EDITORIAL

The Indian National Science Academy, Delhi (INSA), as a part of its program to foster activities in the area of history of science throughout India, has been organizing Seminars on a regular basis along with its Research Council & National Commission meetings in history of science. The Seminar of 2010 was held at the Department of Theoretical Physics, University of Madras, Guindy Campus, Chennai, during 25-26 October 2010. Professor M.S. Sriram was the Coordinator, and the focal theme of the Seminar was, 'Science, Technology with special Emphasis on Mathematics and Astronomy in Medieval India'. The audience consisted of students and faculty of science departments of the colleges, universities and research institutes in Chennai. Though the papers/talks were of pedagogical nature and somewhat suitable to cater to the diverse backgrounds of the audience, all of them had some new content too at the research level. Hence it was decided to publish the proceedings of the Seminar in a single issue of *IJHS*, after going through the usual process of refereeing. However, there is some departure made from the normal seminar proceedings in the selection of papers in this issue. While some presentations could not be included because of non-availability of revised papers, a couple of papers were added considering their importance and relevance to the theme. This, I am sure, will enhance quality, conceptual links and value to medieval science and mathematical knowledge.

The issue has ten papers. While the first paper is on medicine giving an interesting account of pathogenic organisms and disease pattern as appeared in early medical treatises, the remaining papers deal exclusively on some interesting features of mathematics and astronomy in India starting from the time of Bhāskara I in the 7th century to Jyeṣṭhadeva in the 17th century. Some of the topics are Bhāskara I's method of iteration (*asakṛt-karma*) used to sort out the interdependence of variables in movement of planets & duration of eclipses, Nārāyana's derivation of magic squares, rule of combination with its various representations, and derivation of second degree equations and their solutions (*varga-prakṛti*), which show lot of improvisation in handling subsequent steps. Equally interesting are the values of π given in rational integers by various scholars including its improvement by Mādhava first by adopting a slow converging series, and then providing correction to its nth

term to achieve faster result. Significant development was also made by him in power series for sine (*bhujā*) and versine (*śara*) in terms of arc (*cāpa*) and subsequent improvement by Nīlakaṇṭha, together with the knowledge of interpolation. The last paper of course gives an impression of the birth of calculus in international perspectives with input from *Yuktibhāṣā* of Jyeṣṭhadeva, which add undoubtedly interesting features of achievements in Indian mathematics.

The Editor is thankful to all the contributors, scholars and reviewers who have enriched contributions through their efforts and specially to Prof Sriram and his colleagues for their all-round effort. Thanks are also due to University of Madras, IIT Chennai, History of Science Division of the Academy and the members of the Research Council of INSA for their consolidated effort to make the seminar a success and to help the Academy to have a record of the proceedings.

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