

# 5th International Vedic Mathematics Conference Report August 2022

at

#### Sree Sankara College, Kalady, Kerala

After a gap of three years due to the pandemic situation all over the world, the much awaited 5th International Vedic mathematics Conference was held at Sree Sankara College, Kalady, Kerala, from 11th - 13th August 2022. The event was sponsored by the Education Renaissance Trust, UK, which supports schools and teachers who put spiritual values at the heart of education. We were privileged to be hosted by the college which is located close to the birthplace of Adi Shankara.

Members of the IAVM spent many months organising the programme and research papers. Teaching faculty at Sree Sankara College, under the leadership of Dr. Preethi Nair, Principal, and together with Mr. Devaraj P, arranged and managed all the logistics. Particular support in the management of the conference was provided by Smt. Essy C Cherian, HOD, Department of Mathematics, Dr. Biju Thomas, HOD, Department of Statistics and Dr. Suvarnani Antherjanam, HOD, Department of Sanskrit. The first two days were given over to presentation of current research on Vedic mathematics and ancient Indian mathematics and the third day was used for workshops for local students.

The inaugural session was presided over by Sri K Anand, Managing Director, Adi Sankara Group of Institutions, and the inaugural address was given by Dr. Sabu Thomas, Vice Chancellor – Mahatma University, Kottayam. The CEO of IAVM, Swati Dave gave an overview of our mission, recent activities and future plans. The Keynote speech by James Glover, chairman of IAVM, expressed the important structure of Vedic maths for the development of the human mind and the usefulness of its applications in professions and everyday activities. He also described the need for correct understanding of the sutras of Vedic maths.

Research papers for presentation were carefully selected on the basis of originality of research and relevance. Although only twenty-six papers were accepted, their quality is exceptional (a list of titles and authors is appended). The subjects range from advancements and new discoveries in the applications of Vedic maths techniques through to revelations concerning the brilliant classical astronomers and mathematicians of India in relation to trigonometry, calculus and encoding. In due course, research papers will be published in the conference proceedings and also made available on the IAVM website.

On the third day, workshops were delivered by our team of accomplished teachers and comprised 8 parallel workshops teaching Vedic maths to 490 students ranging from 7 year-olds to undergraduates. Smt.Essy C Cherian, together with other faculty and many volunteer undergraduate students, brilliantly handled the logistics so that all the classes ran smoothly. The children ended up loving Vedic maths and wanting more!

The Department of Education in India has published an edict for schools and colleges to include aspects of Indian culture within their curriculum. Many colleges there are searching for ways to include Vedic mathematics because it is directly applicable to passing maths exams. Consequently, Sree Sankara College and IAVM signed an MOU directed towards providing a course in Vedic mathematics for undergraduates.

Delegates were invited on a visit to the birthplace of Adi Shankara - an Ashram within which is complete serenity. Unfortunately, no photos are allowed. The connection with Vedic maths is that the college is presided over by the current Shankaracarya of the South, at Sringeri Math and that Shankaracarya Sri Bharati Krishna Tirthaji was a disciple at the same Math when he discovered and formulated the Vedic maths sutras just over 100 years ago.

#### **GALLERY**



James Glover - Chairman of IAVM delivering keynote speech



The "A" Team for IAVM Swati Dave - CEO, Ramya Balaji - Director, Prajakti Gokhale - Director, Gowri Ramachandran - Treasurer

#### **CONFERENCE PHOTOS**









#### **WORKSHOPS FOR STUDENTS**







































Ashram at the birthplace of Adi Shankara



### **5th International Vedic Mathematics Conference**

Sree Sankara College, Kalady, Kerala 11th - 13th August 2022

## **Research Papers**

| Thirty-Seven - Unique Properties of Divisibility  | Angela Pierri                      |   |
|---|------------------------------------|---|
| Proof of Pascal's Identity using Vedic Mathematics  | Chard Aye Alova                    | * |
| Combinatorics in Vedic Mathematics  | Chard Aye Alova                    | * |
| Vedic Mathematics Sutras and their relevance  | Devaraj P                          | • |
| On the Inter-superimposition of algebra and arithmetic through Vedic Mathematics                                    | James Glover                       |   |
| Only the Last Terms   | James Glover                       |   |
| Digital Roots and Power Values  | Dr Komal Asrani,<br>V.G.Unkalkar   | • |
| Vedic Mathematics for Aesthetic Education   | Laura Aimo                         |   |
| Mathematics Fun with Fibonacci and the Numbers 89 and 109   | Marianne Fletcher                  |   |
| Further Investigation into Identifying Prime Numbers using Fermat's Little Theorem and the Ekadhikena Purvena Sutra | Marianne Fletcher                  |   |
| High Performance IIR Filter Implementation on FPGA using Vedic Multipliers  | Dr Meeraja Murali                  | • |
| Quadratic Solutions using Duplex  | Muthuselvi Prabhu                  | • |
| By Osculation - An Efficient Tool   | Muthuselvi Prabhu                  | • |
| Near Base Multiplication - A Purely Mental Approach and Faster than Ever  | Nathan Annenburg                   |   |
| History of negative numerals and its constructive applications in Vedic mathematics                                 | Prajakti Gokhale                   | • |
| Aryabhta Numeration   | Pranab Kumar<br>Bhattacharjee      | • |
| A Special Method to Square Numbers with Specific 10s Digit  | Raajesh Srinivasa Rama             | * |
| Extending Tirthaji's Special Multiplication Method to Multiply Near Base Digits                                     | Raajesh Srinivasa Rama             | * |
| Removing "Mathematics - Phobia" by Vedic Mathematics: A Case of Experiential Learning                               | Rahul Kumar                        | • |
| Creating a Sudoku Grid using Vedic Maths Sutras   | Ramyanitharshini Balaji            |   |
| Comparitive study between Vedic Method and Gauss Elimination method   | Rashmi Yadav, S.R.Singh            | • |
| A new approach to the solving of problems of Coordinate Geometry using Vedic Mathematics                            | Ravi Asrani, Shashikant<br>Chitnis | • |

| Methods to find the approximate value of irrational numbers from Śulbasūtras to Vedic Mathematics                                     | Sanjay Deshpande                              |
|---|---|
| Perfect recurring decimals for composite denominators having only prime numbers as factors  | Shashikant Chitnis                            |
| Baudhayana- Pythagoras Theorem, Some Indian Proofs  | Shriram Chauthaiwale                          |
| Indian Mathematics in the Classical Period (400AD - 1200AD)   | Dr Soniya Gupta, Nidhi<br>Handa, Rashmi Yadav |
| Implementation of Vedic Sutras to Determine the Characteristic Roots and Corresponding Characteristic Vectors of 4*4 Ordered Matrices | Dr Soniya Gupta, S.R.Singh,<br>Nikhil Gupta   |
| Mathematical Practices in the Regional Schools of Pre-Colonial India  | Swati Dave                                    |
| Sanskrit Coding for Magic Squares   | Usha Sundar                                   |
| Squaring techniques: Ancient v BKT  | Usha Sundar                                   |