

Indian Women and Mathematics

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The symposium “Indian Women in Mathematics, 2012” (IWM) was the first meeting of its kind to be organised in India and attracted about 150 women. The participants included undergraduate and graduate students who are pursuing a degree in the mathematical sciences and faculty members in mathematics from colleges and universities in India. There were also participants of Indian origin who are working and studying in universities outside of India.

The tremendous growth in the Indian economy has resulted in a great demand for a scientifically educated workforce. The government of India has established the Indian Institutes of Science Education and Research in the cities of Bhopal, Mohali, Pune, Kolkata and Thiruvananthapuram. There are ten Indian Institutes of Technology campuses and many new universities have also been established. All these institutes and universities have a department of mathematics and are looking to hire strong research oriented mathematicians who are also excellent teachers.

To meet this need it is clearly important to attract more women to pursue a degree in mathematics and to create an environment which enables their participation in the scientific workforce. The IWM was designed to facilitate interaction between women mathematicians who have an active research career and college teachers, undergraduates and graduate students. Over thirty women researchers from reputed Indian institutes and universities gave expository lectures on a diverse range of mathematical subjects. Since the primary goal was to attract more women to mathematics, the lectures were kept at a very accessible level and generated lively participation and stimulated an interest in higher mathematics in the audience.

On the first afternoon of the meeting, the participants were divided into eight groups, based on their areas of interest in mathematics. Each group had a leader who made a short presentation on their research and then led a group discussion. This allowed for close and informal interaction between senior and junior participants. There were panel discussions on the remaining two afternoons. The first one focused on providing the participants with information on funding



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possibilities to do a PhD in mathematics and future avenues of employment in academia. Students and teachers were told of ways to improve their academic preparation for entering a PhD program. The second discussion focused on job opportunities in industry. Both discussions also addressed the issues of creating appropriate syllabi which would also help students to identify useful courses in disciplines such as computer science, economics and finance.

The need for follow up activities was clearly articulated by the participants and many practical suggestions were made. Outreach activities aimed at young women studying in the smaller towns in India are needed. Programmes aimed at college teachers and fostering their pedagogical skills is critical. The need for a network and networking opportunities for women mathematicians is also essential. It is also important to encourage research activities in mathematics departments increasing the participation of women in conferences and workshops.

Concrete steps are being taken to implement these suggestions and activities are being planned and funding has been sought for the next five years.

Details on abstracts, talks and other features (including photographs and videos) can be found at <http://www.imsc.res.in/~jniyer/IWM.html>

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