INTERNATIONAL INSTITUTE FOR POPULATION SCIENCES (IIPS)

Professor C. Chandrasekaran Memorial Lecture

"Stochastic Modeling in Cardiology Research"

Prof. Arni S. R. Srinivasa Rao

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21st February | 4:00 PM – 5:30 PM

Venue: 3rd Floor, Library Building, IIPS

Abstract: In this talk, a stochastic modeling framework for understanding cardiology-related data will be explained. The basics of modeling building and clinical setting are described with model-based interpretations.

Arni S. R. Srinivasa Rao is a tenured Full Professor and Director of the Laboratory for Theory and Mathematical Modelling, at Medical College of Georgia, Augusta, USA. Until 2012, he held a permanent faculty position at Indian Statistical Institute, Kolkata. He conducted research and/or taught at several institutions, such as the Indian Statistical Institute, the Indian Institute of Science, Hiroshima University, and the University of Oxford. In more than 700 instances his science was covered in the media (including AMS, AMStat News, PAA, Math Digest). Dr. Rao proved a fundamental theorem on stationary populations of Carey's Equality at the Nathan Keyfitz centenary workshop held in 2013 in Columbus, Ohio, within 45 minutes of the problem being posed by the speaker James Carey. He developed and proposed the first artificial intelligence (AI)-based model in the world in February 2020 to identify COVID-19 cases using mobile-based Apps. Dr. Rao's other noted contributions include HIV/AIDS Models for India's national planning, Rao's multilevel contours using Markov chains in complex bundles, Partition Theorem in Populations, Chicken Walk Models, and exact deep learning machines (EDLMs). Dr. Rao is also currently serving as a member of the AI-enabled Technologies & Systems Domain Expert Group (DEG), constituted in 2021 by The Council of Scientific and Industrial Research, Government of India.

Professor Chidambara Chandrasekaran (1911-2000), known as the doyen of demography in India, was the Director of International Institute for Population Sciences (then DTRC) from 1959 to 1965. Prof. Chandrashekaran obtained his Ph.D. in Statistics from University of London in 1938. He also studied at the School of Hygiene and Public Health, Johns Hopkins University, USA. Prof. Chandrasekaran served as Population Adviser at ESCAP, Bangkok, and was associated with the World Bank and UNFPA as a Population Specialist. He was the President of the International Union for the Scientific Study of Population (IUSSP) during 1969 to 1973. He along with Prof. W. E Deming developed the well-known Chandra-Deming formula to provide better estimates of vital events. This technique based on the dual record system was an innovation which is continuously being used by the Sample Registration System, India for collecting vital events. Prof. Chandrasekaran was instrumental in initiating and conducting the well-known Mysore Population Study in the early fifties, which was jointly undertaken by the Government of India and the United Nations. His autobiography -The Life and Works of a Demographer- was published in 1999.

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