



SIG/Research in Mathematics Education
American Educational Research Association Fall

2002 Newsletter

<http://www.sigrme.org>

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Call for Nominations

SIG/RME Early Career Publication Award

NEW DEADLINE -- January 17, 2003

The Special Interest Group for Research in Mathematics Education established the "SIG/RME Early Career Publication Award" in 2001. The first award was presented to Michelle Zandieh in 2002. The purpose of the award is to recognize outstanding mathematics education research publications by individuals within five years of receiving their doctoral degrees. The award includes a stipend of \$500, announcement in the SIG/RME newsletter and on the SIG/RME website, and recognition at the annual NCTM Research Pre-session.

The deadline to make nominations for this award has been extended to January 17, 2003. Complete information detailing the nomination process can be found at the SIG/RME website, <http://www.sigrme.org>.

AERA Winter Institute

AERA will sponsor an institute titled Narrative Inquiry in Social Science Research February 20-22, 2003. This is a restricted enrollment workshop for faculty and advanced students interested in understanding the nature and method of narrative inquiry. The institute is directed by F. Michael Connelly, University of Toronto and Yvonna S. Lincoln, Texas A & M University. The instructors are Ming Fang He, Georgia Southern University, JoAnn Phillion, Purdue University. The institute will be held at the Ontario Institute for Studies in Education, University of Toronto, Toronto, Ontario, Canada. The cost is \$225.00US for the institute only. For complete information, please email Michele Dues at mdues@aera.net, writing *Narrative* in the subject line. Deadline for registration: January 15, 2003.

Conference Announcement

Mathematics Education and Mathematics in the 21st Century: The Roles of Outreach, Teacher Preparation, and Research on Teaching and Learning in a Research I Mathematics Department

February 20-22, 2003
Tucson, Arizona

Sponsored by the Department of Mathematics,
University of Arizona

Organizers: Marta Civil, David Gay, Virginia Horak, Rebecca McGraw, Fred Stevenson, Peter Wiles

Guest of Honor: Stephen Willoughby on the occasion of his retirement

Funded by the Calculus Consortium for Higher Education

This conference will bring together university mathematicians, mathematics educators, and mathematics education graduate students to discuss the roles of mathematics educators in university mathematics departments.

Conference participants will learn about and discuss the implications of exemplary projects --- in outreach, teacher preparation and research on teaching and learning --- carried out in university mathematics departments. Participants will consider the value of such projects for their own departments, how to nurture them, and how to reward faculty members for bringing them about.

The conference will feature keynote speakers, panel discussions, invited short reports, and a poster session. For graduate students, conference participation is contingent upon acceptance of a poster proposal related to the topic of the conference. In addition to the opportunity to present their work, we are pleased to be able to offer travel and lodging reimbursement for expenses incurred by graduate student participants.

Space is limited and applications should be submitted by December 1st, 2002 to ensure full consideration.

See www.math.arizona.edu/~merp and click on "February 03 Conference" to access further information as well as an application form.

Or for additional information or questions, please contact: Sandy Sutton, Department of Mathematics, University of Arizona, Tucson, AZ 85721 Phone: (520) 621-4726, Fax: (520) 626-1325, sutton@math.arizona.edu

PME /PME-NA at University of Hawaii

We are fortunate to have a North American institution hosting the joint meetings of the International Group for the Psychology of Mathematics Education (PME) and the North American Chapter of PME. The joint meeting will be held at the University of Hawaii–Manoa July 13-18, 2003. The deadline for proposals is January 15, 2003. For more information, visit the conference web site at <http://www.hawaii.edu/pme27>.

PME-NA 2002 Proceedings

You can purchase a copy of the PME-NA 2002 proceedings while supplies last by sending a check for \$55, payable to PME-NA to

Denise Mewborn
Department of Mathematics Education
105 Aderhold Hall
Athens GA 30602-7124.

Elections

It is once again time to elect officers for SIG-RME. Biographical sketches of all candidates appear below. A ballot appears later in the newsletter, or you can vote on-line at the SIG-RME web site. Please return all ballots to Alfinio Flores by **January 15, 2003**.

Officer Candidates

Co-Chairperson

Randy Philipp is professor of mathematics education in the School of Teacher Education at San Diego State University and Associate Director of the Center for Research in Mathematics and Science Education. He has cowritten a research monograph and written research articles and chapters and also for practitioners. He teaches elementary and secondary mathematics methods courses, graduate courses in mathematics education, and supervises doctoral students. He also regularly teaches mathematics to students in elementary and middle schools. He directs the Integrating Mathematics and Pedagogy Project designed to investigate the effects of integrating mathematics content and pedagogy for preservice elementary school teachers earlier in their education. The project will create CD-based video clips to be used with prospective or practicing teachers. He has served as Associate Editor of JRME, as Co-Chair of the AERA Division C Section 2 Annual Meeting, and on the steering committee of SIG-RME.

Margaret S. Smith is Associate Professor of Mathematics Education at the University of

Pittsburgh. Her primary interest as a mathematics teacher educator is in the professional education of teachers of mathematics. She focuses on teacher learning in an effort to add to the knowledge base of what good professional development is and how one does it. As such her work lies on the boundary between research and practice where she both conducts research and uses the findings of research as the basis for improved practices in teacher education and for new research. She is currently the co-director of two NSF-funded projects: Cases of Mathematics Instruction to Enhance Teaching (COMET), which is developing cases for use in teacher education; and A Study of Teacher Education: Research on Instructional Design (ASTEROID), which is studying what teachers learn from cases and other practice-based materials.

Recording Secretary

Susan B. Taber is associate professor and chair of the department of Elementary/Early Childhood Education at Rowan University. She teaches the undergraduate course in mathematics pedagogy, as well as graduate classes in elementary curriculum and mathematics curriculum and instruction. She conducts professional development courses, and workshops on mathematics teaching and learning. She has taught high school English and junior high and elementary school mathematics. She worked for the Delaware Statewide Systemic Initiative from 1994-1996. Her research interests are students' understanding of mathematics, particularly of fractions and operations with rational numbers. She is active in AERA, having served as a program co-chair for a section of Division K and as a reviewer for Divisions C and K, as well as the SIG-RME.

Nancy K. Mack is Associate Professor in the Department of Mathematics at Grand Valley State University. For the past several years, she has been engaged in a program of research focused on the learning and teaching of

fractions. She has published the results of this research in several journals, such as Journal for Research in Mathematics Education (JRME) and Journal of Mathematical Behavior, as well as in edited book chapters. She received the NCTM Research Award for the outstanding research article in JRME in 1990. Additionally, she recently completed a term as a member of the Small Research Grants Advisory Committee of The Spencer Foundation.

Steering Committee

Patricio Herbst is Assistant Professor of Mathematics Education at the University of Michigan, School of Education. His research focuses on describing and accounting for the epistemological dimensions of mathematics classrooms and on describing and accounting for the work that teachers do to create and sustain mathematical activity in classrooms. Herbst's current work addresses those interests in the context of high school geometry classes. Herbst's scholarly pursuits inform theory and research on the social construction of knowledge that pays attention to how knowledge gets transformed in response to the requirements of the (institutional and situational) contexts where knowledge operates. They also inform theory and research on mathematics instruction and teacher development in mathematics. His work has been published in (or is in press with) Journal for Research in Mathematics Education, American Educational Research Journal, Educational Studies in Mathematics, and For the Learning of Mathematics, among others.

Jesse L. M. Wilkins (Jay) is Assistant Professor of Mathematics Education at Virginia Polytechnic Institute and State University where he teaches elementary mathematics methods courses. His research interests include quantitative literacy and educational opportunity. His work has been published in School Science and Mathematics, Mathematics Teacher, Mathematics Teaching in the Middle School, the Journal of

Educational Research, the Journal of Experimental Child Psychology, Evaluation Review and the Journal of Research in Education, as well as several state journals. He is co-principal investigator of the Grant: Systemic Reform of Mathematics K-5 for Virginia which provides professional development for all K-5 teachers in two Virginia counties to implement NCTM-based curricula and study the impact of the implementation on teacher and student success in teaching and learning mathematics. He is an active member of AERA, PME-NA, and NCTM as both a reviewer and conference presenter.

Electronic Communications Secretary

Cengiz Alacaci received his doctoral degree in mathematics education from the University of Pittsburgh in 1998. He worked as a post-doctoral research associate at the Learning Research and Development Center of the University Pittsburgh for a year. He later joined Florida International University where he is currently an Assistant Professor of Mathematics Education. His research interests include mathematical problem solving, statistical reasoning, and mathematics teacher education.

Directory Corrections

Please check your entry in the 2002 SIG/RME directory. If your entry needs to be updated or corrected, please send your corrections to Cindy Langrall at langrall@ilstu.edu by February 1, 2003 to ensure inclusion in the 2003 directory.

New Web Address

SIG/RME now has its own domain name: <http://www.sigirme.org>. This will enable the organization to keep the same URL, regardless of who the electronic communications secretary is.

AERA Sessions Related to Mathematics Education

April 21-25, 2003

Chicago, IL

<http://aera.net>

At the Business Meeting in New Orleans, members requested a more complete listing of AERA sessions related to mathematics education. Thus, the following pages contain information regarding sessions sponsored by SIG/RME, Division K, Section 1 (Mathematics and Science Teaching and Teacher Education), and Division C, Section 3 (Mathematics Learning and Instruction) at the AERA Annual Meeting. This information is “hot off the presses,” so it is subject to change. Please check the AERA web site for dates and times of these presentations once they are finalized. Thanks to Elham Kazemi from Division K and Rochelle Gutierrez from Division C for their assistance with gathering this information.

Special Interest Group for Research in Mathematics Education

SIG/RME Invited Address: TBA

Interactive Symposium: Comparative Pedagogy of Group Comparison in Data Analysis

Session Chair: James K. Hammerman, TERC

Discussant: Michael Shaughnessy, Portland State University

- *Using Developing Mathematical Ideas (DMI) cases to explore group comparisons:* Elham Kazemi, Gini Stimpson, Andrea Levy, University of Washington.
- *Software representations as a tool for group comparisons;* Cliff Konold, University of Massachusetts, Amherst.
- *Design experiments using group comparisons to focus on issues of distribution and aggregate attributes;* Jose Luis Cortina, Paul Cobb, Vanderbilt University.
- *Teachers' collaborative inquiry about the statistics and pedagogy of group comparisons;* James K. Hammerman, Andee Rubin, TERC.

Interactive Symposium: Mathematics Lessons in Germany, Japan, the USA and Australia: Structure in Diversity and Diversity in Structure

Session Chair: David J Clarke, University of Melbourne

Discussant: Jeremy Kilpatrick; University of Georgia

- *Issues of Voice and Variation: Developments in International Comparative Research in Mathematics Education;* David Clarke, University of Melbourne; Harsh Suri, La Trobe University.
- *Capturing the structure of Japanese mathematics lessons;* Yoshinori Shimizu, Tokyo Gakugei University.
- *Lesson patterns in three German mathematics classrooms:* Eva Jablonka, Free University Berlin.
- *The structure of mathematics lessons in the United States;* Joanne Lobato, San Diego State University; Carmel Mesiti, University of Melbourne.
- *The structure of mathematics lessons in Australia;* David Clarke, University of Melbourne.

Symposium: Early Algebra

Session Chair: David W Carraher, TERC

Discussant: Kim Ruane, Tufts University

- *The symbioses between signed numbers and an algebrafied curriculum*; Irit Peled, Haifa University.
- *Function graphs and multiplicative structures in third grade*; Analucia D Schliemann, Tufts University; Anne Goodrow, Rhode Island College; Susanna Lara-Roth, Tufts University.
- *Multiple notational systems and algebraic understandings*; Barbara Brizuela, Tufts University; Darrell Earnest, TERC.
- *Understanding teacher development in algebraic reasoning within a district-based community of learners*; Maria Blanton, U Mass- Dartmouth.

Symposium: Systemic Crossfire: Examining Tensions Between Content-Based Reforms and High Stakes Tests in Mathematics

- *Model-data fit studies of the Texas Assessment of Academic Skills: Implications for the content validity of the tests across student groups and school types*; Jere Confrey, Katie Makar, David Carrejo, Sibel Kazak, University of Texas at Austin.
- *Incoherence in the content-based information from high stakes provided teachers for instructional decision-making*; Jere Confrey, David Carrejo, University of Texas at Austin.
- *Listening to students: Interviews with urban high school students about TAAS with commentary by researchers, parents and community members*; Jere Confrey, David Carrejo, Katie Makar, Sibel Kazak, University of Texas at Austin.
- *Teachers' inquiries into high stakes data using statistics software*; Jere Confrey, Katie Makar; University of Texas at Austin.

Symposium: Theoretical and Practical Issues Concerning the Uses of Video in Professional Development for Mathematics

Discussant: Miriam Sherin, Northwestern University

- *Using the unfamiliar to problematize the familiar*; Abraham Arcavi; the Weizmann Institute of Science; Alan Schoenfeld, University of California, Berkeley.
- *Professional development in context: Workshop ideas embedded in practice*; Alan Schoenfeld, University of California, Berkeley.
- *Professional background as a source of perceptions: An examination of what teachers "see" in video clips*; Natasha Speer, Michigan State University.
- *Framing interactions to focus on teachers' beliefs and practices*; Sandra Wilcox, Michigan State University; Elizabeth Jones, Lansing (MI) Public Schools.

Symposium: Identity, Equity, and Mathematical Learning in the Context of Statistical Data Analysis

Discussant: Na'ilah Nasir, Stanford University

- *Two views of culture and their implications for investigating equity in mathematics education*; Lynn Liao Hodge, Paul Cobb, Vanderbilt University.
- *Students' construction of identities as doers of mathematics in the context of statistical data analysis*; Paul Cobb, Lynn Liao Hodge; Vanderbilt University.
- *Classrooms as design spaces for supporting students' identities as doers of mathematics*; Kay McClain; Paul Cobb, Vanderbilt University.

Symposium: If We Build It, Will They Come? A Diversity of Perspectives on Parents and School Mathematics Reform

Session Chair: Sarah Theule Lubienski, Iowa State University

Discussant: Doug McLeod, San Diego State University

- *Traditional or standards-based mathematics? Parents' choices in one district;* Sarah Theule Lubienski, Iowa State University.
- *Parents as observers in the mathematics classroom: Establishing a dialogue between school and community;* Marta Civil, Emily Bernier, Beatriz Quintos, University of Arizona
- *Gatekeepers and guardians: African American parents' responses to mathematics and mathematics education reform;* Danny Martin, Contra Costa College.
- *Working with the public to improve school mathematics: Parents' views on mathematics curriculum reform;* Dominic Peressini, University of Colorado at Boulder; Kate Masarik, San Diego State University; Lisa Adajian, Portland State University; Dan Canada, Portland State University

Paper Session: Mathematics Reform in Classrooms and Districts

Session Chair: Linda Ruiz Davenport; Boston Public Schools

Discussant: Janine Remillard; University of Pennsylvania

- *Understanding the culture of elementary mathematics classrooms in transition;* JeongSuk Pang, Korea National University of Education.
- *Collaborative mathematics classrooms: The development of a community's practices;* Megan E Staples, Stanford University.
- *The impact of a standards-based mathematics curriculum on student achievement in Massachusetts: A Connected Mathematics follow-up study;* Julie Riordan, University of Pennsylvania; Pendred E Noyce, The Noyce Foundation; David Perda, University of Pennsylvania.
- *Algebra in Massachusetts middle schools: Access, achievement, and implications;* David A Perda, University of Pennsylvania; Julie E Riordan, University of Pennsylvania; Pendred Noyce; Noyce Foundation.
- *A theoretical framework for understanding students' conceptions of algebraic equivalence;* Nancy L O'Rode, University of California at Santa Barbara.

Paper Discussion Session: Examinations of Mathematics Teacher Development and Mathematics Teaching

- *From college freshmen to secondary mathematics teachers: Longitudinal case studies based on an analysis of knowledge, beliefs, goals, and behaviors*; Alice F Artzt, Frances R Curcio, Queens College of the City University of New York.
- *Mathematics learning and teaching: Beliefs of elementary teachers from Australia, Hong Kong, Mainland China, Philippines, Singapore and Taiwan*; Peter Howard, Australian Catholic University; Bob Perry, University of Western Sydney.
- *The professional knowledge of elementary mathematics teachers: Its structure and internal relationship*; Tao Xin, Teachers College; Zheng Zhou, St. Johns University.
- *Mathematical representations and pedagogical content knowledge: An investigation of prospective teachers' development*; Robin A Ward, Cynthia O. Anhalt, Kevin D. Vinson, University of Arizona.
- *Effects of educational opportunity on the intraschool distribution of eighth grade mathematics achievement in the U.S. and Korea: Multilevel analyses of TIMSS*; Carol M Smyth, Graduate Center - City University of New York; T. Mark Beasley, University of Alabama at Birmingham.
- *Anchored instruction, an environment for integrating formal and symbolic knowledge in fractions, a case of instructional design*; Teruni D Lamberg, Vanderbilt University; James A Middleton.

Paper Discussion Session: Students' Mathematical Thinking: How it Might be Assessed and Examined

- *The nature of mathematical disability in young children*; Robert A Reeve, Fiona J Reynolds, Univ. of Melbourne.
- *Interactive assessment, metacognition, and individual differences in proportional reasoning*; Fiona J Reynolds, Robert A Reeve, University of Melbourne.
- *Sixth graders' conceptualizations of geometric polygons*; Caroline F Borrow, Kent State University.
- *The development of children's understanding of multidigit multiplication in a third-grade classroom*; Jae Meen Baek, Arizona State University.
- *Understanding students' mathematical thinking: Factors influencing on teachers' analyzing students' written responses to open-ended assessment tasks*; Jinfa Cai, University of Delaware.
- *Certified to know: Students' interpretations of measures of mathematical success*; Robert M Klein, The Ohio State University; Peter Appelbaum, Arcadia University.
- *Revising mathematics assessment items for alignment to curriculum standards*; Robert M Capraro, Mary Margaret Capraro, Texas A&M University.

SIG/RME Business Meeting

Division C, Section 3: Mathematics Learning and Instruction

Symposium: Unpacking Mathematics Underachievement: Researching Home and School Mathematics Practices in the UK and USA)

Chair: Diane D Anderson, Swarthmore College

Discussant: Eva Gold, Research for Action, Philadelphia, PA

- *Listening to the Child*, Diane D Anderson, Swarthmore College
- *Disruptive Seth Doesn't Go to the Grocery*, Janine Remillard, University of Pennsylvania
- *Home Numeracy Practices: Obstacles or Resources?* Brian Street, Kings College London
- *Theorizing Descriptors of the 'Travel' of Home and School Learning/Numeracy Practices*, David Baker, University of Brighton, UK

Interactive Symposium: Diversity in Mathematics Education: Cross-Disciplinary Perspectives on a Shared Case

Chair: Noel Enyedy, UCLA

Discussant: Judit Moschkovich, UCSC

- *Possible and Actual Social and Linguistic Resources that Support Student Participation in a Bilingual Mathematics Classroom*; Noel Enyedy, UCLA; Megan Franke, UCLA; Geoff Saxe, UCB; Walter Secada, UW-Madison; Grace Brown, UCLA; Viviana Castellon, UCLA; Joi Spencer, UCLA
- *The Emergent Culture of Mathematics in a Bilingual Classroom*; Thomas Carpenter, UW-Madison; Andrew diSessa, UC Berkeley; Alan Schoenfeld, UC Berkeley; Deanna Freund, UCLA; Tonya Gau, UW-Madison; Charles Hammond, UC Berkeley; Shiuli Mukhopadhyay, UCLA
- *Language Change within Mathematics Education as a Product of the Cross-Disciplinary Study of a Classroom Case*: Rogers Hall, Vanderbilt; Fred Erickson; UCLA; Ann Ryu; UC Berkeley; Laurie Rubel, UW-Madison; Nooneh Kradjian, UCLA

Interactive Symposium: Making Teaching Public: Studying Teacher Thinking Using Video Techniques

Chair: Kevin F. Miller, University of Illinois at Urbana-Champaign

Discussant: Andrew Isaacs, University of Chicago

- *Repetition is wonderful?: American and Chinese teachers' views of teaching and learning mathematics*; Linda Sims, Christopher Correa, Xiaobin Zhou, University of Illinois at Urbana-Champaign
- *First and Foremost: Examining Lesson Introductions by Chinese and American Elementary School Mathematics Teachers*; Christopher Correa, Kumar, Linda Sims, University of Illinois at Urbana-Champaign
- *You Tell Me I'm Just the Teacher: Authority and Autonomy in American and Chinese Mathematics Classrooms*; Marc McConney, University of Illinois at Urbana-Champaign
- *I see you doing some thinking: the use of visual forms to convey mathematical meanings in early mathematics instruction*; Lucia Flevares, University of Illinois at Urbana-Champaign
- *No Matter How You Slice It: Perception of Teachers' Personal Attributes and Instruction from Thin Slices of Classroom Videos*; Xiaobin Zhou, University of Illinois at Urbana-Champaign

Symposium: Mathematics and Gesture

Chair: Tracy Noble, TERC

Discussants: Martha Alibali, University of Wisconsin – Madison; Rafael Nuñez, University of California at San Diego

- *A "Natural History" of Mathematical Gesture*; Laurie Edwards, St. Mary's College
- *Gestures and Classroom Mathematical Practices*; Chris Rasmussen, Michelle Stephan, Karen Whitehead, Purdue University Calumet
- *Gesture and the Mathematics of Motion*; Tracy Noble, TERC
- *The Symbolic Body*; Ricardo Nemirovsky, Tracy Noble, Cara DiMattia, TERC

Interactive Symposium: The Negotiation of Values in State-Wide Mathematics Reform

Chris Ohana, Western Washington University

Discussant: Janet Sharp, Iowa State University

- *In the Trenches: Two classroom Perspectives*; Esther Holman, Wind River Middle School; Jessica Van Son, Cascade Middle School
- *From Nudge to Coach*; Ruth Chamberlin, ESD 112
- *Infusing Technology in Math Classrooms*; Colleen Bellas, ESD 112
- *Raising the Grade: A State Department of Education Perspective*; James Smith, Office of the Superintendent of Public Instruction

Interactive Symposium: Exploring the Impact of Different Algebra Programs on Students' Mathematical Attitudes and Achievement: Year One Results from the Stanford Mathematics Teaching and Learning Study

- *Comparing Mathematical Approaches: Equity, understanding, and achievement*; Megan Staples and Tobin White
- *Investigating mathematical identities*; Melissa Gresalfi and Emily Shahan
- *The centrality of teaching in mediating curriculum*; Jo Boaler and Karin Brodie

Paper Session : Characterising Individual and Cohort Progression in Learning Numeracy: Results From the Leverhulme 5-Year Longitudinal Study; Margaret L Brown, Mike Askew, Valerie Rhodes, Hazel Denvir, Dylan Wiliam, King's College, London

Paper Session : Examining Curricular Redesign of a High School Mathematics Department and Its Influences on Access to Advanced Mathematics; Lecretia A Buckley, University of Illinois at Urbana-Champaign

Paper Session : U.S. and Chinese Teachers' Knowing, Evaluating, and Constructing Representations in Mathematics Instruction; Jinfa Cai, University of Delaware

Paper Session : Making Sense of the Teaching of Word Problems: Perspectives from High School Mathematics Teachers; Olive Chapman, University of Calgary

Paper Session : Effects of a Research-based Preschool Mathematics Curriculum: Summative Evaluation of the Building Blocks Project; Julie Sarama, Douglas H. Clements, SUNY Buffalo

Paper Session : Appropriation of Graphics Calculators for Learning and Problem Solving; Patricia A Forster, Edith Cowan University

Paper Session : The Mathematical Behavior of Structural Engineers; Julie Gainsburg, Stanford University

Paper Session : Conceptualization of Constructs in Korean Primary Mathematics
Janice Grow-Maienza, Truman State University; Susan Beal, Saint Xavier University, Chicago;
Tamela Randolph, South East Missouri State University

Paper Session : Students' Use of The Reference Point Strategy for Measurement Estimation; Elana Joram, University of Northern Iowa; Anthony J. Gabriele, University of Northern Iowa; Myrna Bertheau, Shell Rock Elementary School

Paper Session : Incorporating Student Thinking in Instruction: The Use of Pedagogical Tools in the Classroom; Karen A Marrongelle, Portland State University, Michael Keynes, Chris Rasmussen, Purdue University Calumet

Paper Session : High School Latino Students' Mathematical Meaning Making Using Multiple Modalities; Hector Morales, University of Illinois at Chicago

Paper Session : Developing “Proportional Reasoning Sense:” Anchoring Instruction in Percents and Measurement; Joan K Moss, Beverly A Caswell, University of Toronto OISE

Paper Session : Writing and Storytelling in Mathematics Education: Empowerment for Latino Students; Shawn Quilter, Cristina Jose-Kampfner, Eastern Michigan University

Paper Session : Learning about Teaching by Studying the Growth of Students' Mathematical Understanding; Jo Towers, University of Calgary

Paper Session : The Microgenesis of Mathematical Generalizations: A Fine-Grained Look at Transfer and Conceptual Change; Joseph F Wagner, University of California, Berkeley

Structured Poster Session: Entitled to Understand: Curriculum Design, Teacher Community and Classroom Discourse in Successful Algebra Project Schools

Chair: James G. Greeno, Stanford University

Discussants: Edmund Gordon, Teacher's College, Columbia University; Robert Moses, Algebra Project

- *A Framework for Understanding Mathematical Meaning in Teacher Practice;* Frank E Davis, Lesley University
- *Algebra for All: A Ten-year Study of a Successful Middle School;* Marian Currell, Martin Luther King Middle School, Mary Maxwell West, Lesley University
- *Considering Competence and Transparency of Representations as Achievements of Interaction in Classroom Practices;* James G Greeno, Stanford University
- *Working Out the Process of a Mathematical Activity;* Victoria Hand, Stanford University
- *Transparency Through Legitimate Peripheral Participation: Creating Mathematical Representations and Meanings in the Algebra Project;* Taylor Martin, Stanford University
- *Mathematical Competence As Procedural Fluency;* Melissa Sommerfeld, Stanford University

New Member Poster Sessions

- *A Situational-Representational Didactic Design for Fostering Conceptual Understanding of Mathematical Content: The Case of Ratio and Proportion*; Dor Abrahamson
- *The Construction of Mathematical Learning In Complex Instruction Groups*; Jean A Doyle, Boston College Lynch School of Education
- *Modality-Based Learning Environment For Young Children: A Reflection on Math Learning in China*; Aige Guo, University of Toledo
- *Limitations in Students' Concept Images of Functions: A Detailed Examination*; Andrew P Jaciw, Stanford University
- *Factors that Influence Middle School Students to Enroll in Algebra*; Lawrence E Letourneau, University of Nevada, Las Vegas
- *Moving between Reform and Traditional Mathematics Curricula: Patterns in Students' Mathematics Achievement*; Gary M Lewis, Jon R Star, Michigan State University
- *Computer Algebra Systems and Mathematics Education: A Learning Model*; Michael Meagher, The Ohio State University
- *Age and Gender Differences in Performance on a Spatial Rotation Test*; Michalis P Michaelides, Stanford University
- *The Relationships Among Problem Solving Performance, Gender, Confidence, and Attributional Style in Third Grade Mathematics*; Rosemarie Michaels, Dominican University of California
- *Secondary Students' Attitudes Toward the Use of Estimation in the Mathematics Classroom: Insights into Students' Perceptions of Mathematics and Implications for Curricular Design*; Mika Munakata, Montclair State University
- *Middle and High School Student Probabilistic Thinking*; Laurie Rubel, University of Wisconsin – Madison
- *Using a "New Synthesis of Reading in Mathematics" to Encourage Finite Mathematics Students to Act Like a Community of Mathematicians*; Janet St. Clair, Troy State University-Montgomery
- *A Comparative Assessment of Constructivist and Traditionalist Approaches to Establishing Mathematical Connections in Learning Multiplication*; Insook Chung, Saint Mary's College; Simon Kim, Cal State Long Beach

Division K, Section 1–Mathematics and Science Teaching and Teacher Education

Symposium: Alternative Ways of Measuring Classroom Practice: What Are We Learning?

Session Chair: Alicia C Alonzo; RAND; University of California, Berkeley

Discussants: Edward A Silver; University of Michigan, Richard J Shavelson; Stanford University

- *Teacher Logs and the Study of Instructional Improvement*, Deborah L. Ball; Brian Rowan; University of Michigan
- *Vignette-Based Surveys and the Mosaic II Project*; Vi-Nhuan Le; Brian Stecher; Laura Hamilton; Gery Ryan; Valerie Williams; Abby Robyn; Alicia C Alonzo; RAND; University of California, Berkeley
- *Instructional Artifact Packages and the Impact of State Accountability on Classroom Practices Project*; Hilda Borko; University of Colorado, Boulder; Brian Stecher; RAND; Alicia C Alonzo; RAND; University of California, Berkeley; Sherie McClam; University of Colorado, Boulder

Symposium: Everyday Classroom Assessment - Practice, Theory, and Policy: Where do we go from here?

Session Chair: J Myron Atkin; Stanford University

Discussants: J Myron Atkin; Stanford University, Paul J. Black; King's College London

- *The Local and the Practical: Exploring Teachers' Assessment Practices*; Mistilina D. Sato; Janet E. Coffey; Savitha Moorthy; Matthew D. Thibeault; J Myron Atkin; Stanford University
- *A Successful Formative Intervention: Why did it work?* Paul J. Black; Christine Harrison; Dylan Wiliam; King's College London
- *A Comparative Look at Two Classroom Assessment Projects: What are the lessons? Where do we go from here?* J Myron Atkin; Janet E. Coffey; Savitha Moorthy; Mistilina D. Sato; Matthew D. Thibeault; Stanford University; Paul J. Black; Dylan Wiliam; King's College London

Symposium: Exploring the dynamic tensions between classroom and institutional change: Implications for professional development in math & science

Facilitators/Discussants: Leslie Herrenkohl; Elham Kazemi; University of Washington

Participants: Paul Cobb; Vanderbilt University; Kay McClain; Vanderbilt University;

Rich Lehrer; Vanderbilt University; Judith Warren Little; UC Berkeley; Ann Rosebery; TERC;

Beth Warren; TERC; Adam Gamoran; University of Wisconsin-Madison

Symposium: International perspectives on the results from the TIMSS-R Video Study: Sharing the global responsibility for the quality of mathematics teaching

Session Chair: James Hiebert; University of Delaware

Discussant: James Stigler; LessonLab, Inc.

Overview of TIMSS-R Video Study, Patrick Gonzales; National Center for Education Statistics

Country presentation: Australia, Barry McCrae; Australian Council for Educational Research

Country presentation: Japan, Hanako Senuma; National Inst. for Ed. Policy Research of Japan

Country presentation: Netherlands, Klaas Tj Bos; University of Twente

Country presentation: Switzerland, Kurt Reusser; University of Zurich, Christine Pauli; University of Zurich

Symposium: Studying Teacher Knowledge for Secondary Algebra Instruction: Challenges in Design and Analysis

Chair: Joan Ferrini-Mundy; Michigan State University

Discussant: Jo Boaler; Stanford University

- *Teacher Knowledge for Teaching School Algebra: Challenges in Developing an Analytic Framework*; Joan Ferrini-Mundy; Robert Floden; Dara Sandow; Sharon Senk; Gail Burrill; Michigan State University
- *Teacher Knowledge for Teaching School Algebra: Challenges in Using a Situated Perspective*; Hilda Borko; Jeff Frykholm; Christine Willis; Mary Pittman; Erick Eiteljorg; University of Colorado, Boulder
- *Teacher Knowledge for Teaching School Algebra: Challenges in Linking Teacher Knowledge and Student Achievement*; Daniel Chazan; University of Maryland; John P. Smith, III.; Michigan State University; Betsy P. Becker; Michigan State University; Robin Marcus; University of Maryland

Symposium: Studying Teacher Learning from Cases and Other Practice-Based Materials

Session Chair: Margaret S Smith; University of Pittsburgh

Discussants: Virginia Richardson; University of Michigan, Douglas Grouws; University of Iowa

- *Distinguishing Between Additive and Multiplicative Relationships: Tracing the Development of Teachers' Understanding of Proportionality in a Practice-Based Course*; Margaret S Smith; University of Pittsburgh; Edward A Silver; University of Michigan; Gaea Leinhardt; University of Pittsburgh; Amy Hillen; University of Pittsburgh
- *Cases as Vehicles for Enhancing Teacher Learning: What Do Teachers Learn and How Do They Learn It?* Mary Kay Stein; Margaret S Smith; Elizabeth K Hughes; University of Pittsburgh
- *Learning Content in the Context of Practice: A Videocase Curriculum Example*; Nanette Seago; San Diego State University Foundation; Heather Hill; University of Michigan; Dan Heck; Horizon Research; Judy Mumme; WestEd:
- *Tracing Teachers' Development in Recognizing and Reconciling Representations of Linear Functions within Teaching Practice*; Nanette Seago; San Diego State University Foundation: Judy Mumme; WestEd

Symposium: Supporting and Sustaining the Learning of Professional Teaching Communities in the Institutional Setting of the School and School District

Session Chair & Discussant: Megan Franke; University of California, Los Angeles

- *Supporting Teachers' Learning in the Social Context of the Professional Teaching Community*; Chrystal Dean; Paul Cobb; Kay McClain; Vanderbilt University:
- *Situating Teachers Instructional Practices in the Institutional Setting of the School and School District*; Paul Cobb; Kay McClain; Vanderbilt University
- *The Institutionally Situated Learning of a Professional Teaching Community: The Case of Washington Park*; Kay McClain; Teruni Lamberg; Lori Tyler; Vanderbilt University:
- *The Institutionally Situated Learning of a Professional Teaching Community: The Case of Jackson Heights*; Teruni Lamberg; Chrystal Dean; Paul Cobb; Qing Zhao; Vanderbilt University

Symposium: Teaching All Children: Making Visible the Imperative for Equity in Elementary Mathematics Teaching

- *Designing Mathematics Problems for Access and Equity*; Deborah Loewenberg Ball; Hyman Bass; University of Michigan
- *Collecting Norms for Collective Work*; Mark Hoover; University of Michigan
- *From Everyday to Mathematics: The Evolution of Mathematical Practices*; Ed Wall; University of Michigan
- *Where is Equity? Tensions in Attention to Equity in the Mathematics Classroom*; Jennifer M. Lewis; University of Michigan

Symposium: Teaching for social justice: Issues of agency and praxis in math and science education

Session Chair: Angela Calabrese Barton; Teachers College Columbia University

Discussant: William Tate

- *I've never felt this special: Valuing student knowledge in science*; Kathleen St. Louis; Teachers College Columbia University;
- *Students in a diverse, urban, middle school engage in mathematics to explore, critique and transform their world*; Erin E Turner; University of Texas Austin; Beatriz Font; New York City Public Schools
- *Middle school science students' beliefs, attitudes and agency*; Sumi Hagiwara; Teachers College Columbia University
- *Exploring the Politics of Caring in Urban Science Education*. Maria Rivera; Teachers College Columbia University
- *Envisioning Race, Culture and Identity in Urban Science Classroom* Verneda Johnson; Teachers College Columbia University

Symposium: Using Information Technology to Improve Math and Science Teaching and Learning

Session Chair: Janie Schielack; Texas A&M University

Discussants: Andrew Stricker; Vanderbilt University

- *Information Technology in Science Center for Teaching and Learning: Producing "New Generation" Science Education Leaders*; Cathy Loving; Texas A&M University
- *Engaging Classroom Teachers in Authentic Science Research*; Lawrence R. Griffing; Texas A&M University
- *Investigating the Impact of Authentic Science Experiences on Participants' Beliefs and Understandings*; Jennifer Parrott; Britta Thompson; Texas A&M University
- *Using Action Research to Bridge the Gap Between Science and Educational Research*; Stephanie L. Knight; Texas A&M University
- *Designs of Learner-Centered Information Technology in Science Interventions via Teacher Inquiry: A Synopsis*; Carol L. Stuessy; Texas A&M University

Paper Session: Analyzing Classroom Interaction as Opportunities for Teacher Learning in Science and Mathematics

Session Chair: Kent Seidel; University of Cincinnati

Discussant: Susan Empson; UT Austin

- *What Happens When the Problem Isn't Solved in Five Minutes?* Helen M Doerr; Syracuse University
- *Autonomy and Teacher Learning*; Janet E Warfield; Illinois State University
- *Interaction and classroom communities: The implications of classroom rules, roles and objectives for scientific inquiry*; Jennifer S Goldberg; Noel Enyedy; UCLA
- *Resolving a teaching dilemma in a third grade classroom community: Developing reflective mathematical discourse*; Ellice A Forman; Ellen Ansell; University of Pittsburgh

Paper Session: Attending to Issues of Equity and Diversity in the Teaching of Science and Mathematics

Session Chair: Patrick M. Jenlink; Stephen F. Austin State University

Discussant: Anita Lenges; University of Washington

- *Learning to Teach Science to All: Beginning Teachers' Experiences in Middle School Science Classrooms*; Julie A Bianchini; *Influence of Science Education Professional Development on African American Science Teachers' Conceptual Change and Practice*; Angelicque Tucker; Emory University
- *Promoting Science and Literacy among Linguistically Diverse Students: Impact of Instructional Intervention on Teacher Knowledge, Beliefs, and Practices*; Juliet E. Hart; Okhee Lee; Craig K Enders; University of Miami
- *Using Programs of Instructional Research to Develop Attention to Equity in Programs of Elementary Mathematics Instruction*; Keisha M Ferguson; Deborah Ball Loewenberg; University of Michigan

Paper Session: Documenting and Assessing Effective Teaching Practices in Math and Science

Session Chairs: Kenneth Ruthven; University of Cambridge

Discussants: Ann C. Howe, NC State University

- *Transforming practice for accessibility: Narrative accounts of three teachers' attempts at integrating inclusive science education*; Brenda Capobianco; Purdue University:
- *Assessing Some Aspects of Teachers' Instructional Practices Through Vignettes: An Exploratory Study*; Maria Araceli Ruiz-Primo; Stanford University; Min Li; University of Washington
- *Teachers experiencing confusion over a student's idea can promote students' mathematical reasoning*; Eileen Fernandez; Montclair State University
- *Investigating inquiry-teaching in elementary classrooms: A teaching experiment*; Michael Barnett; Boston College; Sasha A Barab; Indiana University; William Harwood; Indiana University; Charles Reigeluth

Paper Session: Exploring the Role of Identity in the Teaching of Mathematics and Science

Session Chairs: Christine Nucci; Arizona State University

Discussants: Juliet Baxter; University of Oregon

- *Role of Teacher Knowledge and Identity in Classroom Interactions in Elementary Mathematics*; Corey Drake; University of Missouri-St.Louis; Susan B. Empson; Higinio Dominguez; Debra L. Junk; Kevin LoPresto; University of Texas at Austin
- *The Development Of A Pro-Reform Mathematics Teacher Identity: The Case Of Holly*; Laura R Van Zoest; Western Michigan University; Jeffrey V Bohl; Battle Creek Area Mathematics and Science Center
- *Target Students: Catalysts or inhibitors to the teaching and learning of chemistry in a masters of chemistry education program*; Kate Scantlebury; University of Delaware; Kenneth G Tobin; University of Pennsylvania
- *Coherence, Contradiction and the Formation of School Science Identities*; Stacy I Olitsky; University of Pennsylvania; Linda Loman; Curtin University of Technology

Paper Session: Interdisciplinary Approaches to Teaching Science and Mathematics

Session Chairs: Valarie L Akerson; Indiana University

Discussants: Margaret A Schimmoeller; Randolph-Macon Woman's College

- *This is not your parents' chemistry course: Using group work to improve science learning and literacy*; Sarah-Kate LaVan; Sonya Martin; University of Pennsylvania
- *Collaborative Leadership in an Integrated Approach to Teaching Science*; Josephine D Wallace; David K Pugalee; Patricia Douville; University of North Carolina at Charlotte
- *Accountability for Teacher Development: Collaborative Efforts to Prepare Teachers to Address Math, Science and Technology Standards*; Cynthia J Benton; SUNY Cortland
- *Mathematics and Language Arts Integration in the Elementary School*; Ron W. Zambo; Arizona State University West

Paper Session: Preservice Teacher Preparation in Science and Mathematics

Session Chairs: Robert E Bleicher; California State University Channel Islands

Discussants: Elizabeth A Davis; University of Michigan

- *Preservice Teachers' Development and Implementation of Science Performance Assessment Tasks*; Judith A Morrison; WSU; Amy McDuffie; WSU; Valarie Akerson; Indiana University
- *"What" and "How" Does a Mentor Teacher Learn During a Secondary Science Teacher Candidate's Internship?* Scott A Ashmann; Illinois Institute of Technology
- *Effects of Contextualized & Decontextualized Nature of Science Instruction on Teachers' Practices*. Michael P Clough; Joanne K Olson; Iowa State University
- *Reform Teaching Practices in Undergraduate Mathematics and Science Classes*. James B Carroll; University of Portland; Patricia D Morrell; University of Portland
- *Blending Mathematics Learning with an Early Field Experience: What Do Prospective Elementary School Teachers Learn?* Rebecca C Ambrose; San Diego State University; Cheryl Vincent; Santee School District

Paper Session: Teacher Beliefs and the Teaching of Mathematics and Science

Session Chairs: Elana Joram; University of Northern Iowa

Discussants: Christine L Ebert; University of Delaware

- *Past Lives in the Present: An Inquiry into the Historical Dimensions of Teachers' Practical Knowledge*; Roland W Mitchell; Jerry L Rosiek; University of Alabama
- *The Impact of Early Life History on Teachers' Beliefs about Teaching and Learning: Out-of-School Experiences as Learners and Knowers of Science*; Leigh K Smith; Brigham Young University
- *How do Chinese science teachers' conceptions of inquiry-based science*; BaoHui Zhang; University of Michigan; Joseph S Krajcik; Lei Wang; Jihua Hu; Yangyi Qiang
- *The Terrarium Unit: A challenge to teachers' concepts of what is science teaching*; Allan G Harrison; Reyna Zipf; Central Queensland University

Paper Session: Technology as a Tool for Teaching Mathematics and Science

Session Chairs: Sharon Anne O'Connor; SUNY at Old Westbury

Discussants: Jon Margerum-Leys; Eastern Michigan University

- *Evaluation of a multimedia case-based learning environment for science teacher education in Jamaica.* Melody A. Williams; Ellen van den Berg; Jan van den Akker; University Of Twente
- *Face-to-Face and Computer Mediated Tutoring: A Comparative Exploration on High School Math Students' Achievement.* Barbara Schpilberg; Betty Hubschman; Barry University
- *Science teachers' perspectives of web-supported problem-based learning environment: A qualitative inquiry.* Younghoon Kim; Barbara L Grabowski; Hae-Deok Song; Pennsylvania State University

Paper Session: Using Practice-Based Tools for Professional Development with Mathematics Teachers

Session Chairs: Daniel S Battey; UCLA

Discussants: Michele Crockett; University of Illinois

- *In pursuit of flexible teaching: How mathematics teachers 'learn to notice' in the context of a video club.* Elizabeth A van Es; Northwestern University;
- *Individual Interviews as a Window into Teachers' Practice: A Framework for Understanding Teacher-Student Interactions during Mathematical Problem Solving.* Victoria R Jacobs; Rebecca C Ambrose; San Diego State University
- *Taking advantage of openings in the curriculum to promote teachers' learning from cases;* Melissa D Boston; University of Pittsburgh
- *Using Records of Teaching to Learn about the Use of Instructional Representations in Elementary Mathematics Teaching.* Rhonda B Cohen; Deborah L Ball; University of Michigan

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Paper Discussions (i.e., Roundtables)

- *Exploring The Integration Of Caring Practices To Develop Pre-Service Early Childhood Teachers' Strategies For Teaching Science And Mathematics;* Ithel Jones; Vickie E. Lake; Florida State University;
- *In-service and Pre-service Teachers' Ability to Detect Mathematical Errors.* Rebecca R Robichaux; Southeastern Louisiana University; Polly Rodrigue; Nicholls State University; Anthony J Guarino; Auburn University
- *The Functionality Of Graphical Representations: Contexts Within Which Preservice Teachers Construct Graphical Representations.* Aisling M Leavy; MIC – University of Limerick
- *Mathematics Teacher Dispositions and Possible Assessment Measures.* Bridget Arvold; University of Illinois at Urbana-Champaign
- *Arguing the Limitations of Evidence in Middle School.* Cynthia C Szymanski Sunal; Dennis W. Sunal; University of Alabama
- *The Use of Retrospective Pretests for Measuring Mathematics and Science Teaching Efficacy Beliefs in Preservice Teachers.* Pamela Cantrell; University of Nevada, Reno
- *Promoting Mathematics Learning through Problem-Based Instruction.* Juliann L Johnson; University of Texas at Arlington
- *An Evaluation of Innovative Mathematics Preparation Initiative Program: A Joint Program Of California State University, Los Angeles And Los Angeles Unified School District.* Deborah Oh; California State University, Los Angeles; Fred Uy

- *Influences of Critical Reflection and Field Experiences on Mathematics Teaching: A Preservice Elementary Teacher Development Initiative.* Thea K Dunn; University of Wisconsin-River Falls:
- *Use of Conceptually Based Mathematics Curricula for Professional Development of Teachers.* Janice Grow-Maienza; Sam Minner; Scott Olsen; David Bethel; Truman State University
- *Presevice Teachers' Voices and Discourses of Mathematics: Implications for Teacher Education.* Camille Cammack; Saginaw Valley State University
- *Developing Alternative Strategies for Educational Equity.* Marisol A Rodarte; UC Santa Barbara

Posters

- *Linking Teachers' Embedded Traditions to Students' Images of Mathematics.* Rong-Ji Chen; Bridget Arvold; University of Illinois at Urbana-Champaign:
- *Using Online Discussion Forums as Professional Development to Further Teachers' Understanding of Students' Mathematical Thinking.* Jeffrey C Shih; UNLV
- *Teacher Intern Experiences with Self-Assessment in an Elementary Mathematics Methods Course.* Ming C Tomayko; University of Maryland

**Research Pre-session
April 7-9, 2003
Convention Center
San Antonio, Texas**

Monday, April 7th 2003

7-8:30 p.m.

Opening Session, TBA

Tuesday, April 8th 2003

9-10:30 a.m.

Treating Lessons as Experiments

Hiebert, Morris, Glass, Wearne, Goggins, Hwang, Peterson

Leadership & Learning in 3 Elementary Schools

Davenport, Carter, Porn, Grant, Briars, Scott-Nelson

What Constitutes Good Math Teaching

Wilson, Cooney, Stinson, Knuth, Burrill

Explorations of Math Learning

Ebby, Remillard, Mosley-Culpepper, Klein, Jackson, Tatar, Greeno

Generalization and Proof

Schifter, Monk, Bastable, Russell

The Quality of Math Ed Research

Simon, Clements, Presmeg, Maher, Silver

Sustaining Teacher Change

McCabe, Kowalchuk

11 a.m.-12:30 p.m.

Korean Primary Mathematics

Grow-Maienza, Beal, Trafton, Thompson, Miura

Teacher Leadership Roles

Fonzi, Miller, Weiss

Teaching Well in K-12 Classrooms

Whitenack, Cavey, Lovin, Heaton

On Latinos & Mathematics

Khisty, Chval, Morales, Civil

Building Interdisciplinary Software Teams

Reed, Greer, Hoffman, Kaput

Multiple Perspectives Early Childhood Math Project

Clements, Sarama, Bardsley, Spitler, Baroody, Steffe, Wheatley

The Role of Beliefs, Values, and Norms

Eisenmann, Jansen-Hoffmann, Tiong -Seah, Pimm, Theule-Lubienski

1:30-2:30 p.m.

Poster Sessions

Mentoring Session

2:45-5:15 p.m.

Secondary Math Teachers' Learning

Doerr, Artzt, Curcio, Koc, McGraw, English, Van Zoest, Bohl, Brown, Lesh

Schools as a Unit of Change

Sztajn, White, Pateman, Zilliox, Alleksaht-Snider, Gutierrez, Campbell

Conceptualizing & Proving in Math Classes

Herbst, Balacheff, Harel, Knuth

Research on Math Ed in Rural Settings

Schultz, Hatfield, Howley, Mahoney, Nelson, Silver

Climbing the Inference Wall

Rubin, Konold, Finzer, Hammerman

Teacher Development

Koellner-Clark, Amit, Blanton, Lewis, Middleton, Murata, Schifter, Schorr, Takahashi

Relating Professional Development to the Classroom

Kazemi, Stimpson, Lenges, Bastable, Sherin

Wednesday, April 9th 2003

8-9:30 a.m.

Impact of Standards-Based MS Math Curriculum

Shafer, Reys, Kulm, Zawojewski

If We Build It Will They Come?

Theule-Lubienski, Civil, Bernier, Quintos, Martin, Peressini, Masarik, Adajain, Canada, Ferrini-Mundy

Integrating Math & Pedagogy

Philipp, Sowder, Clement, Schappelle, Thanheiser, Cooney, Franke

Recent Math Sciences Ed Board Reports...

MSEB, Lacampagne

Essential Elements of Lesson Study

Hovermill, Frykholm, Guzman

NAEP Student Responses

Brown, Lambdin, Wilcox

Publishing in the Journal for Math Education

JRME Editorial Panel

Getting Your Manuscript Published in an NCTM Journal

NCTM Editorial Panels

10-11:30 a.m.

NSF

TBA

Knowledge for Teaching Algebra in Secondary School

Senk, Romagnano, Mumme, Seago Papick

Teaching Communities as Sites for Teacher Change in Math

McClain, Cobb, Lechman, Regis, Schmitt, Ashley, Synan, Simon, Kazemi

NAEP Recent Data

Lester, Jr., Kenney, Kloosterman, Kehle, Braswell

Nat'l Study of Leadership in Math & Science Education

Burrill, Ferrini-Mundy, Graham

Inquiry Learning for Preservice MS Math Teachers

Wanko, DeLoach-Johnson, Keiser-Krumpe Stonewater, Lappan, Bay-Williams

Factors Affecting the Math Educ of Hispanic Middle Schoolers

Long, Hur, Gesslin, Hirigoyen, Hamilton

Visual Comprehension in Algebra, Stats and Calc

Van Dyke, J. White, Soto, A. White

Teaching & Learning Integrated Math

Marrongelle, Moremi -Adeyemi, Jones, Meier

12:45-3:15 p.m.

SIRG

TBA

Networked Handhelds

Roschelle, Kaput, Stroup, Davis, Hegedus, Vahey, Ares, Hamilton, ,

Researching Intervention in Early Number Learning

Wright, Stafford, McLean, McClain, Martland, Munn, Pateman, Williams

The Impact of Case's Theory

Moss, Kalchman, Okomoto, Cobb, English, Hiebert, Koedinger

Developing Algebraic Thinking in Early Grades

Cai, Carpenter, Fujii, Huinker, Kieran, Lew, Fong, Ng, Schmittau, Moyer

1:30-3:00 p.m.

How High School Students Approach Algebra Problems

Marcus, Kahan, Heid, Goroff, Huntley

Tracking the Student Performance of Staff-Development Participants

Lewis, Hynes, Dixon, Hoffman, Lowery

Block Schedule and IMP

Kramer, Keller, Merlino

3:30-4:45 p.m.

Closing Session

Scientific Research in Education: Opportunity or Restriction?

Jere Confrey

BALLOT

Vote for one person for each office.

Co-Chair

_____ Randy Philipp

_____ Margaret S. Smith

Recording Secretary

_____ Nancy K. Mack

_____ Susan Taber

Steering Committee

_____ Patricio Herbst

_____ Jesse (Jay) L. M. Wilkins

Electronic Communications Secretary

_____ Cengiz Alacaci

_____ _____ (write-in)

Return your ballot to

Alfinio Flores
Arizona State University
Curriculum and Instruction
Tempe AZ 8528-0911

by **January 15, 2003.**

Or, you can vote on-line at <http://www.sigme.org>.

Denise S. Mewborn, Recording Secretary
SIG/RME
105 Aderhold Hall
Department of Mathematics Education
Athens, GA 30602-7124