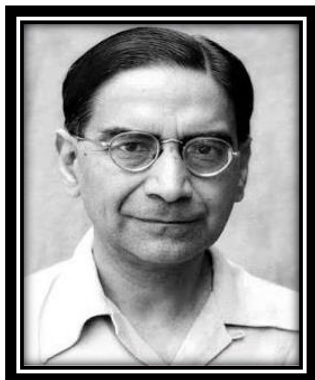


INDIAN SCIENCE NEWS ASSOCIATION (ISNA)

92, A.P.C. Road, Kolkata 700009

The Members of the Council of ISNA
request the pleasure of your company at the



Prof. P.C. Mahalanobis
(1893-1972)

P.C. Mahalanobis Memorial Lecture on 'The Antiquity of the Arithmetic Mean'

to be delivered by

Prof. Amartya Kumar Dutta
Director, Indian Statistical Institute, Kolkata

Friday, October 9, 2026 at 4.30 p.m.

in the
N.R. Sen Auditorium, University of Calcutta,
Kolkata - 700 009

Prof. Bikas K. Chakrabarti
President, ISNA
former Director, Saha Institute of Nuclear
Physics, Kolkata
will preside over the programme.

Prof. Amit Krishna De
Honorary Secretary, ISNA

Abstract: The importance of the Arithmetic Mean was articulated in 1809 by C.F. Gauss, one of the pioneers of mathematical statistics. S.M. Stigler, a distinguished statistician of our time, considers Arithmetic Mean as the first of the "five ideas that changed statistics and continue to change the way we think about the world".

Historians of statistics had hitherto identified the earliest unambiguous statistical use of the general Arithmetic Mean in a work of the English astronomer Henry Gellibrand (1635) and believed that examples of mean-taking would not be found in ancient science. But, as in the case of numerous other scientific concepts, their account overlooked the clear, precise and abundant use of the Arithmetic Mean in the treatises of ancient Indian mathematicians to represent the depth, width or length of an irregular-shaped pool of water and thereby estimate its volume. In fact, Brahmagupta (628 CE) defines and applies the more sophisticated concept of the Weighted Arithmetic Mean. The treatment of the excavation problems through the Arithmetic Mean was possibly one of the factors which shaped the gradual development of calculus in India. The weighted arithmetic mean also appears in ancient Indian arithmetic treatises as an exact mathematical formula in computing the proportion of pure gold in an alloy formed by blending of several pieces of gold of different weights and purities.

In this talk, we shall discuss the emergence of some of the avatars of the Arithmetic Mean at different time points, in different contexts, in different mathematics cultures.

Speaker: Amartya Kumar Dutta is the Director and Professor of Mathematics at the Indian Statistical Institute (ISI).

An ex-student of South Point High School (1981 Madhyamik, 1983 HS), St. Xavier's College (1986 B.Sc. Maths. Hons.) and ISI (1988 M. Stat.), Prof. Dutta obtained his PhD in Mathematics at the Tata Institute of Fundamental Research (TIFR), Mumbai, in 1994 under the guidance of Prof. S.M. Bhatwadekar, and has several research publications in Commutative Algebra and Affine Algebraic Geometry.

A recipient of the INSA Teachers Award of the Indian National Science Academy, Prof. Dutta has taught, mentored and guided several students, since he joined ISI Kolkata as a faculty member in 1996; his students include the world-famous mathematician Neena Gupta who has made a rare breakthrough in mathematics and has emerged as an inspiring role model for young aspiring researchers.

For more than 25 years, Prof. Dutta has also been regularly delivering lectures and writing articles on topics in History of Science, especially on Ancient Indian Mathematics. He is the recipient of the first Satish C. Bhatnagar Award in History of Mathematics of the Indian Mathematical Society, for his article "Weighted Arithmetic Mean in Ancient India" (Bhavana, October 2017).

Prof. Dutta has been teaching history of mathematics in ancient India and Science and Scientific Temper in modern India in the one-year Indology course at the Ramakrishna Mission Institute of Culture, Kolkata. Apart from mathematics and history of science, Prof Dutta has also contributed articles and delivered talks in several institutions on other topics of cultural interest.

Programme

- 4.30 p.m. Felicitation of Dignitaries :
- 4.35 p.m. Welcome Address and Introduction of the Speaker : Prof. Amit Krishna De, Honorary Secretary, ISNA
- 4.50 p.m. P.C. Mahalanobis Memorial Lecture : Prof. Amartya Kumar Dutta, Director, Indian Statistical Institute, Kolkata
- Title of Talk: The Antiquity of the Arithmetic Mean
- 5.40 p.m. Presentation of Memento to the Speaker and Presidential Address : Prof. Bikas K. Chakrabarti, President, ISNA, and former Director, Saha Institute of Nuclear Physics, Kolkata
- 5.55 p.m. Distribution of certificates of XXXIX TPSCMP (Basic Training) :
- 6.00 p.m. Release of ISNA e-Paper *Scientifica Communica*, Vol. 5, Issue 2 :
- 6.10 p.m. Vote of Thanks : Prof. Manas Chakrabarty, Vice-President, ISNA
- Anchor : Dr. Rupsa Ghosh, former student, ISNA

