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Announcements

Registration and all sessions are located on the south end, River Level, of the Henry B. Gonzalez Convention Center.

Informal meetings can be held in Room 204 A of the Convention Center.

Research posters can be seen in Rooms 006 A, B, and C on Tuesday, April 8.

The Call for Papers for the next Research Presession, to be held in Philadelphia, Pennsylvania, in April 2004, will be available at the registration table.

A reception will be held Friday evening following the opening session on the Lila Cockrell Theatre River Patio.
Monday, April 7, 2003

7:00 P.M. – 8:30 P.M. (OPENING SESSION)

Randomized Trials: Their Progress, Prospects, and Challenges

OPENING SPEAKER
Robert Boruch, University of Pennsylvania, Philadelphia, Pennsylvania
robertb@gse.upenn.edu

Randomized trials, common in medical research, are being used more frequently in other sectors to plan and evaluate interventions. This briefing presents evidence on their increased role in criminological, economic, and education research and the boundary conditions that delimit their use. The import is assessed relative to historical, scientific, ethical, and normative standards. The main scientific standards concern the choice of questions that are posed in the research and the interest in producing statistically unbiased estimates of the relative effects of interventions.

LILA COCKRELL THEATRE

Tuesday, April 8, 2003

9:00 A.M. – 10:30 A.M. (CONCURRENT SESSIONS)

Treating Lessons as Experiments: A Model for Improving Teaching and Teacher Education Programs

ORGANIZERS/PRESENTERS
Jim Hiebert, University of Delaware, Newark, Delaware
hiebert@udel.edu
Anne Morris, University of Delaware, Newark, Delaware
abmorris@udel.edu
Brad Glass, University of Delaware, Newark, Delaware
bjglass@udel.edu

PRESENTERS
Diana Wearne, University of Delaware, Newark, Delaware
Laurie Goggins, University of Delaware, Newark, Delaware
Stephen Hwang, University of Delaware, Newark, Delaware

REACTOR
Blake Peterson, Brigham Young University, Provo, Utah

Treating lessons as experiments and lesson study are two components in our model for improving teaching. We will discuss how we use the model to improve our teacher education program as well as how students in the program are learning to use the model to improve their own teaching. Analyses of data will be presented.
Leadership and Learning in Elementary Schools: Three Cases of Collaboration among Principals, Teacher-Leaders, and Mathematics Coaches

**Organizer**
Linda Ruiz Davenport, Boston Public Schools, Boston, Massachusetts
ldavenport@boston.k12.ma.us

**Presenters**
Andy Carter, Roosevelt University, Chicago, Illinois
Mary Jo Porn, University of Illinois at Chicago, Chicago, Illinois
Cathy Miles Grant, Rivendell School District, Orford, New Hampshire

**Discussants**
Diane Briars, Pittsburgh Public Schools, Pittsburgh, Pennsylvania
Barbara Scott Nelson, Education Development Center, Newton, Massachusetts

This symposium explores the nature and role of school-based leadership and learning by examining three cases of school-based collaborations among principals, teacher-leaders, teachers, and elementary school mathematics coaches in an urban area.

What Constitutes Good Mathematics Teaching and How It Develops: Nine High School Teachers’ Perspectives

**Organizer**
Patricia S. Wilson, University of Georgia, Athens, Georgia
pwilson@coe.uga.edu

**Presenters**
Thomas Cooney, University of Georgia, Athens, Georgia
David W. Stinson, University of Georgia, Athens, Georgia

**Reactors**
Eric J. Knuth, University of Wisconsin—Madison, Madison, Wisconsin
Gail Burrill, Michigan State University, East Lansing, Michigan

A research-based synthesis of the perspectives of nine high school mathematics teachers regarding good mathematics teaching and how it develops will be shared. Compatibility of these perspectives with research, NCTM recommendations, and teacher education will be discussed.
Explorations of Mathematical Learning within Social Settings

**Organizer/Presenter**
Caroline Brayer Ebby, University of Pennsylvania, Philadelphia, Pennsylvania
caroline@gse.upenn.edu

**Presider**
Janine Remillard, University of Pennsylvania, Philadelphia, Pennsylvania

**Presenters**
Shea Mosley Culpepper, University of Pennsylvania, Philadelphia, Pennsylvania
Valerie Klein, University of Pennsylvania, Philadelphia, Pennsylvania
Kara Jackson, University of Pennsylvania, Philadelphia, Pennsylvania
Deborah Tatar, Center for Technology in Learning, SRI International, Menlo Park, California

**Discussant**
James G. Greeno, Stanford University, Stanford, California

This symposium will focus on conceptual issues involved in studying mathematical learning in social settings. In particular, the presenters will share their attempts to understand the situated nature of teacher and student learning while also accounting for individual differences.

Generalization and Proof, Grades K–5: Learning from Classroom Cases

**Organizer/Presider/Presenter**
Deborah Schifter, Education Development Center, Newton, Massachusetts
dschifter@edc.org

**Presenters**
Stephen Monk, University of Washington, Seattle, Washington
Virginia Bastable, SummerMath for Teachers/Mount Holyoke College, South Hadley, Massachusetts
Susan Jo Russell, TERC, Cambridge, Massachusetts

Participants will discuss a case, written by a classroom teacher, to consider the following themes concerning early algebraic thinking in the K–5 classroom: generalizations about number systems, forms of argument, representations, and the actions teachers take to support algebraic reasoning.
The Quality of Mathematics Education Research

**Organizer/Presenter**
Martin Simon, Pennsylvania State University, University Park, Pennsylvania
msimon@psu.edu

**Discussants**
Doug Clements, Associate Editor, Mathematical Thinking and Learning; State University of New York at Buffalo, State University of New York, Buffalo, New York
Norma Presmeg, Editor, Educational Studies in Mathematics; Illinois State University, Normal, Illinois
Carolyn Maher, Editor, Journal of Mathematical Behavior; Rutgers, The State University of New Jersey, New Brunswick, New Jersey
Edward Silver, Editor, Journal for Research in Mathematics Education; University of Michigan, Ann Arbor, Michigan

Important current issues in the quality of mathematics education research will be identified and discussed. Editors of four leading mathematics education journals (MT&L, JRME, JMB, and EMS) will respond. Feedback from attendees will follow.

Sustaining Teacher Change—Learning from Action Research

**Organizer/Presenter**
Auriana Kowalchuk, Edmonton Public Schools, Edmonton, Alberta
auriana.kowalchuk@epsb.ca

The findings of three government-funded action research projects in grades 4–12 mathematics will be presented. Teacher change and its sustainability when funding is no longer in place will be discussed.
Tuesday, April 8, 2003

11:00 A.M. – 12:30 P.M. (Concurrent Sessions)

Korean Primary Mathematics: Block Learning and Conceptualization of the Constructs

Organizer/Presenter
Janice Grow-Maienza, Truman State University, Kirksville, Missouri
jgrow@truman.edu

Presenter
Susan Beal, Saint Xavier University, Chicago, Illinois

Discussants
Paul Trafton, University of Northern Iowa, Cedar Falls, Iowa
Denisse Thompson, University of South Florida, Tampa, Florida
Irene Miura, San Jose State University, San Jose, California

This presentation is on conceptualization of the constructs in Korean Mathematics for Grades 1–6, a series recently translated by the NSF, and reactions to its relevance for mathematics reform in the United States by four widely published educators.

Teacher Leadership Roles: What Our Research Has Uncovered about Initiating and Implementing Them

Organizers/Presenters
Judith Fonzi, University of Rochester, Rochester, New York
judy.fonzi@rochester.edu
Barbara Miller, Education Development Center, Newton, Massachusetts
bmiller@edc.org

Discussant
Iris Weiss, Horizon Research, Inc., Chapel Hill, North Carolina

The focus of the research was on understanding the factors influencing the effective initiation of teacher-leader positions and on analyzing the enacted roles of teacher-leaders and their contributions to broad-based and long-term reforms. Findings will be shared, and participants will be invited to discuss their experiences and raise additional questions.
Teaching Well in K–12 Mathematics Classrooms: Understanding Teachers’ Mathematical Understandings

**Organizer/Presenter**
Joy W. Whitenack, James Madison University, Harrisonburg, Virginia
whitenjw@jmu.edu

**Presenters**
Laurie Cavey, James Madison University, Harrisonburg, Virginia
LouAnn Lovin, James Madison University, Harrisonburg, Virginia

**Discussant**
Ruth Heaton, University of Nebraska—Lincoln, Lincoln, Nebraska

This symposium addresses the knowledge that teachers of mathematics must have and use to teach mathematics well. The presenters provide examples across K–16 instructional settings to explore the possibility of capturing what teachers must know to facilitate student learning.

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On Latinos and Mathematics: A View of the “Possible”

**Organizer/Presenter**
Lena Licón Khisty, University of Illinois at Chicago, Chicago, Illinois
llkhisty@uic.edu

**Presenters**
Kathryn Chval, National Science Foundation and University of Illinois at Chicago, Washington, D.C., and Chicago, Illinois
Hector Morales, University of Illinois at Chicago, Chicago, Illinois

**Facilitator/Discussant**
Marta Civil, University of Arizona, Tucson, Arizona

This interactive worksession will explore classroom processes and practices that affect Latinos’ learning of mathematics. Current classroom-based research on Latinos being successful in mathematics will be presented and used to initiate a discussion of future research directions.
Building Interdisciplinary Software Teams

Organizer/Presenter
Stephen K. Reed, San Diego State University–CRMSE, San Diego, California
sreed@sunstroke.sdsu.edu

Presenters
Brian Greer, San Diego State University–CRMSE, San Diego, California
Bob Hoffman, San Diego State University, San Diego, California

Discussant
Jim Kaput, University of Massachusetts Dartmouth, North Dartmouth, Massachusetts

The purpose of Animation Tutor (www.sci.sdsu.edu/mathtutor/) is to improve estimation, reasoning, and problem-solving skills in an intermediate algebra course. The participants demonstrate how their different disciplines (mathematics education, instructional technology, cognitive psychology) influenced the design of the modules.

Multiple Perspectives on an Early Childhood Mathematics Curriculum Research Project

Organizer/Presenter
Douglas H. Clements, University at Buffalo, State University of New York, Buffalo, New York
clements@buffalo.edu
Julie Sarama, University at Buffalo, State University of New York, Buffalo, New York
jsarama@buffalo.edu

Presenters
Mary Ellen Bardsley, University at Buffalo, State University of New York, Buffalo, New York
Mary Elaine Spitler, University at Buffalo, State University of New York, Buffalo, New York

Discussants
Arthur J. Baroody, University of Illinois at Urbana-Champaign, Champaign, Illinois
Les Steffe, University of Georgia, Athens, Georgia
Grayson Wheatley, Florida State University, Tallahassee, Florida

On the basis of the notion that curriculum developing and testing should follow progressive methods of “curriculum research,” we present multiple perspectives on one curriculum development project that followed these methods through inception to summative evaluation.
The Role of Beliefs, Values, and Norms in Mathematics Classrooms: A Conceptualization of Theoretical Lenses

**Organizer/Presenter**
Beth Herbel-Eisenmann, Ontario Institute for Studies in Education–University of Toronto, Toronto, Ontario
bhe@oise.utoronto.ca

**Presenters**
Amanda Jansen-Hoffmann, Michigan State University, East Lansing, Michigan
Wee Tiong Seah, Monash University, Clayton, Victoria, Australia

**Discussants**
David Pimm, University of Alberta, Edmonton, Alberta
Sarah Theule Lubienski, Iowa State University, Ames, Iowa

This symposium highlights the theoretical lenses of beliefs, values, and norms relating to mathematics education, including their affordances and constraints. The synergy of these lenses, with the potential to help us better understand life in mathematics classrooms, will be explored.

Tuesday, April 8, 2003

1:30 P.M. – 2:30 P.M. (Concurrent Poster Sessions)

Developing Teacher-Leaders in Mathematics through Professional Learning Communities

**Organizer/Poster Presider**
Robert M. Bayer, Stark County Educational Service Center, Canton, Ohio
bayer@sparcc.org

**Poster Discussants**
Jo Marie Kutscher, Pfeiffer Middle School, Massillon, Ohio
William Sereychas, Lake Middle School, Hartville, Ohio

Teacher-led study groups from forty participating middle and high schools in Stark County, Ohio, conducted local Action Research to improve student achievement. Measurable goals and results from 2000 through 2003 will be shared from this ongoing project.
Experimental and Quasi-Experimental Research on Instructional Approaches for Teaching Mathematics to Students with Learning Disabilities

**Organizer/Poster Presenter**
David J. Chard, University of Oregon, Eugene, Oregon
dchard@oregon.uoregon.edu

This presentation focuses on our current knowledge base regarding instructional approaches that help students with learning disabilities be successful in mathematics. Using meta-analytic procedures, we reviewed twenty-six studies that met rigorous criteria. This analysis revealed significant findings in instructional and curriculum design approaches, providing performance feedback to teachers, providing performance feedback to students, and cooperative learning and peer-assisted instruction.

Applying Research Results in Classrooms

**Organizer/Poster Presenter**
Dean Frerichs, First in the Nation in Education (FINE) Foundation, Des Moines, Iowa
dfrerichs@finefoundation.org

Pilot-study results will be summarized and preliminary findings will be reported on a project designed to bridge the gap between mathematics education theory and practice. The project assists teachers in using and adapting research results in local settings.

Seeking “School” Mathematics in the Everyday Practice of Structural Engineers

**Organizer/Poster Presenter**
Julie Gainsburg, Stanford University, Stanford, California
jgains@stanford.edu

This ethnographic study of the mathematical behavior of structural engineers challenges previous findings of a “gap” between school and real-world mathematics. The engineers observed engaged in creative mathematics use, integrating abstract, formal mathematics with contextual and practical problem solving.

Interpretive Frameworks and Integrated Instruction

**Organizer/Poster Presenter**
Michael D. Hardy, Harding University, Searcy, Arkansas
mhardy@harding.edu
This poster session will explore theoretical issues to be considered when teaching mathematics or any topic by integrated instruction and the implications these issues have for pedagogy.

**Lesson Studies: Russian Experience**

**Organizer/Poster Presenter**
Alexander Karp, Teachers College, Columbia University, New York, New York
apk16@columbia.edu

This session is devoted to lesson studies based on the experience of Russian schools. It will examine the most fundamental and widespread ideas, principles, and rules on which mathematics lessons in Russia are based.

**The Role of Curriculum in Mathematics Courses for Prospective Elementary School Teachers**

**Organizer/Poster Presenter**
Gwendolyn M. Lloyd, Virginia Polytechnic Institute and State University, Blacksburg, Virginia
lloyd@math.vt.edu

This poster displays findings associated with a research project that investigates the impact of engagement with different curriculum materials on preservice elementary school teachers’ conceptions of mathematics and pedagogy.

**Developing Children’s Probability and Statistics Knowledge: A Research of Teachers’ Professional Development and Teacher Researchers**

**Organizer/Poster Presenter**
Celi Aparecida Espasandin Lopes, Universidade Estadual de Campinas-UNICAMP, Sao Paulo, Brazil
celilopes@uol.com.br

This presentation will illustrate my research with a visual display of materials. I will discuss the results.
Perspectives on Teachers’ and Students’ Algebraic Understandings

Organizer/Poster Presenter
Joanna O. Masingila, Syracuse University, Syracuse, New York
jomasing@syr.edu

Poster Presenters
Angeles Dominguez, ITESM, Campus Monterrey, Monterrey, Mexico
Jean H. Palm, Syracuse University, Syracuse, New York

Three perspectives of teachers’ and students’ algebraic understandings will be reported on: (a) middle school teachers’ models of their students’ algebraic thinking, (b) high school teachers’ understanding of algebra and how their students learn algebra, and (c) college students’ understandings of variable.

The Benefits of Order-of-Magnitude Problems in the Mathematics Classroom to Promote Creative Strategies to Use Problem-Solving Tasks

Organizer/Poster Presenter
Mika Munakata, Montclair State University, Upper Montclair, New Jersey
mm907@columbia.edu

Twenty eleventh-grade students were interviewed on their strategy use on order-of-magnitude problems. Data were analyzed with respect to students’ flexibility when solving these problems, their comfort with the ambiguity of the problems, and the mathematical soundness of their strategies.

New Methods for Teaching Mathematics Online to Independent Learners

Organizer/Poster Presenter
Joey Offer, University of Texas at Austin, Austin, Texas
joffer@mail.utexas.edu

Poster Presenter
Susan Williams, University of Texas at Austin, Austin, Texas

In this poster session, algebra 1 materials using a modified problem-based framework for students who work alone will be demonstrated. The materials were designed for a new online course through the Distance Education Center at the University of Texas at Austin.
An Alternative Approach to the Mathematics Education of Future Elementary School Teachers

**Organizer/Poster Presenter**
Dvora Peretz, Michigan State University, East Lansing, Michigan
pere@math.msu.edu

An alternative approach for teaching future elementary school teachers mathematics endorses a “Physical-Abstract” perspective, where students “Do Physically” to solve problems. Participants are invited to join a critical discussion about ongoing research, which it is hoped will lead to future collaboration.

Is the Algebra EOC Exam Aligned with Current Standards?

**Organizer/Poster Presenter**
Jane Ries, University of Texas at Austin, Austin, Texas
jane.ries@alumni.utexas.net

**Poster Presenters**
La Vergne Lestermeringolo, University of Texas at Austin, Austin, Texas
Phoebe Weidmann, University of Texas at Austin, Austin, Texas

Does the Texas Algebra End-of-Course exam align with NCTM (national) and TEKS (state) standards? This poster session will try to help determine the answer to that question and a few more along those lines.

The Effect of a Function-Based Approach to Teaching Prealgebra in a Ninth-Grade Introduction to Algebra I Course

**Organizer/Poster Presenter**
Elisabeth Beatty Riggs, Tarleton State University, Stephenville, Texas
eriggs@tarleton.edu

**Poster Presenter**
Trena Wilkerson, Baylor University, Waco, Texas

This research examines the effect of a function-based approach to teaching prealgebra in a ninth-grade public school classroom setting. Effects on algebra readiness, mathematics achievement, and attitude toward mathematics will be addressed.
Gaining Options: Girls Investigate Real Life

**Organizer/Poster Presenter**
Sally Roberts, Wayne State University, Detroit, Michigan
s.k.roberts@wayne.edu

**Poster Presenters**
Pamela T. Reid, University of Michigan, Ann Arbor, Michigan
Melissa C. Gilbert, University of Michigan, Ann Arbor, Michigan

Middle school girls build mathematical confidence, skills, and understanding by investigating mathematics and social science in a technology-rich environment. This presentation will discuss lessons learned and barriers overcome for the success of the program.

Teaching Algebra to Struggling Learners

**Organizer/Poster Presenter**
Laurie Rubel, University of Wisconsin—Madison, Madison, Wisconsin
lhrubel@wisc.edu

The Diversity in Mathematics Education Center for Learning and Teaching Mathematics (DiME Center) is an NSF-funded collaborative effort among UW-Madison, UC-Berkeley, and UCLA. The DiME Center is collaborating with the Madison Metropolitan School District on a teacher development program called Teaching Algebra to Struggling Learners. The program aims to help teachers continue to build an understanding of students’ algebraic thinking and to help teachers implement instructional practices that maximize student learning.

The Role of Identity in Supporting Professional Development through Collegial Interaction

**Organizer/Poster Presenter**
P. Mark Taylor, University of Tennessee, Knoxville, Tennessee
pmark@utk.edu

A study of the collegial interactions among teachers in three high school mathematics departments will be discussed. “Pillars” supporting or deterring collegial interaction as well as the central role of the teachers’ sense of identity are discussed.

Using National and International Assessment Frameworks to Improve Mathematics Instruction

**Organizers/Poster Presenters**
Tony Thompson, University of Alabama, Tuscaloosa, Alabama
athompson@bamaed.ua.edu
Stephen Sproule, St. John’s College, Johannesburg, South Africa
Assessment frameworks are used to guide the development of test items for NAEP, TIMSS, and PISA. The purpose of this research is to ascertain whether these frameworks can be adapted to guide decision making in the mathematics classroom.

Exploring Relationships between Reform-Based Pedagogical Practices and Equity in the Inner-City Classroom

Organizer/Poster Presenter
Candace Wooley, University of Colorado at Boulder, Boulder, Colorado
candace_wooley@ceo.cudenver.edu

Pedagogical enactments used by a high school mathematics teacher to foster discursive practices in an inner-city school classroom will be investigated in this session. In striving to create opportunities for students to author their own mathematical knowledge, the teacher made certain trade-offs in content and mathematical rigor that may or may not have been of service to the students. This issue and implications thereof will be discussed.

Mentoring Session for Novice Researchers

Organizers
Doug Grouws, University of Iowa, Iowa City, Iowa
douglas-grouws@uiowa.edu
Robert Reys, University of Missouri—Columbia, Columbia, Missouri
reysr@missouri.edu

Presenters
A group of experienced researchers will serve as informal mentors. (The list of mentors will be made available at the conference registration area.)

A group of experienced researchers, representing a diversity of research interests and methodologies, will be available to talk informally with small groups of conference participants about undertaking a personal research agenda. The session will be organized in roundtable format, with each mentor assigned to chat with a roundtable of five to ten participants.
Secondary School Mathematics Teachers’ Learning through Practice

Organizer/Presider/Presenter
Helen M. Doerr, Syracuse University, Syracuse, New York
hmdoerr@syr.edu

Presenters
Alice F. Artzt, Queens College of the City University of New York, Flushing, New York
Frances R. Curcio, Queens College of the City University of New York, Flushing, New York
Yusof Koc, Indiana University, Bloomington, Indiana
Rebecca McGraw, University of Arizona, Tucson, Arizona
Lyn D. English, Queensland University of Technology, Brisbane, Australia
Laura R. Van Zoest, Western Michigan University, Kalamazoo, Michigan
Jeffrey V. Bohl, Battle Creek Area Math and Science Center, Battle Creek, Michigan

Discussants
Catherine Brown, Indiana University, Bloomington, Indiana
Richard Lesh, Purdue University, West Lafayette, Indiana

Two studies examining secondary school mathematics teachers’ learning as they progressed from pre-service to beginning teachers and two that analyzed experienced teachers’ learning will be presented. The presenters and audience will discuss the research and the underlying theoretical perspectives.

Schools as a Unit of Change in Mathematics Education Professional Development: Issues for Implementation and Research

Organizers/Presenters
Paola Sztajn, University of Georgia, Athens, Georgia
psztajn@coe.uga.edu
Dorothy Y. White, University of Georgia, Athens, Georgia
dwhite@coe.uga.edu

Presenters
Neil Pateman, University of Hawaii, Honolulu, Hawaii
Joseph Zilliox, University of Hawaii, Honolulu, Hawaii
Martha Allexsaht-Snider, University of Georgia, Athens, Georgia
Rochelle Gutierrez, University of Illinois at Urbana-Champaign, Champaign, Illinois
DISCUSSANT
Patricia F. Campbell, University of Maryland, College Park, Maryland

This symposium will present professional development projects that work with entire schools or mathematics departments. The goal of the session is to examine the tensions and possibilities when considering schools as a unit of change in mathematics education reform.

007 A

Conceptualizing and Proving in Mathematics Classrooms

ORGANIZER/PRESIDER/PRESENTER
Patricio G. Herbst, University of Michigan, Ann Arbor, Michigan
pgherbst@umich.edu

PRESENTER/DISCUSSANT
Nicolas Balacheff, Laboratoire Leibniz–Institut Imag, Grenoble, France

PRESENTERS
Guershon Harel, University of California, San Diego, La Jolla, California
Eric Knuth, University of Wisconsin—Madison, Madison, Wisconsin

The session will discuss the role that proof may play in building and shaping the knowledge that a class holds as public and the challenges that teachers might have to confront as they enable students to investigate reasoning and proving the development of new concepts.

007 B

Research on Mathematics Education in Rural Settings

ORGANIZER/PRESIDER
James Schultz, Ohio University, Athens, Ohio
schultz@ohio.edu

PRESENTERS
Larry L. Hatfield, University of Georgia, Athens, Georgia
Craig Howley, Ohio University, Athens, Ohio
Carolyn R. Mahoney, Elizabeth City State University, Elizabeth City, North Carolina
Karma Nelson, University of Montana, Missoula, Montana
Edward Silver, University of Michigan, Ann Arbor, Michigan

This session will address issues in mathematics education in rural settings, a critical underrepresented area of research. It builds on a three-day research symposium involving leading mathematics education and rural researchers held in November 2002. Consistent with the goals of the November symposium, this session endeavors to promote the interface of mathematics education researchers and rural education researchers and identify means to extend and sustain research beyond ACCLAIM.

007 C & D
Climbing the Inference Wall: Trying an Informal Approach

**Organizer/Presenter**
Andee Rubin, TERC, Cambridge, Massachusetts
andeerubin@terc.edu

**Chair**
Cliff Konold, Scientific Reasoning Research Institute/University of Massachusetts, Amherst, Massachusetts

**Presenters**
Bill Finzer, KCP Technologies, Emeryville, California
Jim Hammerman, TERC, Cambridge, Massachusetts

This session will explore “informal inference,” a form of thinking that underlies statistical judgments without using the standard approaches of hypothesis testing and *p*-values. The role of two new statistical learning tools in supporting teachers’ development of informal inferential thinking through visualization and interaction with data will be analyzed.

Teacher Development through Examination of Practice

**Organizer/Presenter**
Karen Koellner-Clark, Georgia State University, Atlanta, Georgia
kkoellner@gsu.edu

**Presenters**
Miriam Amit, Ben Gurion University of the Negev, Beer Sheva, Israel
Maria L. Blanton, University of Massachusetts Dartmouth, North Dartmouth, Massachusetts
Catherine Lewis, Mills College, Oakland, California
James A. Middleton, Arizona State University, Tempe, Arizona
Aki Murata, Mills College, Oakland, California
Roberta Schorr, Rutgers, The State University of New Jersey, Newark, New Jersey
Akihiko Takahashi, University of Illinois at Urbana-Champaign, Champaign, Illinois
Karen Schultz, Georgia State University, Atlanta, Georgia

**Discussant**
Deborah Schifter, Education Development Center, Newton, Massachusetts

This symposium is intended to provide four perspectives on teacher education that support the current reform movement in mathematics education. These presentations all focus on “examination of teacher practice,” yet each takes a different epistemological and theoretical framework.
Relating Professional Development to the Classroom: Understanding Teachers’ Experiences

ORGANIZER/PRESENTER
Elham Kazemi, University of Washington, Seattle, Washington
ekazemi@u.washington.edu

PRESIDER
Virginia Stimpson, University of Washington, Seattle, Washington

PRESENTER
Anita Lenges, University of Washington, Seattle, Washington

DISCUSSANTS
Virginia Bastable, Mount Holyoke College, SummerMath for Teachers, South Hadley, Massachusetts
Miriam Sherin, Northwestern University, Evanston, Illinois

How teachers relate their professional development experiences in Developing Mathematical Ideas to their classrooms will be examined. This issue will be addressed theoretically and methodologically by presenting data that documents the diversity of teachers’ instructional practices within classrooms and teachers’ instructional dilemmas.
Wednesday, April 9, 2003

8:00 A.M. – 9:30 A.M.

Studying the Impact of Standards-Based Middle School Mathematics Curricula

Organizer/Chair/Presenter
Mary C. Shafer, Northern Illinois University, De Kalb, Illinois
shafer@math.niu.edu

Presenters
Robert Reys, University of Missouri—Columbia, Columbia, Missouri
Gerald Kulm, Texas A&M University, College Station, Texas

Discussant
Judi Zawojewski, Illinois Institute of Technology, Chicago, Illinois

Research from three longitudinal studies of the impact of standards-based middle school curricula will be shared. The studies focus on instruction, the use of curricular materials, teacher knowledge, and professional development in relation to student performance. Linkages among the studies are explored.

006 A

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

Organizer/Presenter
Sarah Theule Lubienski, Iowa State University, Ames, Iowa
stl@iastate.edu

Presenters
Marta Civil, University of Arizona, Tucson, Arizona
Emily Bernier, University of Arizona, Tucson, Arizona
Beatriz Quinteros, University of Arizona, Tucson, Arizona
Danny Martin, Contra Costa College, San Pablo, California
Dominic Peressini, University of Colorado at Boulder, Boulder, Colorado
Kate Masarik, San Diego State University, San Diego, California
Lisa Adajian, Portland State University, Portland, Oregon
Dan Canada, Portland State University, Portland, Oregon

Discussant
Joan Ferrini-Mundy, Michigan State University, East Lansing, Michigan

This symposium will examine parents' beliefs about mathematics instruction, their goals for their children, and ways in which these can vary across socioeconomic and ethnic contexts. The presenters will suggest avenues for meaningful inclusion of parents' perspectives in current reform efforts and will raise dilemmas inherent in such work.

006 C
Integrating Mathematics and Pedagogy: An Investigation of the Effects on Elementary Preservice Teachers’ Beliefs and Learning of Mathematics

**Organizer/Presider**
Randolph Philipp, San Diego State University, San Diego, California
rphilipp@mail.sdsu.edu

**Presenters**
Judith Sowder, San Diego State University–CRMSE, San Diego, California
Lisa Clement, San Diego State University–CRMSE, San Diego, California
Bonnie Schappelle, San Diego State University–CRMSE, San Diego, California
Eva Thanheiser, San Diego State University–CRMSE, San Diego, California

**Discussants**
Thomas J. Cooney, University of Georgia, Athens, Georgia
Megan Franke, University of California, Los Angeles, Los Angeles, California

For large-scale quantitative and qualitative studies from a research and development project designed to integrate mathematical content and children's mathematical thinking early in the undergraduate years of prospective elementary school teachers, the theoretical framework and results will be presented.

Recent Mathematical Sciences Education Board Reports and Conferences: Implications for Research, Policy, and Practice

**Organizer**
Carol LaCampagne, Mathematical Sciences Education Board, Washington, D.C.
clacampa@nas.edu

**Presenter**
Vicki Stohl, Mathematical Sciences Education Board, Washington, D.C.

MSEB is engaging in a number of activities that have implications for the mathematics education research community. Included for discussion are the following: A Review of the Evaluation Data on the Effectiveness of NSF-Supported and Commercially Generated Mathematics Curriculum Materials; the Mathematics Learning Study (K–8) and Its Extension to Mathematics Learning Study II (9–14); Attracting and Retaining U.S. Students in Mathematics and Mathematically Intensive Careers; Talking It Through: Cross-National Conversation about Secondary Mathematics Curriculum; and Building a Coherent System of Assessment in Mathematics.
Essential Elements of Lesson Study for Mathematics Teacher Professional Development

**Organizer/Presenter**
Jeffrey Hovermill, New Mexico State University, Las Cruces, New Mexico
hovermil@colorado.edu

**Presider/Discussant**
Jeffrey Frykholm, University of Colorado at Boulder, Boulder, Colorado

**Presenters**
Rebecca Perry, Mills College, Oakland, California
Wanda Guzman, New Mexico State University, Las Cruces, New Mexico

The supports and challenges that two United States lesson study projects have encountered while facilitating mathematics teacher professional development will be introduced as a springboard for subsequent discussion of the essential elements of lesson study.

007 B

NAEP Student Responses: How Can We Use Them and What Can We Learn from Their Use?

**Organizer/Moderator/Presenter**
Catherine A. Brown, Indiana University, Bloomington, Indiana
cathbrow@indiana.edu

**Presenter**
Diana V. Lambdin, Indiana University, Bloomington, Indiana

**Discussant**
Sandra K. Wilcox, Michigan State University, East Lansing, Michigan

This worksession will focus on the use of actual student responses to NAEP constructed-response mathematics items with three populations: teacher educators, teachers, and students. Participants will be asked to generate suggestions for research questions and designs.

007 C & D

Publishing in the *Journal for Research in Mathematics Education*

**Organizer/Presenter**
*Journal for Research in Mathematics Education* Editorial Panel, National Council of Teachers of Mathematics, Reston, Virginia

This worksession introduces attendees to the processes involved in publishing in the *Journal for Research in Mathematics Education (JRME)* with the purpose of encouraging the submission of high-quality manuscripts to JRME. The session will inform both experienced authors of research reports and newcomers to the field.

008 A
Writing about Research for a General Practitioner

ORGANIZER/PANELIST
Sandy Berger, National Council of Teachers of Mathematics, Reston, Virginia
sberger@nctm.org

PANELISTS
Denisse Thompson, University of South Florida, Tampa, Florida
Rose Mary Zbiek, University of Iowa, Iowa City, Iowa

The editorial panels of Teaching Children Mathematics, Mathematics Teaching in the Middle School, and the Mathematics Teacher will present tips and techniques for writing about research for a more general audience, followed by a question-and-answer period. For the third part of this session, we encourage you to bring specific ideas or manuscripts for discussion in individual or small-group format.

Wednesday, April 9, 2003
10:00 A.M. – 11:30 A.M.

Funding Opportunities in Mathematics Education Research

ORGANIZER/PRESENTER
Eric Hamilton, National Science Foundation, Arlington, Virginia
ehamilto@nsf.gov

PRESENTER
Barry Sloane, National Science Foundation, Arlington, Virginia

DISCUSSANT
Kathryn Chval, National Science Foundation, Arlington, Virginia

Representatives from NSF's Directorate for Education and Human Resources (EHR) will continue a series of annual NCTM Research Presession discussions on the state of funding for mathematics education research. A principal focus of discussion will be the more prominent and visible role that research is taking throughout EHR. Specific topics this year will include highlights of the newly integrated Evaluative Research and Capacity Building/Research on Learning and Education Programs; the Program in the Teacher Professional Continuum; Research, Evaluation, and Technical Assistance in the Math and Science Partnership Program; the Digital Libraries Program; and the new cross-directorate Science of Learning Program. Approximately half of the session will be reserved for questions and answers.
Knowledge for Teaching Algebra in Secondary School: Perspectives and Issues

**Organizer/Presider/Presenter**
Sharon L. Senk, Michigan State University, East Lansing, Michigan
senk@math.msu.edu

**Presenters**
Lew Romagnano, The Metropolitan State College of Denver, Denver, Colorado
Judith Mumme, WestEd, Camarillo, California
Nanette Seago, WestEd, Camarillo, California

**Discussant**
Ira Papick, University of Missouri—Columbia, Columbia, Missouri

Researchers from three projects describe how they have been studying knowledge for teaching algebra and discuss the implications of both their methodology and their findings for understanding the knowledge needed for teaching algebra in secondary school.

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The Role of Institutional Context in Enabling or Constraining Professional Teaching Communities as Sites for Teacher Change in Mathematics

**Organizer/Chair/Panel Moderator**
Kay McClain, Vanderbilt University, Nashville, Tennessee
kay.mcclain@vanderbilt.edu

**Presenters**
Paul Cobb, Vanderbilt University, Nashville, Tennessee
Julie Lechman, Madison #1 Middle School, Phoenix, Arizona
Troy Regis, Park Middle School, Phoenix, Arizona
Paula Schmitt, Meadows Middle School, Phoenix, Arizona
Leah Ashley, Lowe's Grove Middle School, Durham, North Carolina
Renee Synan, Carrington Middle School, Durham, North Carolina

**Reactors/Discussants**
Marty Simon, Pennsylvania State University, University Park, Pennsylvania
Elham Kazemi, University of Washington, Seattle, Washington

Results will be presented from research efforts at two sites where professional teaching communities have emerged to support teacher change. Teachers and researchers from each site will document aspects of the contrasting institutional contexts that enable or constrain ongoing efforts.
NAEP: Recent Data, Trends, and Issues

Organizer/Moderator/Presenter
Frank K. Lester, Jr., Indiana University, Bloomington, Indiana
lester@indiana.edu

Presenter/Discussant
Patricia A. Kenney, University of Michigan, Ann Arbor, Michigan

Presenters
Peter Kloosterman, Indiana University, Bloomington, Indiana
Paul Kehle, Indiana University, Bloomington, Indiana

Discussant
James S. Braswell, Educational Testing Service, Princeton, New Jersey

Respondent
Judith Sowder, San Diego State University, San Diego, California

This panel presentation will focus on NAEP mathematics trends from 1990 to 2000 along with an upcoming monograph on the NAEP program. A demonstration of the new online data tool for analyzing NAEP data will be included.

A National Study of Leadership in Mathematics and Science Education: Implications for Doctoral Programs in a Changing Educational Context

Organizer/Presenter
Gail Burrill, Michigan State University, East Lansing, Michigan
burrill@msu.edu

Presenter
Joan Ferrini-Mundy, Michigan State University, East Lansing, Michigan

Discussants
Karen Graham, University of New Hampshire, Durham, New Hampshire
Patricia Wilson, University of Georgia, Athens, Georgia
Karen King, Michigan State University, East Lansing, Michigan

Doctoral programs are crucial elements in preparing leaders in mathematics education and in shaping directions for research. What are we learning about our graduates, program structure, and leaders that can help us negotiate the changing research environment?
Inquiry Learning for Preservice Middle School Mathematics Teachers

**Organizer/Presider/Presenter**
Jeffrey Wanko, Miami University, Oxford, Ohio
wankojj@muohio.edu

**Presenters**
Iris DeLoach Johnson, Miami University, Oxford, Ohio
Jane Keiser Krumpe, Miami University, Oxford, Ohio
Jerry Stonewater, Miami University, Oxford, Ohio

**Discussants**
Glenda Lappan, Michigan State University, East Lansing, Michigan
Jennifer Bay-Williams, Kansas State University, Manhattan, Kansas

The researchers' multifaceted longitudinal study investigates preservice teachers' attitudes and beliefs about inquiry learning and implications for the Process Standards. Each presenter will share a different perspective and engage the audience in a discussion of the implications for next steps.

Factors Affecting the Mathematics Education of Hispanic Immigrant Middle Schoolers

**Organizer/Presenter**
Madeleine Long, American Association for the Advancement of Science, Washington, D.C.
mlong@aaas.org

**Presenters**
Meir Ben Hur, Virtual Learning Systems, Chicago, Illinois

**Discussants**
William Gesslin, University of New Hampshire, Durham, New Hampshire
Hector Hirigoyen, Miami Dade Public Schools (retired), Miami, Florida

This worksession uses results from an intervention program designed to prepare an underschooled immigrant population in Europe for successful integration into mainstream classrooms to explore research issues concerned with broader questions of Hispanic immigrant schooling and learning.

Visual Comprehension in Algebra, Statistics, and Calculus

**Organizers/Presenters**
Frances Van Dyke, American University, Washington, D.C.
vandyke@american.edu
Janet A. White, Millersville University, Millersville, Pennsylvania
jwhite@millersville.edu
In this session the importance of increased attention to visual comprehension in algebra, statistics, and calculus will be underscored. Groups will work in one of the three areas addressing typical misconceptions they have encountered in their students’ work.

Teaching and Learning Integrated Mathematics and Science: Benefits and Barriers

Organizer/Presenter
Karen Marrongelle, Portland State University, Portland, Oregon
marrongelle@mth.pdx.edu

Presider
Cheryl Moremi Adeyemi, Virginia Commonwealth University, Richmond, Virginia

Presenter
Shelly M. Jones, PIMMS–Wesleyan University, Middletown, Connecticut

Discussant
Sherry L. Meier, Illinois State University, Normal, Illinois

This symposium discusses the benefits of and barriers to integrating mathematics and science during classroom instruction. The integration of mathematics and science curricula is examined from the teacher’s perspective at the middle school level and from the student’s perspective at the undergraduate level.

Wednesday, April 9, 2003

12:45 P.M. – 3:15 P.M.

The Upcoming Research Catalyst Conference

Organizers/Presiders/Presenters
Standards Impact Research Group, National Council of Teachers of Mathematics, Reston, Virginia
standards@nctm.org

This session will present a discussion of the upcoming Research Catalyst Conference, which will be presented by the National Council of Teachers of Mathematics with partial funding from the National Science Foundation. The objectives of the conference are to improve pre-K–12 mathematics teaching and learning and to build and strengthen an interdisciplinary research community. The conference is scheduled for September 11–13, 2003, in Reston, Va. As applications and conference information become available, they can be accessed through http://www.nctm.org/highered/index.htm.
Networked Handhelds: How Can Classroom Connectivity Advance Standards-Based Teaching?

**Organizer/Presenter**
Jeremy Roschelle, SRI International, Menlo Park, California  
roschelle@acm.org

**Chair**
Jim Kaput, University of Massachusetts Dartmouth, North Dartmouth, Massachusetts

**Chair/Presenter**
Walter Stroup, University of Utah, Salt Lake City, Utah

**Presenters**
Sarah Davis, Texas Instruments, Dallas, Texas  
Stephen Hegedus, University of Massachusetts Dartmouth, North Dartmouth, Massachusetts  
Phil Vahey, SRI International, Menlo Park, California

**Discussants**
Nancy Ares, University of Utah, Salt Lake City, Utah  
Eric Hamilton, National Science Foundation, Arlington, Virginia

The wireless linking of handhelds or computers offers new ways to organize aspects of classroom mathematics, affecting content, teaching, and assessment as well as personal and social aspects of mathematical experience. How can we best use these new capabilities?

Researching Intervention in Early Number Learning

**Organizer/Presenter**
Robert Wright, Southern Cross University, Lismore, New South Wales, Australia  
bwright@scu.edu.au  
astafford@rivergent.net

**Presenters**
Holly MacLean, Alief Independent School District, Houston, Texas  
James Martland, University of Liverpool, Liverpool, England  
Penny Munn, University of Strathclyde, Glasgow, Scotland  
Lois Williams, Mary Baldwin College, Staunton, Virginia

**Discussants**
Kay McClain, Vanderbilt University, Nashville, Tennessee  
Neil A. Pateman, University of Hawaii, Honolulu, Hawaii

This session presents results of an intervention in early number learning that has been implemented in school districts across the United States and in other countries. The intervention allows schools to respond to increased emphasis on student success in mathematics.
A Systematic Look at Learning, Development, and Curriculum Design in Mathematics Education: The Impact of Case’s Theory

**Organizer**
Joan Moss, University of Toronto, Toronto, Ontario
jmoss@oise.utoronto.ca

**Coauthors/Presenters**
Mindy Kalchman, University of Wisconsin—Madison, Madison, Wisconsin
Yukari Okomoto, University of California, Santa Barbara, Santa Barbara, California

**Reactors**
Paul Cobb, Vanderbilt University, Peabody College, Nashville, Tennessee
Lyn English, Queensland University of Technology, Brisbane, Australia
Jim Hiebert, University of Delaware, Newark, Delaware
Kenneth Koedinger, Human-Computer Interaction Institute, Carnegie Mellon University, Pittsburgh, Pennsylvania

In this session particular features of Case’s theory of intellectual development for curriculum design and instruction in mathematics will be analyzed. The implications of this theory through the presentation of cross-cultural data as well as new data from instructional interventions in rational number and functions will also be discussed.
Developing Algebraic Thinking in Early Grades: Case Studies of Chinese, Japanese, Russian, Singaporean, South Korean, and U.S. Elementary School Mathematics Curricula

Organizer/Presenter
Jinfa Cai, University of Delaware, Newark, Delaware
jcai@math.udel.edu

Presenters
Toshiakira Fujii, Tokyo Gakugei University, Tokyo, Japan
DeAnn Huinker, University of Wisconsin—Milwaukee, Milwaukee, Wisconsin
Hee Chan Lew, Korea National University of Education, Cheongwon, Choonbuk, Korea
Swee Fong Ng, National Institute of Education, Singapore
Jean Schmittau, SUNY at Binghamton, Binghamton, New York
John C. Moyer, Marquette University, Milwaukee, Wisconsin

Discussants
Thomas Carpenter, University of Wisconsin—Madison, Madison, Wisconsin
Carolyn Kieran, Université du Québec à Montréal, Montreal, Quebec

The purpose of this symposium is to provide an international perspective (including China, Japan, Russia, South Korea, Singapore, and the United States) on developing students' informal and formal algebraic thinking in elementary school.

Wednesday, April 9, 2003

1:30 P.M. – 3:00 P.M.

How High School Students Approach Algebra Problems: A Cross-Curricular Study

Organizer/Presenter
Mary Ann Huntley, University of Delaware, Newark, Delaware
huntley@math.udel.edu

Presider
Robin Marcus, University of Maryland, College Park, Maryland

Presenter
Jeremy Kahan, University of Minnesota, Minneapolis, Minnesota

Discussants
M. Kathleen Heid, Pennsylvania State University, State College, Pennsylvania
Daniel Goroff, Harvard University, Cambridge, Massachusetts

An interview study focusing on how pairs of high school students ($n = 44$), using different curricula, approach a variety of algebra problems will be reported on. Problems include solving purely algebraic sentences, items embedded in contextual settings (modeling), and items involving graphing.

007 C & D

Tracking the Student Performance of Staff-Development Participants

**Organizer/Presenter**
Nancy Lewis, University of Central Florida, Orlando, Florida
nlewis@mail.ucf.edu

**Presenters**
Michael C. Hynes, University of Central Florida, Orlando, Florida
Juli K. Dixon, University of Central Florida, Orlando, Florida
Elizabeth Hoffman, University of Central Florida, Orlando, Florida
Kim Lowery, University of Central Florida, Orlando, Florida

This interactive worksession will focus on tracking the student performance of the participants in staff development programs. Models for tracking student performance in an NSF-funded staff development program will be shared.

008 A

The Joint Impact of a Semestered (4 × 4) Block Schedule and the Interactive Mathematics Program (IMP) Curriculum on High School Mathematics Achievement

**Organizer/Presenter**
Steven L. Kramer, University of Maryland, College Park, Maryland
skramer@wam.umd.edu

**Presenters**
Regina Keller, Strath Haven High School, Wallingford, Pennsylvania
Joseph Merlino, LaSalle University, Philadelphia, Pennsylvania

The session will report results from a six-year longitudinal study of mathematics achievement at a suburban high school that simultaneously adopted a semestered (4 × 4) block schedule and the Interactive Mathematics Program (IMP), a curriculum designed to implement the NCTM’s 1989 *Curriculum and Evaluation Standards for School Mathematics.*
Toward Defining the “Scientific” in Scientific Research in Mathematics Education

SPEAKER
Jere Confrey, University of Texas at Austin, Austin, Texas
jere@mail.utexas.edu

Starting with a synopsis of the argument in Scientific Research in Education (NRC), a meaning for scientific research in mathematics education differentiating from other types of studies will be defined. This approach will be contrasted with the proposed criteria from the What Works Clearinghouse and those articulated in Making Social Science Matter (Flyvbjerg). Examples will be drawn from design experiments, research on curricular effectiveness, research on the psychometrics of testing, and implementation research. These analyses will result in a call for substantial changes in the conduct of some research in mathematics education.
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<td>Lila Cockrell Theatre</td>
<td>Leadership and Learning in Elementary Schools: Three Cases of Collaboration among Principals, Teacher-Leaders, and Mathematics Coaches</td>
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<td>What Constitutes Good Mathematics Teaching and How It Develops: Nine High School Teachers’ Perspectives</td>
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<td>Generalization and Proof, Grades K–5: Learning from Classroom Cases</td>
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<td>Teacher Leadership Roles: What Our Research Has Uncovered about Initiating and Implementing Them</td>
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<td>Experimental and Quasi-Experimental Research on Instructional Approaches for Teaching Mathematics to Students with Learning Disabilities</td>
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<td>Developing Children’s Probability and Statistics Knowledge: A Research of Teachers’ Professional Development and Teacher Researchers</td>
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<td>New Methods for Teaching Mathematics Online to Independent Learners</td>
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<td>The Benefits of Order-of-Magnitude Problems in the Mathematics Classroom to Promote Creative Strategies to Use Problem-Solving Tasks</td>
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The Role of Curriculum in Mathematics Courses for Prospective Elementary School Teachers 006 A B & C

Interpretive Frameworks and Integrated Instruction 006 A B & C

Applying Research Results in Classrooms 006 A B & C

Exploring Relationships between Reform-Based Pedagogical Practices and Equity in the Inner-City Classroom 006 A B & C

Lesson Studies: Russian Experience 006 A B & C

Developing Teacher-Leaders in Mathematics through Professional Learning Communities 006 A B & C

Using National and International Assessment Frameworks to Improve Mathematics Instruction 006 A B & C

The Role of Identity in Supporting Professional Development through Collegial Interaction 006 A B & C

Teaching Algebra to Struggling Learners 006 A B & C

Gaining Options: Girls Investigate Real Life 006 A B & C

The Effect of a Function-Based Approach to Teaching Prealgebra in a Ninth-Grade Introduction to Algebra I Course 006 A B & C

1:30 p.m. – 2:30 p.m. (Mentoring Session)

Mentoring Session for Novice Researchers 007 C & D

2:45 p.m. – 5:15 p.m. (Concurrent Sessions)

Secondary Mathematics Teachers’ Learning through Practice 006 D

Schools as a Unit of Change in Mathematics Education Professional Development: Issues for Implementation and Research 007 A

Conceptualizing and Proving in Mathematics Classrooms 007 B

Research on Mathematics Education in Rural Settings 007 C & D

Climbing the Inference Wall: Trying an Informal Approach 008 A & B

Teacher Development through Examination of Practice 205

Relating Professional Development to the Classroom: Understanding Teachers’ Experiences 206 A

WEDNESDAY, APRIL 9, 2003

8:00 a.m. – 9:30 a.m. (Concurrent Sessions)

Studying the Impact of Standards-Based Middle School Mathematics Curricula 006 A

If We Build It, Will They Come? A Diversity of Perspectives on Parents and School Mathematics Reform 006 C

Integrating Mathematics and Pedagogy: An Investigation of the Effects on Elementary Preservice Teachers’ Beliefs and Learning of Mathematics 006 D

Recent Mathematical Sciences Education Board Reports and Conferences: Implications for Research, Policy, and Practice 007 A

Essential Elements of Lesson Study for Mathematics Teacher Professional Development 007 B

NAEP Student Responses: How Can We Use Them and What Can We Learn from Their Use? 007 C & D

Publishing in the Journal for Research in Mathematics Education 008 A

Writing about Research for a General Practitioner 008 B
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NCTM 2002 Research Presession
General Evaluation Form

1. The most useful part of the Presession for me was…

2. The least useful part of the Presession for me was…

3. Were there research topics that you expected to be included but weren’t?

4. Sessions were designed to create opportunities for interaction between presenters and participants. Please comment on the opportunities for such interaction.

5. Which of the following best describes you? (Please circle as many as apply.)
   a. Graduate student
   b. School administrator or supervisor
   c. K–12 teacher
   d. Researcher
   e. Mathematician
   f. Higher education/mathematics education
   g. Higher education/other
   h. Professional developer
   i. Other______________________________

6. How often have you attended the Research Presession? (Please circle one.)
   a. First time
d. More often than three times
   b. Second time
c. Third time

7. Please feel free to offer any additional comments.