

ICM 2010

The next International Congress of Mathematicians will take place August 19–27, 2010, in Hyderabad, India. As the president of the International Mathematical Union, I have been and will be involved in virtually all aspects of this big event, and would like to share with you some thoughts on congresses.

The ICM is the single most important event in mathematics every four years. Its organization, from the work of the local organizers to the program committee to the prize committees to the publishers of the *Proceedings* (and many others), is the most important task for the IMU leadership and indeed for our whole community.

Often one hears skepticism about having such congresses at all. One of the objections people make is the exceptionally large size of it (at least for a mathematics meeting). Indeed, a single participant will only know a small fraction of the other participants, and you might walk down the crowded corridors for a long time without seeing a familiar face. Any participant will be able to follow only a small fraction of the section talks. A lot of effort has been made to make the invited talks accessible to a general mathematical audience; but it is still difficult to follow so many ideas from different parts of mathematics within such a short time. However, scientists working in physics, computer science, or many other branches of science are envious of the fact that we mathematicians have such an event.

While the first thing that comes to mind when speaking about math research is a mathematician sitting in a chair and chewing a pencil, or perhaps two of them standing at a blackboard trying to put together a new proof, the science of mathematics has many other important facets: How to apply mathematical results in other sciences, humanities, or in the economy, or how to distill from applications new problems or even theories? How to communicate mathematics most efficiently to other mathematicians? How to teach mathematics at all levels? How to popularize it, both to students (to inspire them to study mathematics) and to political and industrial leaders (to get support for research)? These questions are becoming more and more important, and I believe IMU has a duty to address all of them. Congresses are forums to learn about these issues and to discuss them.

As the backbone of the congress, carefully chosen speakers describe the latest developments in mathematics. I trust that the invited speakers will follow the trend observable at recent congresses and make their presentations as broadly accessible as at all possible.

We learn firsthand about the most important prizes in mathematics, and hear the recipients and/or experts describe their work. The Fields Medal and the Nevanlinna Prize themselves are unique in their scope. Most scientific prizes, like the Nobel Prize, are awarded to old people whose work is well known and well recognized. In contrast, these prizes of the IMU go to young people and new results. This way the whole community can learn about these breakthrough results and can meet these young mathematicians who are bound to become important personalities of our science in the near future.

It is a special pleasure to note that a new prize, the Chern Medal Award, will be given for the first time at the 2010 congress. This award, established in memory of the outstanding mathematician S. S. Chern, will be given for lifelong contribution to the field of mathematics.

We will have panel discussions about important issues such as education, applications, electronic publications, impact factors, and other topics that are in the forefront of interest at the time of the congress. There will be interesting exhibitions; over the years, there have been a variety of topics for these exhibitions, such as the history of the IMU, or the history of mathematics in the host country. There is always a book fair, there are meetings of special groups, poster sessions, satellite conferences, excursions, and many other events.

Just before the congress, the General Assembly will meet in Bangalore to decide on the site of the next congress, to elect the new leadership, and to discuss and make decisions about many other issues that are of interest to the mathematical community. The most important decisions will be announced at the opening ceremony of the congress.

Mathematics is a rather lonely science; most of our work is happening inside our heads. Therefore it is particularly good to have a big event bringing together our community every four years!

To choose the site of the congress is always a difficult decision. To have congresses in both developing countries and developed ones is important. In a developing country, the impact of such an event on the local community and on its position in the eyes of the general public may be much larger. But of course fewer mathematicians have firsthand experience with the site, and there are more concerns about the unknown, so people might hesitate to attend. A developed country, having a larger personal base and a longer experience, can often use the congress to promote mathematics in novel ways, and thereby provide example and experience for later congresses.

The site of the congress moves around in the world, and India, with its long tradition in mathematics and also with its attraction for tourists, is a fascinating congress venue. A year ago I visited India, the site of our 2010 congress in Hyderabad. Some friends wondered about such a trip, mentioning all sorts of dangers from snakes to malaria. If you recall, a few weeks earlier there had been terrorist attacks in Mumbai, and indeed, quite a few participants of the conference cancelled their trips. Needless to say, the terrorist attacks had no influence on my visit (except for some increased security at public buildings), and with some caution, it was easy to avoid infections (and snakes). India is a country where crime, especially violent crime, is rare.

I would like to invite you all to come to India and contribute to the success of the congress. See you at ICM 2010 in Hyderabad!

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