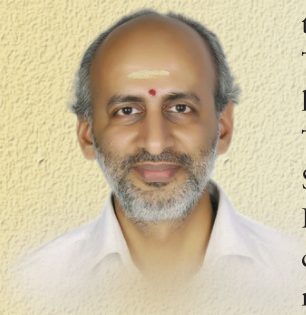
A Brief Biodata of
Prof. K. Ramasubramanian



K. Ramasubramanian is an Institute Chair Professor at the Indian Institute of Technology Bombay, India. He holds a doctorate degree in Theoretical Physics, a Master's in Sanskrit and a Bachelor's in Engineering—a formidable combination to do multidisciplinary research. He was honored with the coveted title '*Vidvat Pravara*' by the Shankaracharya of Sringeri Sharada Peetham, Karnataka, India, for completing a rigorous course in *Advaita Vedānta* (a 14-semester program), in 2003.

He is one of the authors who prepared detailed explanatory notes of the celebrated works *Gaṇita-Yuktibhāṣā, Tantrasaṅgraha* and *Karaṇapaddhati*, that bring out the seminal contributions of the Kerala School of Astronomy and Mathematics. In recognition of his outstanding scholarship, the prestigious *Maharshi Badrayan Vyas Samman* was conferred upon him by the President of India in 2008. He is a recipient of several other awards and accolades as well. Since 2013, he serves as an elected council member of the International Union of History and Philosophy of Science and Technology. In 2018, he was elected as a Fellow of the Indian National Science Academy (FNA). Currently, he is also the editor of the Indian Journal of History Science.

D.M. Bose Memorial Lecture 2019

135th Birthday Celebration of
Professor Debendra Mohan Bose

26th November, 2019

BOSE INSTITUTE
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Use of Calculus in Indian Astronomy

Prof. K. Ramasubramanian
IIT Bombay

Abstract

We all know today that the language of calculus provides us a fantastic tool to describe the dynamics of the physical world. The benefits of the language has not only been used by physicists, but also fully explored by engineers, economists, biologists, statisticians, and so on.

Coming to speak of the origins of this language, of late, we find reputed scientists and historians of science describing the 16th century text *Ganita-yuktibhasha* as 'The first textbook on Calculus'. We also find articles challenging this idea of attributing the birth of calculus to Indians. Without subscribing to either of the views, during our talk we would like to take the audience on an excursion into the past, to show how the subject got evolved over centuries starting from Aryabhata and Brahmagupta (5th and 7th cent), passing through Bhaskara and Madhava (12th and 14th cent), and finally terminating our journey with the works of Nilakantha Somayaji, Jyesthadeva, Sankara Variyar and Achyuta Pisharati, of the 16th century.

Throughout this excursion our aim would be highlight, how in the context of solving certain interesting problems in Indian astronomy, the astronomer-mathematicians of India have made brilliant use of certain techniques to arrive at some important formulae and results, which we can be understood and appreciated using the language of calculus and analysis as taught today to mathematicians, scientists and engineers.

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on

26th November, 2019 at 3.00 p.m.

on the occasion of the
135th Birthday of Prof. Debendra Mohan Bose

Speaker
Prof. K. Ramasubramanian
Department of Humanities and Social Sciences
IIT Bombay
Powai, Mumbai 400 076

Titled
Use of Calculus in Indian Astronomy

Prof. Gautam Bhattacharyya
Acting Director
Saha Institute of Nuclear Physics
has kindly consented to preside over the programme

Venue
Bose Institute
Unified Academic Campus
EN-80, Sector-V, Salt Lake City, Kolkata-91

Prof. (Dr.) Uday Bandyopadhyay
Director
Bose Institute