The Mathematical Association of America
New Jersey Section

2000 Award for Distinguished College or University Teaching of Mathematics

In 1991 the Mathematical Association of America instituted Awards for Distinguished College or University Teaching of Mathematics in order to honor college or university teachers who have been widely recognized as extraordinarily successful and whose teaching effectiveness has been shown to have had influence beyond their own institutions.

Citation

Dr. Janet H. Caldwell

Rowan University

The New Jersey Section of the Mathematical Association of America is pleased to present its 2000 sectional award for Distinguished College or University Teaching of Mathematics to Dr. Janet H. Caldwell of Rowan University.

Dr. Caldwell received her bachelor's degree in mathematics from Rice University in 1972, and her master's and doctorate from the University of Pennsylvania in mathematics education research in 1975 and 1977, respectively. She has been teaching at Rowan University for the past sixteen years. Prior to that, she was a mathematics teacher in the junior and senior high schools in Texas and Pennsylvania, a mathematics instructor at Cabrini College, and a mathematics specialist with Research for Better Schools, Inc. in Philadelphia.

The major focus of Dr. Caldwell's professional work is teaching, in which she tries to accomplish the following goals: (1) to enhance students' understanding of the concepts and skills included in the content of each course, (2) to improve students' appreciation for the aesthetics of mathematics as well as its utility, (3) to prepare students for success in subsequent courses, and (4) to enable students to use mathematics in their chosen careers. Students have responded enthusiastically to her teaching. She strives to develop intuitive understanding of major concepts while also illustrating the structure and beauty of mathematics. While it is difficult to change students' attitudes toward a subject that many find loathsome, Dr. Caldwell is successful in altering many students' feelings about mathematics. She works diligently to create a caring atmosphere for

learning mathematics in her classes. To make mathematics more alive and to enhance discussions with students, she used the graphing calculator and the computer extensively in her teaching. And in order to improve students' appreciation of mathematics, she constantly seeks examples of mathematical applications from other fields such as the biological and physical sciences, business, psychology, music and art. Dr. Caldwell tries to draw analogies and point out linkages within mathematics itself and across disciplines. Her efforts were previously recognized when she was awarded the CASE NJ Professor of the Year, 1994-95, and the Max Sobel Outstanding Mathematics Educator Award from the Association of Mathematics Teachers in New Jersey.

Dr. Caldwell teaches in many settings beyond the college campus. She provides numerous workshops for teachers of mathematics at all grade levels, and numerous presentations at local, regional and national conferences of mathematics teachers. She is an ardent advocate for change in mathematics education, specifically in state efforts to reform the K-12 mathematics curriculum. She served as co-chair of the Executive Board for the New Jersey Statewide Systemic Initiative and member of the Board of Governors of the NJ Mathematics Coalition. She also served in the Board of National Council of Supervisors of Mathematics, and as a past president of the Association of Mathematics Teachers of New Jersey.

With an extensive list of publications related to teaching, Dr. Caldwell is also a published author of a middle school math series - *Middle School Math* - and an innovative text for a general education geometry course. She has received major grants from the Eisenhower Higher Education Professional Development and the NJ Statewide Systemic Initiative for her K-12 professional development activities in mathematics and science.

Response from Professor Caldwell

Over the past decade, MAA-NJ has been able to honor only a few of the many outstanding professors of mathematics in New Jersey's colleges and universities. I am extremely honored to be this year's Award recipient and will endeavor to be worthy of it and of this group's high regard. I would like to thank my colleagues at Rowan University and recognize the collegial atmosphere and support for good teaching that have been established there. I would also like to recognize the teachers who inspired me (and others) to study mathematics and become professor of mathematics, not only those at the university level, but perhaps more importantly for me, the ones from elementary school, junior high, and high school. I only hope that I continue to convey to my students my own excitement and enthusiasm toward mathematics and its teaching as well as they have.

It seems as if the longer I teach, the more questions I have. What is the appropriate emphasis for proof or symbolic manipulation? How should we be using technology in our classrooms? How can I get them to think more deeply about what they are learning? Each day, it seems I learn new things about teachings, about myself, about mathematics, and about my students. As I wrestle with these questions for myself, I appreciate opportunities to discuss these same issues at professional meetings and elsewhere. I hope that all of us in the mathematics community continue these discussions, working together to help students learn more mathematics and learn it better.