



**THE 3 E'S OF
MATHEMATICS:**

**EMPOWERING
THROUGH
EQUITY
IN
EDUCATION**

RCDPM

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
RADISSON PLAZA HOTEL
FORT WORTH, TEXAS**

1994 Conference Committee

Beatrice Moore-Harris, Co-Chair
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Fort Worth, TX

Bettye Forte, Co-Chair -- Director of Math
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R C D P M

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

Room

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

Presider: 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

Room

1. **Mathematics Facilitators** Tarrant
Trish Koontz, Kent State University,
Kent, OH
2. **Mathematics Proclivity Survey** Scott
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** Citizens A
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** Van Zandt
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** Rose
Jayne Fleener, University of Oklahoma, Norman, OK

Thursday, February 10, 1994 (continued)

3:30-4:30 PM PRESENTATIONS

Room

6. **President's Hour: Informal Visit with Past and Present RCDPM Presidents** Tarrant
 7. **Constructivism as a Source of Mathematical Empowerment** Van Zandt
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** Scott
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** Rose
Vincent P. Schielack, Jr., Texas A & M University,
College Station, TX
 10. **Accommodating Assessment and Learning: Portfolios and Preservice Teachers in Field Experiences** Citizens A
Deneese 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** Rose
Kingsley Durant, University of Virginia, Charlottesville, VA
12. **Societal and Ethnic Factors Affecting Sixth Grade African American Students' Performance in a Mathematics Class** Tarrant
Marilyn E. Strutchens, University of Kentucky, Lexington, KY
13. **Recognizing and Understanding the Special Needs of the Mathematically Gifted Female** Scott
Mildred (Millie) Martin, Texas A & M University, College Station, TX
14. **Writing Assignments Contained in Mathematics Textbooks** Metropolitan
Barbara Bando Irvin, Irvin Educational Consultant Services, Plano, TX
15. **Clinical Methods for Treating Theoristic Disabilities** Citizens A
Clyde L. Greeno, The MALEI Institute, Tulsa, OK

Friday, February 11, 1994 (continued)

9:00-9:50 AM PRESENTATIONS

Room

16. **Cutting Up: Equivalent Fractions in a Geometric Setting** Continental
Vicki Schell, Lenoir-Rhyne College, Hickory, NC
Marguerite Mason, University of Virginia, Charlottesville, VA
17. **Fostering Mathematical Communication in Primary Classrooms** Rose
Deborah A. Carey, University of Maryland, College Park, MD
18. **Effects of School-Type and Gender of the Mathematics Teacher on Nigerian Female Students' Mathematics Achievement** Tarrant
Winifred Mallam, Texas Woman's University, Denton, TX
19. **A Model Supplementary Mathematics Program for Children at Risk** Scott
Bennie A. Adams, St. Louis Community College, Forest Park, MO
20. **Teaching Sixth Grade Geometry with Tinkertoys** Metropolitan
Paulette Fenoglio, Prairie Valley ISD, Prairie Valley, TX

9:50-10:10 AM

Coffee Break

Foyer, Third Floor

Friday, February 11, 1994 (continued)

10:10 AM-12:00 NOON WORKSHOPS Room

21. **Alternative Assessment:
Effective Strategies for
Evaluating the Mathematics
Knowledge of Diverse Students** Continental
Karen S. Norwood, North Carolina State University,
Raleigh, NC

Handwritten
~~22.~~ **Discovering Pentacubes** Citizens B
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** Scott
Idorenyin Jamar, LRDC-University of Pittsburgh,
Pittsburgh, PA

24. **Teachers' Understanding of Data
Interpretation** Citizens A
George W. Bright, University of North Carolina,
Greensboro, NC

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

Friday, February 11, 1994 (continued)

10:10-11:00 AM PRESENTATIONS Room

~~26.~~ **Development and Validation
of the Middle Grades Process
Assessment Tool (MGPAT):
Alternative Strategies for Assessing
Mathematics and Science Reasoning** Van Zandt
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** Metropolitan
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** Tarrant
Charles E. Mitchell, Tarleton State University,
Stephenville, TX

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

30. **Use of Multiple Assessments for
Diagnosis and Remediation in the
Primary Grades** Citizens A
Patricia M. Lamphere, University of Montana,
Missoula, MT

Friday, February 11, 1994 (continued)

11:10 AM-12:00 Noon PRESENTATIONS Room

31. **Strategies for Teaching Topics in Geometry to Secondary Students and Developmental College Students** Rose
Verlyn G. Stahlecker, St. Philip's College, San Antonio, TX
32. **Spatial Visualization Instruction: Computers vs. Concrete Materials** Metropolitan
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** Citizens B
David M. Davison, Dixie L. Metheny, and Kenneth W. Miller, Eastern Montana College, Billings, MT

- ~~34.~~ **Error Analysis in the Interpretation of Line Graphs** Continental
Barba Patton, University of Houston at Victoria, TX and Private Educational Consultant

Friday, February 11, 1994 (continued)

2:00-2:50 PM PRESENTATIONS Room

- ~~35.~~ **Math on Display: Experiencing Math from Children's Literature** Tarrant
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** Scott
Judith and Melfried Olson, Western Illinois University, Macomb, IL
37. **Adding Fractions with Fraction Bars and Pictorial Models** Metropolitan
Glenna Hawkins, Dallas Christian School, Dallas, TX
38. **Applying Constructivism to Math and Science Teaching** Citizens A
Gail Kirkwood, Grand Canyon University, Phoenix, AZ
39. **Mathematics Instruction and Assessment in the Middle Grades: Bridging the Gap** Van Zandt
Micheale F. Chappell and Denisse R. Thompson, University of South Florida, Tampa, FL

3:00-3:50 PM PRESENTATIONS

40. **Overcoming Reticence: Technology to the Rescue** Rose
Phyllis F. Kavett, Kean College of New Jersey, Union, NJ

Friday, February 11, 1994 (continued)

3:00-3:50 PM PRESENTATIONS

Room

41. **The Role of Learning Styles in a Developmental Mathematics Classroom** Tarrant
Lisa Crilley, Hiram College, Hiram, OH
42. **Providing Effective Mathematics Instruction to African-American Students: Impact of Culture and a Case for Cooperative Learning** Metropolitan
Edward McDonald, LRDC-University of Pittsburgh, Pittsburgh, PA
43. **Classroom Application in Assessing the Goals of the NCTM STANDARDS** Citizens A
Gail Kirkwood, Grand Canyon University, Phoenix, AZ
Kimber Eckman, Washoe County ISD, Reno, NV
44. **Linguistic Teaching in Developmental Mathematics** Van Zandt
Janice M. Green, Hiram College, Hiram, OH

4:00-4:50 PM PRESENTATIONS

- ~~45.~~ **Missouri's MATH ATTACK: Rejuvenating Middle School Math** Metropolitan
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** Rose
Mary Ellen Schmidt, Ohio State University, Mansfield, OH

Friday, February 11, 1994 (continued)

4:00-4:50 PM PRESENTATIONS

Room

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

4:00-4:50 PM SPECIAL INTEREST GROUPS

48. **Chaos Theory and Cognitive Research: The Need for New Paradigms** Citizens A
Discussion Leader:
Jayne Fleener, University of Oklahoma, Norman, OK
49. **Worksession: Networking the RCDPM Membership** Van Zandt
Discussion Leaders:
George A. Wyer, West Hartford Public Schools, West Hartford, CT
Diana Jordan and Jerome B. Senturia, Cleveland State University, Cleveland, OH
50. **Clinical Methods** Tarrant
Discussion Leader:
Clyde L. Greeno, The MAEI 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** Scott
Diana S. Perdue, University of Virginia,
Charlottesville, VA
52. **Mathematics and Other Indicators for Success of Minorities in College** Tarrant
Patricia A. Brosnan and Mary Ellen Schmidt,
Ohio State University, Columbus, OH
53. **Prescriptives for Test Anxiety** Citizens A
Evelyn R. Brown, Texas Southern University,
Houston, TX

Saturday, February 12, 1994 (continued)

8:00-8:50 AM PRESENTATIONS

Room

54. **Effect of a Computer Algebra System on Students' Problem-Solving Achievement in Undergraduate Remedial Mathematics** Van Zandt
Cynthia R. Trout, St. Edward's University,
Austin, TX
55. **Changes in Undergraduate Preservice Teachers' Beliefs during an Elementary Teacher Certification Program** Metropolitan
George W. Bright and Nancy Nesbitt Vacc,
University of North Carolina, Greensboro, NC
- 9:00-9:50 AM PRESENTATIONS**
56. **Video and Printed Materials to Increase Female Participation in Math and Science** Rose
Judith Olson, Western Illinois University,
Macomb, IL
57. **Sociological Foundations of Math: Educational Implications** Citizens B
Ramaswami Mahalingam, University of Pittsburgh,
Pittsburgh, PA
58. **Do Elementary Education Majors Have a Reason to Fear Mathematics?** Continental
Mary Lou Nevin, California State University,
Bakersfield, CA

Saturday, February 12, 1994 (continued)

9:00-9:50 AM PRESENTATIONS

Room

59. **Methodology or Content:
Which Is the Focus?** Van Zandt
Virginia Usnick and Marilyn Sue Ford,
University of Nevada, Las Vegas, NV
60. **Diagnosing for Success: A Study of
College Basic Mathematics Students** Tarrant
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** Scott
Vicki Schell, Lenoir-Rhyne College, Hickory, NC
Sharon Spencer, Pensacola Junior College,
Pensacola, FL
62. **Enriching Mathematics Methods
Courses** Citizens A
Sheryl A. Maxwell, University of Virginia,
Charlottesville, VA
63. **Adults with Learning Disabilities:
Emerging Perspectives and
Instructional Strategies** Metropolitan
Beatrice C. Babbitt, University of Nevada,
Las Vegas, NV

Saturday, February 12, 1994 (continued)

10:10-11:00 AM PRESENTATIONS

Room

64. **Utilizing Portfolios in Teacher
Education with Preservice Teachers:
Connecting the Theoretical with
the Practical** Continental
Alan Zollman, Northern Illinois University, DeKalb, IL
Deneese Jones, University of Kentucky, Lexington, KY
65. **An In-Service Elementary
Mathematics Training Project,
MATH FITNESS: Results and Implications** Van Zandt
John Bernard and Olga M. Ramirez, University of
Texas-Pan American, Edinburg, TX
Arturo Olivarez, Texas Tech University, Lubbock, TX
Lee N. von Kuster (retired), University of Montana,
Missoula, MN

11:15 AM-12:30 PM

Closing Session:

Crystal Ballroom

John W. Wilson Memorial Lecture

President: Martin Johnson, RCDPM 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.