

India's National Presentation at ICME-2012

INSA Steering committee for INP

September 14, 2011

India is a land characterized by its linguistic and cultural diversity, a democracy grappling with problems of poverty and illiteracy while at the same time confidently looking to address these and emerge as a global economic power. The landscape of Mathematics education in India reflects this reality, offering a kaleidoscope of innovations and initiatives, challenges and endemic problems.

India's National Presentation (INP) at ICME-2012, Seoul, will seek to highlight this complexity, offering a taste of the richness of experience that Mathematics education in India offers. Broadly, the themes of INP will be grouped under:

1. **Historical and cultural aspects of mathematics and mathematics education:** This will include historical contributions to mathematics, folk and ethnomathematics, mathematics education in pre-colonial India, and the colonial encounter in textbooks and pedagogy.
2. **Systemic and policy aspects of education:** This will include an introduction to general structures of education in India, critical issues, selection and board examination systems, assessment culture, the "coaching industry", language policy, gender issues, regional diversity, equity policies and measures adopted by the Central and State Governments.
3. **Curriculum and pedagogy at various levels:** At school level, the curricula of the central and state boards of education, and the impact of the National Curriculum Framework 2005 on these will be discussed. At all stages, the forces shaping curricula, innovations and experiments in pedagogy and research will be highlighted. Nurture and enrichment programmes, especially at the secondary and tertiary levels, will be discussed.

4. **Teacher education and development:** This will include discussions of the reality, of a large number of schools and colleges, as against the shortfall of trained teachers; issues of content knowledge of teachers; structural challenges in teacher education; emergence of teachers' networks; and the efforts undertaken by the Government under the Sarva Shiksha Abhyan and other initiatives.

Articles on these themes will be collected into a booklet, copies of which will be made available to all ICME participants.

A short presentation on each of these 4 themes, and 2 special 'highlight' presentations, thus making 6 presentations of 15 minutes each, will occupy the first 90-minute slot in the time allotted to INP. The remaining time will be used principally for video presentations. Thus, we have a tentative schedule for the afternoon of Monday, July 9, 2012:

- 3:00 PM to 4:30 PM: six 15-minute presentations: 4 overviews of the themes listed above, and 2 special 'highlight' presentations.
- 5:00 PM to 6:30 PM: Talks and Video presentations on the themes.

A team of resource persons, including mathematicians, educators, education researchers and mathematics popularizers, will be participating in ICME 2012, who will be involved in these presentations and interaction with participants, offering explanations when needed.

INP will also include some visual exhibitions:

- An exhibition illustrating the diversity of Indian classrooms, both in cultural and geographic terms and in resource rich / poor terms,
- an exhibition of text and other material used in India,
- an exhibition on Mathematics in art and culture, and in people's practices, at work or at leisure.

INP will seek to register the multitude of voices of many actors in Mathematics education in India.