# AUSTRALIA HOLDS A BIG CONFERENCE ON HOW TO LEARN MATHEMATICS

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People came from all over the world to Australia to talk together and to learn from each other about how best people from age 4 to infinity can learn mathematics and enjoy using it. You could have the idea that all the mathematics you meet at school, and the ways in which you meet it, were fixed in their forms many years ago. Not so. People are always trying to find better ways to help students learn, new ways to make the things learnt more relevant, and what new things should be discussed in school and elsewhere. This conference was one of the more important ways in which this activity is stimulated.

The meeting was held at the University of Adelaide and took a full week, from Friday 24 to Thursday 30 August 1984. It was called the fifth International Congress on Mathematical Education, ICME 5. Such conferences are held every four years and started with one in Lyons, France. It was a great honour for Australia to be asked to run the congress. There were 1,786 women and men taking part. When you add those accompanying them to Adelaide, 198 persons, you get a grand total of 1984. The organizers assure us they have checked their figures and have not cheated! All told, 68 countries attended.

Whatever do people do at congresses like this? The answer is: many different things. There were four talks an hour long, given by world leaders, and listened to by everybody collected together in Adelaide's large Festival theatre. There were many shorter talks, and about two hundred talks of just a quarter of an hour, which, as I found, is a very short time indeed for someone to put across her or his ideas, discoveries, research results or what have you. Often there were up to nineteen talks going on at the same time and so we all had to make difficult decisions about which ones we would attend.

It was not all listening to other people talking. Many joined a working group, of about fifteen to twenty, that met four times, for 1½ hours each time, to argue about, and to share experiences about, some controversial aspect of

the learning of mathematics. These were under the following seven general headings, each with many working groups: Mathematics for all. Professional life of teachers. The role of technology. Theory, research and practice. Curriculum development. Applications and modelling. Problem solving. My special interest is in mathematical modelling and problem solving, and it was noteworthy how much more attention was paid to this area, in many different parts of the congress, compared with that paid at ICME 4 in San Francisco; we can expect to see much more emphasis on this aspect of mathematics in school and university courses in the future. We also joined a second set of working groups on matters associated with the various age groups of students, 4-8, 7-12, 11-16, 15-19, 18+, on Pre-service teacher education, and on Adult, technical and further education. In these two sets of meetings, totalling twelve hardworking hours, we were able to discuss with people from other countries quite solid details on matters of concern and were often able to come to a consensus on recommendations for future action.

About two hundred poster presentations were given by people who were not lucky enough to be given a time to speak; we could read the posters at any time and, at a few set times, the authors stood by their posters to discuss them with anyone interested. At two meetings of editors of journals on mathematics education, I had the pleasure of representing your editor, Ms Nikov, and of helping to arrange the exchanging of our journals. Did you know that "Parabola" goes to many different countries, to editors of similar magazines?

Going to a conference is hard work! Nearly every day started at 8.30am and continued until 9.30pm, even including Saturday and Sunday. One redeeming feature was that there was a "happy hour" each day at 5pm so that we could have a relaxing drink and nibble of cheese while meeting new people. On the Monday afternoon we toured a vineyard, which was a pleasant way to meet yet more people and to talk still more about mathematics education. The whole congress was a very tiring experience, but a very successful one as part of the never-ending process of trying to improve the learning of mathematics. Now we hope we shall be able to get to ICME 6 in 1988 in Hungary.