathematics Culture In The Classroom</i>		
Joaquin Giménez & Marcelo Barrial	2-429	304B
<i>On Line Professional Community Development And Collaborative Discourse In Geometry</i>		
Azita Manouchehri	3-221	305A
<i>Factors Motivating Reform: Learning From Teachers' Stories</i>		
Susan N. Friel	2-389	305B
<i>Identifying A Research Agenda: The Interaction Of Technology With The Teaching And Learning Of Data Analysis And Statistics</i>		
Aurora Gallardo	2-405	306A
<i>"It Is Possible To Die Before Being Born". Negative Integers Subtraction: A Case Study</i>		
Ferdinand D. Rivera & Joanne Rossi Becker	4-63	306B
<i>The Effects Of Numerical And Figural Cues On The Induction Processes Of Preservice Elementary Teachers</i>		
George Philippou, Charalambos Charalambous & Leonidas Kyriakides	4-7	307A
<i>The Development Of Student Teachers' Efficacy Beliefs In Mathematics During Practicum</i>		
Federica Olivero	3-429	307B
<i>Cabri As A Shared Workspace Within The Proving Process</i>		

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