Reports... The NCTM Annual Meeting

by Julia E. Magana

New Orleans. City of hot jazz, cold hurricanes, and discrete mathematics. At least that is how I viewed this dynamic city during the NCTM 69th Annual Meeting.

Many different topics on a variety of levels were discussed, but this was the first time in 69 years that the NCTM focused on discrete mathematics and its applications in K - 12 curricula.

There were many workshops with discrete mathematics themes, some giving just overviews and other dealing with specific topics. ''Implementing the Discrete Math Standard in the Secondary School Classroom'', a workshop conducted by Nancy Crisler, Gary Froelich, and Larry Spence, used John Dossey's *Discrete Mathematics and the Secondary Mathematics Curriculum* as a way of presenting different discrete mathematics topics to people of a variety of mathematical backgrounds.

After reviewing the Dossey materials, many teachers realized that some of the discrete math topics, such as combinatorics, probability, matrices, and linear programming are discussed in textbooks which they have been using for years. Other topics however, like graph theory, apportionment and fair division, difference equations, and fractals are new to the high school classroom.

The 1991 NCTM Yearbook, *Discrete Mathematics Across the Curriculum K- 12,* was released at the meeting, and its contents were reviewed by editor Margaret Kenney. A sample of other presentation titles includes ''Applications of Finite, Discrete and Combinatorical Mathematics'', ''Graph Theory -- The Queen of Discrete Mathematics'', ''Activities in Discrete Mathematics: Backpacks, Yearbooks and Trees'', and ''Counting, Matching, Graphing: Discrete Mathematics in Elementary School''.

A number of sessions at the conference dealt with specific discrete math topics such as chaos and fractals.

Heinz-Otto Peitgen spoke on ''Fractals for the Classroom: The Fascinating Concept of Chaos and Fractals.'' He began with an in-depth discussion of the ''chaos game'', which is one of the key entrance points to the study of fractals. This then led to the idea of using limits as a way to describe self-similarity. Peitgen's reference material was a newly released NCTM publication, *Fractals For the Classroom*, which he coauthored (see complete reference on bottom of page 4).

Robert L. Devaney also gave a talk on chaos and fractals but he concentrated more on the use of iteration to create dynamical systems. ''This is a branch of research mathematics that is accessible,'' he said. ''We are talking about quadratic functions!''. Devaney's book *Chaos, Fractals and Dynamics* provides an introduction to these three topics using a combination of hands-on computer experimentation and precalculus mathematics.

Besides going to the workshops and meeting mathematicians from all over the world, I also visited the Exhibit Hall which was full of displays on ''the most current mathematics education products, publications, software, and services'' including an increasing number of discrete math materials.

This year's NCTM Annual Meeting was definitely a great experience! For a discrete mathematician, it offered more than in past years and

Speaking discretely...

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This is the first issue of the newsletter. It was assembled and largely written by teachers in the Leadership Program in Discrete Mathematics at Rutgers University. We hope that future issues will have your contributions as well.

We are particularly interested in hearing about topics that you have used in your classes, about how your students have responded to discrete mathematics, and about how discrete mathematics has affected your approach to teaching. We look forward to hearing from you.

In each issue...

... you will find a variety of articles under the following headings:

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