THE 3 E'S OF MATHEMATICS:
EMPOWERING THROUGH EQUITY IN EDUCATION

RCOPM
21st ANNUAL CONFERENCE

FEBRUARY 10-12, 1994

RADISSON PLAZA HOTEL
FORT WORTH, TEXAS
RESEARCH COUNCIL FOR DIAGNOSTIC
AND PRESCRIPTIVE MATHEMATICS

TWENTY-FIRST ANNUAL CONFERENCE

THE 3 E'S:

EMPOWERING THROUGH EQUITY
IN EDUCATION

FEBRUARY 10-12, 1994
RADDISON PLAZA HOTEL
FORT WORTH, TEXAS
**1994 Conference Committee**

Beatrice Moore-Harris, Co-Chair  
Fort Worth Independent School District  
Fort Worth, TX  

Bettye Forte, Co-Chair  
Director of Math  
Fort Worth Independent School District  
Fort Worth, TX

**1994 Program Committee**

Frances M. Thompson, Chair  
Texas Woman's University  
Denton, TX

Janie F. Schielack  
Texas A & M University  
College Station, TX

Mariella Smith Morgan  
Temple ISD

**RCDPM Executive Board and Appointed Officers**

Martin L. Johnson, President  
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Roy Callahan, VP for Publications  
Cynthia Miller, Secretary  
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George Wyer, Membership Coordinator  
Anna O. Graeber, Newsletter Editor

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**RCDPM**

**Twenty-First Annual Conference**

**February 10-12, 1994**  
Fort Worth, Texas

**Thursday, February 10, 1994**

**8:00 AM-12:00 Noon**  
RCDPM Executive Board Meeting  
*Presidential Suite*

**11:00 AM-2:00 PM**  
Conference Registration  
*Mezzanine*

**12:00-12:30 PM**  
First Timers' Orientation and Information Session  
( hosted by RCDPM Officers)  
*Continental*

**1:00-2:00 PM**  
Opening Session  
*Crystal Ballroom*

**Keynote Address**

*President:* Bettye Forte, Conference Co-Chair

*Speaker:* Dr. Don R. Roberts,  
Superintendent of Schools,  
Fort Worth Independent School District,  
Fort Worth, TX

*Empowering through Equity in Education*
Thursday, February 10, 1994 (continued)

2:15-3:15 PM PRESENTATIONS

1. Mathematics Facilitators
   Trish Koontz, Kent State University, Kent, OH

2. Mathematics Proclivity Survey
   Sue Brown, University of Houston-Clear Lake, TX
   Joe Dan Austin, Rice University, Houston, TX

3. Emphasis on Mathematical Concepts and Its Relation to Developmental Mathematics Students’ Performance, Anxiety, and Attitude
   Vera Preston, Austin Community College, Austin, TX
   Charles E. Lamb, University of Texas, Austin, TX

4. Changing Preservice Secondary Mathematics Teachers’ Reported Reasons for Student Errors and Reported Methods of Intervention
   Anna O. Graeber, University of Maryland, College Park, MD

5. Comparative Study of Preservice Teachers’, High School Students’, and Practicing Teachers’ Metaphors for Mathematics Teaching and Learning
   Jayne Fleener, University of Oklahoma, Norman, OK

Room

Tarrant

Scott

Citizens A

Van Zandt

3:30-4:30 PM PRESENTATIONS

6. President’s Hour:
   Informal Visit with Past and Present RCDPM Presidents
   Tarrant

7. Constructivism as a Source of Mathematical Empowerment
   John A. Fossa, UFRN (Brazil) and Texas A&M University, College Station, TX

8. Preservice Secondary Mathematics Teachers’ Perceptions of Themselves as Teachers and Learners
   Charles E. Lamb, University of Texas, Austin, TX
   P. Gail Kirkwood, Grand Canyon University, Phoenix, AZ
   Mark Christal, University of Texas, Austin, TX

9. Self-Paced Precalculus Mathematics
   Vincent P. Schielack, Jr., Texas A & M University, College Station, TX

10. Accommodating Assessment and Learning: Portfolios and Preservice Teachers in Field Experiences
    Denese Jones, University of Kentucky, Lexington, KY
    Alan Zollman, Northern Illinois University, DeKalb, IL

        4:30 PM on---Free Evening. Discover Ft. Worth on your own!
Friday, February 11, 1994

7:00-8:00 AM
Continental Breakfast
Room Crystal Ballroom

8:00-10:00 AM
Conference Registration (cont.)
Mezzanine

8:00-8:50 AM PRESENTATIONS

11. Teaching Functions and Graphing: Instructional Decisions and Change
   Kingsley Durant, University of Virginia, Charlottesville, VA
   Room Rose

12. Societal and Ethnic Factors Affecting Sixth Grade African American Students' Performance in a Mathematics Class
   Marilyn E. Strutchens, University of Kentucky, Lexington, KY
   Room Tarrant

13. Recognizing and Understanding the Special Needs of the Mathematically Gifted Female
   Mildred (Millie) Martin, Texas A & M University, College Station, TX
   Room Scott

14. Writing Assignments Contained in Mathematics Textbooks
   Barbara Bando Irvin, Irvin Educational Consultant Services, Plano, TX
   Room Metropolitan

15. Clinical Methods for Treating Theoristic Disabilities
   Clyde L. Greeno, The MAEI Institute, Tulsa, OK
   Room Citizens A

9:00-9:50 AM PRESENTATIONS

16. Cutting Up: Equivalent Fractions in a Geometric Setting
   Vicki Schell, Lenoir-Rhyne College, Hickory, NC
   Marguerite Mason, University of Virginia, Charlottesville, VA
   Room Continental

17. Fostering Mathematical Communication in Primary Classrooms
   Deborah A. Carey, University of Maryland, College Park, MD
   Room Rose

18. Effects of School-Type and Gender of the Mathematics Teacher on Nigerian Female Students' Mathematics Achievement
   Winifred Mallam, Texas Woman's University, Denton, TX
   Room Tarrant

19. A Model Supplementary Mathematics Program for Children at Risk
   Bennie A. Adams, St. Louis Community College, Forest Park, MO
   Room Scott

20. Teaching Sixth Grade Geometry with TinkerToys
   Paulette Fenoglio, Prairie Valley ISD, Prairie Valley, TX
   Room Metropolitan

9:50-10:10 AM
Coffee Break
Foyer, Third Floor
10:10 AM–12:00 NOON  WORKSHOPS

Karen S. Norwood, North Carolina State University, Raleigh, NC

22. Discovering Pentacubes
Jane F. Schielack, Texas A & M University, College Station, TX

10:10–11:00 AM  PRESENTATIONS

23. Impact of Instructional Style on the Mathematics Learning of African American Students: A Case Study
Ildoreyin Jamar, LRDC–University of Pittsburgh, Pittsburgh, PA

24. Teachers’ Understanding of Data Interpretation
George W. Bright, University of North Carolina, Greensboro, NC

25. Gender Equity Strategies for Mathematics
David A. Young, Fayetteville Public Schools, Fayetteville, AR

Friday, February 11, 1994 (continued)

10:10–11:00 AM  PRESENTATIONS

Susan L. Westbrook and Laura N. Rogers, North Carolina State University, Raleigh, NC
Jayne Fleener, University of Oklahoma, Norman, OK

27. Using HANDS–ON EQUATIONS to Teach Algebra to At–Risk and Learning Disabled Sixth Graders
Jennifer Barclay, Red Oak ISD, Red Oak, TX

11:10–12:00 NOON  PRESENTATIONS

28. Using a Constructivist Approach with Manipulatives in Teaching Mixed Numbers
Charles E. Mitchell, Tarleton State University, Stephenville, TX

29. Differences in Ability to Generalize Mathematical Problems Among Sixth and Seventh Grade Students
Mildred (Millie) Martin, Texas A & M University, College Station, TX

30. Use of Multiple Assessments for Diagnosis and Remediation in the Primary Grades
Patricia M. Lamphere, University of Montana, Missoula, MT
Friday, February 11, 1994 (continued)

11:10 AM—12:00 Noon PRESENTATIONS

31. Strategies for Teaching Topics
   In Geometry to Secondary Students
   and Developmental College Students
   Verlyn G. Stahlecker, St. Philip's College,
   San Antonio, TX

32. Spatial Visualization Instruction:
    Metropolitan
    Computers vs. Concrete Materials
    Cindy Higginbotham, Art Institute of Dallas,
    Dallas, TX

12:15—1:45 PM
Luncheon and Annual Business Meeting
Crystal Ballroom
Luncheon Entertainment by THE RAINBOW CONNECTION,
Texas Woman's University, Denton, TX
Presider at Business Meeting:
Martin L. Johnson, RCDPM President

2:00—3:50 PM WORKSHOPS

33. Integrating Math and Science Activities for Culturally Diverse Students
    David M. Davison, Dixie L. Metheny, and
    Kenneth W. Miller, Eastern Montana College,
    Billings, MT

34. Error Analysis in the Interpretation of Line Graphs
    Barb Patton, University of Houston at Victoria, TX
    and Private Educational Consultant

Friday, February 11, 1994 (continued)

2:00—2:50 PM PRESENTATIONS

35. Math on Display: Experiencing Math from Children's Literature
    Wendy Abbott, Cathy Wittie, Jana Crouch, and Cindy Madison, Stephenville ISD, Stephenville, TX

36. And How Much Is That? A Look at Estimation and Measurement Skills
    Judith and Melfried Olson, Western Illinois University,
    Macomb, IL

37. Adding Fractions with Fraction Bars and Pictorial Models
    Glenna Hawkins, Dallas Christian School,
    Dallas, TX

38. Applying Constructivism to Math and Science Teaching
    Gail Kirkwood, Grand Canyon University,
    Phoenix, AZ

39. Mathematics Instruction and Assessment in the Middle Grades: Bridging the Gap
    Michaela F. Chappell and Denise R. Thompson,
    University of South Florida, Tampa, FL

3:00—3:50 PM PRESENTATIONS

40. Overcoming Reticence: Technology to the Rescue
    Phyllis F. Kavett, Kean College of New Jersey,
    Union, NJ
Friday, February 11, 1994 (continued)

3:00–3:50 PM PRESENTATIONS

41. The Role of Learning Styles in a Developmental Mathematics Classroom
   Lisa Crilley, Hiram College, Hiram, OH

42. Providing Effective Mathematics Instruction to African-American Students: Impact of Culture and a Case for Cooperative Learning
   Edward McDonald, LRDC-University of Pittsburgh, Pittsburgh, PA

43. Classroom Application in Assessing the Goals of the NCTM STANDARDS
   Gail Kirkwood, Grand Canyon University, Phoenix, AZ
   Kimber Eckman, Washoe County ISD, Reno, NV

44. Linguistic Teaching in Developmental Mathematics
   Janice M. Green, Hiram College, Hiram, OH

4:00–4:50 PM PRESENTATIONS

45. Missouri's MATH ATTACK: Rejuvenating Middle School Math
   Larry N. Campbell, Ozark Mountain Community Classroom, Branson, MO

46. One School District's Efforts to Meet the NCTM CURRICULUM STANDARDS for the Middle School
   Mary Ellen Schmidt, Ohio State University, Mansfield, OH

Friday, February 11, 1994 (continued)

4:00–4:50 PM PRESENTATIONS

47. Bringing Underrepresented Minorities into Math-Related Professions through Pre-College Programs
   David E. Boliver, University of Central Oklahoma, Edmond, OK
   Manuel Barriozabal, TexPREP, University of Texas, San Antonio, TX
   General G. Marshall, PSREP, Huston-Tillotson College, Austin, TX

4:00–4:50 PM SPECIAL INTEREST GROUPS

   Discussion Leader:
   Jayne Fleener, University of Oklahoma, Norman, OK

49. Worksession: Networking the RCDPM Membership
   Discussion Leaders:
   George A. Wyer, West Hartford Public Schools, West Hartford, CT
   Diane Jordan and Jerome B. Senturia, Cleveland State University, Cleveland, OH

50. Clinical Methods
   Discussion Leader:
   Clyde L. Greeno, The MALEI Institute, Tulsa, OK

4:50–6:30 PM
Some free time before dinner! Be prepared for a delightful evening!
Friday, February 11, 1994 (continued)

6:30–9:00 PM  
RCDPM Dinner  
Room  
Crystal Ballroom

Presider: Frances M. Thompson, Program Chair
Special Guest: Len Barron, Educator–Entertainer, Boulder, CO

Walking Lightly—A Portrait of Einstein

Saturday, February 12, 1994

7:00–8:00 AM  
Continental Breakfast  
Room  
Crystal Ballroom

8:00–8:50 AM  PRESENTATIONS

51. Student Opinions and Attitudes toward Teaching Methods in Developmental Mathematics Courses  
Diana S. Perdue, University of Virginia, Charlottesville, VA

52. Mathematics and Other Indicators for Success of Minorities in College  
Patricia A. Brosnan and Mary Ellen Schmidt, Ohio State University, Columbus, OH

53. Prescriptives for Test Anxiety  
Evelyn R. Brown, Texas Southern University, Houston, TX

8:00–8:50 AM  PRESENTATIONS

54. Effect of a Computer Algebra System on Students’ Problem-Solving Achievement in Undergraduate Remedial Mathematics  
Cynthia R. Trout, St. Edward’s University, Austin, TX

55. Changes in Undergraduate Preservice Teachers’ Beliefs during an Elementary Teacher Certification Program  
George W. Bright and Nancy Nesbitt Vacc, University of North Carolina, Greensboro, NC

56. Video and Printed Materials to Increase Female Participation in Math and Science  
Judith Olson, Western Illinois University, Macomb, IL

57. Sociological Foundations of Math: Educational Implications  
Ramaswami Mahalingam, University of Pittsburgh, Pittsburgh, PA

58. Do Elementary Education Majors Have a Reason to Fear Mathematics?  
Mary Lou Nevin, California State University, Bakersfield, CA

Saturday, February 12, 1994 (continued)

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Mary Lou Nevin, California State University, Bakersfield, CA
9:00–9:50 AM PRESENTATIONS

59. Methodology or Content: Which Is the Focus?  
Virginia Usnick and Marilyn Sue Ford,  
University of Nevada, Las Vegas, NV

60. Diagnosing for Success: A Study of College Basic Mathematics Students  
Barbara Sunderland Rives, Lamar University, Orange, TX

9:50–10:10 AM Coffee Break  
Foyer, Third Floor

10:10–11:00 AM PRESENTATIONS

61. Following the Yellow Brick Road: The Path of Misconceptions in the Concept of Inverses of Polynomial Functions  
Vicki Schell, Lenoir-Rhyne College, Hickory, NC  
Sharon Spencer, Pensacola Junior College, Pensacola, FL

62. Enriching Mathematics Methods Courses  
Sheryl A. Maxwell, University of Virginia, Charlottesville, VA

63. Adults with Learning Disabilities: Emerging Perspectives and Instructional Strategies  
Beatrice C. Babbitt, University of Nevada, Las Vegas, NV

11:15 AM–12:30 PM CLOSING SESSION  
Crystal Ballroom

John W. Wilson Memorial Lecture  
Presider: Martin Johnson, RCPDM President

Speaker: Dr. Thom Alcoze, Director  
Center for Native Education and Cultural Diversity, Northern Arizona University, Flagstaff, AZ

Creating Relevant Mathematics and Science Experiences for Native American Learners  
[question and answer session to follow lecture]

SO LONG, Y'ALL! HOPE YOU ENJOYED YOUR SHORT STAY IN TEXAS! COME SEE US AGAIN REAL SOON!
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Research Council for Diagnostic and Prescriptive Mathematics 21st Annual Conference  
Fort Worth, Texas  
February 10-12, 1994  
Registration Form

Name

Mailing Address

Phone day ( ) evening ( )

Institutional Affiliation

Special Requests: I will need a sign language interpreter for the conference (circle one)  Yes  No

Registration Information

Full registration includes coffee breaks each day throughout the conference, continental breakfast, lunch and banquet on Friday, and continental breakfast on Saturday. Please circle the appropriate category on this form.

Member  Full Conference $130  Friday Only $80
Non-Member  Full Conference $150  Friday Only $100
Speaker  $120 (reduced fee limited to one speaker per session)
Guest of Registrant  $75 (write name of guest below for badge)

Full Time Student  Full Conference $75  Friday Only $50
Banquet tickets available for Friday Only registrants at $25 each.
Annual RCDPM Membership Fee  (Includes FOCUS subscription)  $28

Total Enclosed $ __________

Make checks payable to RCDPM. Mail your registration to:
Beatrice Moore-Harris, 3200 Clovermeadow, Fort Worth, Texas 76123
Registration Deadline is January 31, 1994
Research Council for Diagnostic and Prescriptive Mathematics 21st Annual Conference
Hotel Information

ALL HOTEL RESERVATIONS ARE TO BE MADE DIRECTLY WITH THE HOTEL

Conference Hotel: Radisson Plaza Hotel Fort Worth
815 Main Street
Fort Worth, Texas 76102
Phone: 817-870-2100
Fax: 817-335-3408

Guest Room Accommodations:

Single $70 Double $70
Triple 80 Quad $80

THESE RATES DO NOT INCLUDE CITY, STATE, OR LOCAL TAXES.

You must state that you are with the RCDPM Conference in order to receive the conference rates.

A limited number of rooms are available at the conference rate so make your reservations as soon as possible!

Hotel reservations may be made by calling 1-800-333-3333 or 817-870-2100.

Transportation to and from the airport is available through the Airporter Bus Service (817) 334-0092 (from DFW Airport only), the Super Shuttle (817) 329-2090 (from DFW Airport only) or (817)329-2025 (from Love Field only) and local taxi companies.