

FIRST INTERNATIONAL CONFERENCE OF THE NEW MILLENNIUM ON HISTORY OF MATHEMATICAL SCIENCES

Delhi: December 20-23, 2001

(A Brief Report)

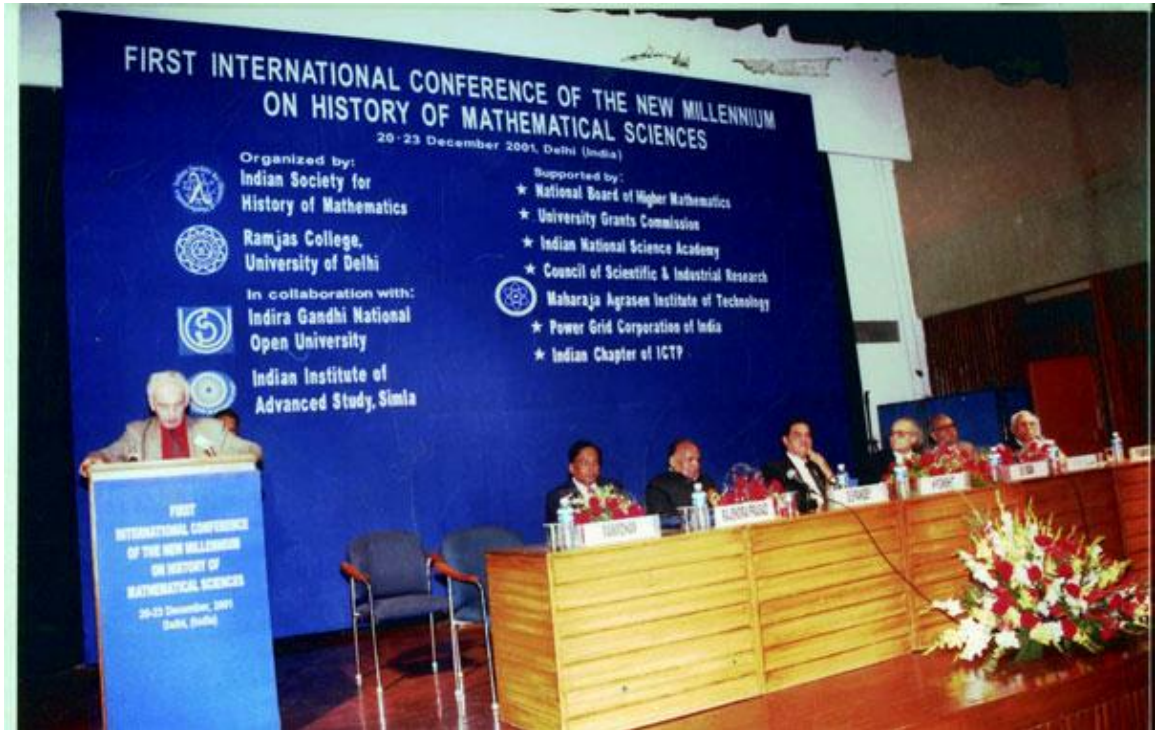
The First **International Conference** of the New Millennium on **History of Mathematical Sciences** was held at New Delhi from **December 20-23, 2001**. It was organized jointly by the Indian Society for History of Mathematics and Ramjas College, University of Delhi in collaboration with Indira Gandhi National Open University and Indian Institute of Advanced Study, Simla. The Conference was the first of its kind ever held in India and covered all aspects of the history of mathematical sciences, and in particular, the ancient Indian history of the subject. A large number of mathematicians (and users of mathematics in industry and technology) participated in the deliberations, including leading experts from 11 countries viz. USA, U.K., Canada, Germany, Luxembourg, Italy, Israel, Iran and Nepal, apart from many eminent scholars from India. The venue of the conference was the Indian National Science Academy, New Delhi.



Profesor H. P. Dikshit, Vice Chancellor, IGNOU inaugurates the conference

With the opening remarks by Dr. Man Mohan (Conference Coordinator), Dr. Rajendra Prasad, Principal, Ramjas College, Delhi (and Chairman, Reception Committee) delivered the welcome address. Professor B S Yadav, the Chairman of the Organizing Committee, gave a brief account of the conference and related organizational efforts over the past one year. At this stage Professor Ivor Grattan-Guinness (Middlesex University, U.K.) read out the message of the President of the British Society for History of Mathematics. This was followed

by the remarks highlighting the importance of the conference by Professor V C Srivastava (Director, Indian Institute of Advanced Study, Simla) and Professor G S Pandey (President, ISHM). The Conference was inaugurated by Professor H P Dikshit, Vice Chancellor, Indira Gandhi National Open University. The inaugural session ended with a vote of thanks by Professor Y P Sabharwal, the Organizing Secretary.



Professor Ivor Grattan-Guinness (Middlesex University, UK) reading the message of the President of British Society for History of Mathematics

The academic sessions began with the Presidential address "*The Glory of Ancient Indian Mathematics*" by Professor G S Pandey, President of the Indian Society for History of Mathematics. There were in all 22 lively sessions including the concurrent ones, during the 4 days of the conference.



Professor Dr. Volker Peckhaus (Germany) is delivering his talk

The following invited talks were presented:

IVOR GRATTAN-GUINNESS, Middlesex University at Enfield: *History or genealogy? Historians and mathematicians on the history of mathematics*

A. P. SINGH, University of Jammu, Jammu: *Developments of Complex Dynamics*

ANTONINO DRAGO, Unniversita di Napoli, Italy: *The Introduction of Actual Infinity in Modern Science: Mathematics and Physics in both Cavalieri and Torricelli*

ARUNA KAPUR, Jamia Millia Islamia, New Delhi: *Al-khwarizmi – an eminent Muslim scholar of Mathematics and Astronomy*

D. N. VERMA, TIFR, Mumbai: *Leap-Frogging from the Pre-History of Fibonacci-Like Recursions, to Future Prospects for Higher Continued Fractions: In Tribute to Archimedes and Jacobi*

DEBORAH HUGHES HALLETT, Univ. of Arizona, USA: *Teaching of Mathematics in the US: Past, Present and Future*

E VON COLLANI, Univrsitat Wuerzburg, Germany: *History, State of the Art and Future of the Science of Stochastics*

G. C. SHARMA, School of Basic Sciences, Agra Univ., Agra: *Finite element Technique: A Historical Perspective*

H. P. DIKSHIT, Vice-Chancellor, IGNOU, New Delhi: *U N Singh Memorial Lecture- Emerging Horizon of Mathematics*

JAMUNA PRASAD AMBASHT, Benedict College, Columbia, USA: *Countability of Rationals*

JASBIR SINGH CHAHAL, Birmingham Young University, USA: *Pell's equation and the Unity of Mathematics*

JEAN-PAUL PIER, Centre Universitaire de Luxembourg, Luxembourg: *Harmonic Analysis, a historical manifold during the XXth Century*

KAMAL CHANDA, Texas Technical University, USA: *On a class of Stationary Non-linear Processes: A Review*

LIYAQUAT KHAN, Actuarial Society of India: *Mathematics and Actuarial Science - Past, Present and the Future*

NORBERT H SCHLOMIUK, University of Montreal, Canada: *Andre Weil and the history of mathematics*

P.L. SACHDEV, I.I.Sc., Bangalore: *Advent of Non-linear Science – A Historical Perspective*

PARMESHWAR JHA, Sapaul, Bihar: *Mathematics in the Tribal Belt of Bihar*

PARVIN SINCLAIR, IGNOU, New Delhi: *History as a Pedagogic Tool*

S L SINGH, Gurukul Kangri Vishwavidyalaya, Hardwar: *Zero in Vedas and Vedic tradition*

S M RAZAULLAH ANSARI, International Commission for History of Astronomy: *Mathematics in Medieval India: A Bio-Bibliographical Survey of Significant Indo-Persian Source*

S. R. SARMA, AMU, Aligarh: *History of mathematical literature in the Regional Languages of India*

SAEED S HASHEMI, Imam Hussain University, Iran: *Connection of old and new Mathematics in works of Islamic Mathematicians with a look to History of Logarithm*

SAILESH DAS GUPTA, Kolkata: *The Origin of the word Algebra*

V K Malhotra, Information System Organization, GOI: *Some historical Prospects of Indian Official Statistical Systems*

V MADHUKAR MALLAYYA, Trivendrum: *An interesting Demonstration of Bhaskaracarya's Rules on Vargakarma*

VITALI MILMAN, Tel Aviv University, Israel: *From Functional Analysis to Asymptotic Geometric Analysis*

VOLKER PECKHAUS, Universitat Erlangen-Nurnberg, Germany: *Dinnaga's Logic of Invention*

The following papers were presented during the conference:

NITA SHAH, Gujarat University, Ahmedabad: *Retrospects and Prospects of Operations Research*

ALOK KUMAR, School of Mathematical Sciences IBS, Agra: *Reliability: From Intuition to Theory*

ANANDA PRASAD PANT, Tribhuvan University, Kathmandu, Nepal: *Historical aspects of Ring Theory*

ANANT W VYAWAHARE, M. Mohota Science College, Nagpur: *Madhva's Contribution to Infinite Series*

ANUPAM JAIN, Devi Ahilya University, Indore: *Prominent Jaina mathematicians and their Work*

ARUN SRIVASTAVA, CSA University of Agriculture and Technology, Kanpur: *A Review on Ancient Indian Mathematics*

- B S KIRANAGI, Mysore Univerity, Karnataka: *History and some achievements of 20th century in Mathematics*
- D. BALAJI, University of Delhi: *Cauchy's halo; the complex function theory*
- Deepak Jadhav, Barwani, MP: *Theories of Indices and Logarithms in India from Jaina Sources*
- DHANESH CHANDRA BHAVSAR, V S Patel College, Billimora: *Concordance of Mathematics and Music*
- HUKUM SINGH, NCERT, New Delhi: *Geometry and its Applications*
- KANHAIYA JHA, Kanthmandu University, Nepal: *A Brief Report on Mathematics Education in Nepal*
- MUSTAFIZUR RAHMAN, GKV, Hardwar: *Development of astronomical observatories in India*
- N MURUGESAN, SR Eng. College, Coimbatore: *Vowels of Language of Ancient Indian Mathematics are in the Discrete Sense*
- N SHIVA KUMAR, Mysore University: *Direct Method of Summation of LifeTime Structure Matrix in the Gommatasara*
- NEM KUMAR JAIN, PGDAV College, Univ. of Delhi: *Mathematical Modeling of Humanism*
- NIDHI HANDA, Hardwar, Uttaranchal: *Direction and Construction in Sulbas*
- P K SINGH, University of Allahabad, Allahabad: *Glimpses of the development of Mechanics: from the ancient period to the renaissance*
- P. SARADA DEVI, TIFR Colony, Mumbai: *History of Indian Mathematics-awareness in the teachers and students and other related issues*
- PADMAVATHMMA, Mysore University: *Sri Mahaviracharya's Ganitasarasangraha*
- PRAGATI JAIN, Devi Ahilya Univ., Indore: *Mathematical contribution of "Acharya Veersen"*
- PREETI GUPTA, M.D. Univ., Rohtak: *A history of Information Measures and generalized performance function*
- PUNITA SHARMA, Sri Venketeshwara College, Delhi: *Mathematics and Enlightenment*
- R P PANT, G B Pant University, Pant Nagar, Uttaranchal: *A History of Fixed Point Theorems*
- R S KAUSHAL, Univ. of Delhi, Delhi: *Abstraction and Structural Analogies in Mathematical Sciences*
- RAI GYAN NARAIN PRASAD, NE Rly, Gorakhpur: *Concept of perception in Vedanta darshna and mathematical sciences*
- RAMESH CHAND, Vidya Mandir, BHEL, Hardwar: *Importance of place value system in algebra*
- RASHMI BHARDWAJ, GGSIP University, Delhi: *History of Chaos*
- RENU CHUG, M.D. Univ., Rohtak: *Developments in Metric Fixed Point Theory*
- S MUTURATHNAM, Christian Medical College Vellore: *Development of Statistics: A Historical Review*
- SADAGOPAN RAJESH, Alwarthiru Nagar, Chennai: *Algebra and its teaching in Historic Perspective*

SHASHI KIRAN, Mata Sundri College, Delhi: *The History of Pointwise Regularity of Riemann's Non-differentiable Function*

SUBHENDU BHATTACHARYA, LIC of India, Kolkata: *Risk Theory: A Historical Study*

SUSHEEL KUMAR AZAD, Rajdhani College, Delhi: *Computing: Past, present and future paradigms*

TAJINDER PAL SINGH, B. R. Ambedkar College, Univ. of Delhi: *The Development of fuzzy sets and fuzzy relations*

UJJWALA DONGOANKAR, Einstein International Foundation, Nagpur: *A brief review of literature of Jain Karmic Theory*

VINOD MISHRA, SLIE&T, Longowal, Punjab: *Statistical analysis of Doctoral dissertations on Indian Mathematical Sciences*

VIRENDRA ARORA, Gurukul Kangri Vishwavidyalaya, Hardwar: *Mathematics In Vedic Literature*

Summaries of the above talks and papers were available in the form of a printed booklet. A 88 page colorful Souvenir was also released on the occasion which contained useful information about the host city of Delhi, articles on its history, culture and seats of learning besides some articles on the history of mathematics. It also contained a tentative schedule of the conference as also the names and addresses of the expected participants. A copy of the latest issue of Delhi City Magazine was also made available to all the participants free of cost. The outstation participants found the information in the magazine highly useful.

Other highlights of the Conference included a play on History of Mathematics ***Journey through maths - The crest of the peacock*** organized by P SARDA DEVI, Mumbai. The play was really superb and was praised by one and all. There was also a cultural programme by the Doordarshan Artists, which left an everlasting impression on the delegates. There was a 20-minutes coverage of the Inaugural and the U.N. Singh Memorial Sessions on Delhi Doordarshan (DD1) in its IGNOU programmes.



Discussing a point (L to R) are Professor Vitali milaman (Tel Aviv, Israel), Professor Norbert Schlomiuk (Montreal, Canada) and Ivor Grattan-Guiness (Middlesex, UK)

The Valedictory address was delivered by Dr. Dandapati, Secretary, University Grants Commission. Participants freely expressed their comments and observations and gave fruitful suggestions for the future. The organizers utilized this opportunity to express their gratitude to all those who helped them in organizing this conference. They also thanked M/S Travel Corporation of India, the Event Manager, for the excellent and foolproof arrangements made by them.



Professor Norbert Schlomiuk (Montreal, Canada) speaking at the valedictory function

The expenses on organizing the Conference were met by

- Collaboration amounts given by the Indira Gandhi National Open University and the Indian Institute of Advanced Study, Simla.
- Grants received from the National Board of Higher Mathematics, the University Grants Commission, the Council of Scientific & Industrial Research and the Indian National Science Academy.
- Financial support extended by the Power Grid Corporation of India, Maharaja Agrasen Institute of Technology and the Indian Chapter of ICTP.
- Courtesy Dinners for the participants hosted by Professor H P Dikshit, the Vice Chancellor of Indira Gandhi National Open University and Shri Brij Mohan Gupta, the Chairman of Ramjas College Governing Body.
- Advertisements in the Souvenir.
- Delegation Fees.

The Conference was well attended by about 200 persons and was a great success. In fact organizers deserve all praise for so successfully arranging such a large scale International

Conference on history of Mathematical Sciences in India at a time when things seemed difficult in view of the prevailing tense international scenario.

As announced earlier, an international publisher will publish the Proceedings of the Conference. It will be published in the form of a Book based on the selected papers presented at the conference and will contain papers approved by an Editorial Board, after getting them duly refereed. Professor Ivor Grattan-Guinness, Professor of History of Science, Middlesex University at Enfield, U.K., is the Chairman of the Editorial Board and Professor B S Yadav is its Executive Editor.

The above constraint will allow only about 25-30 papers to be included in the book. The rest will be considered for publication in the next issues of *Ganita Bharati*. In fact many have already appeared in Volume 24 (2002).