



C.R.Rao

In Memory of C.R. Rao

CALYAMPUDI RADHAKRISHNA RAO
THE MAN WHO REVOLUTIONISED STATISTICS
Awarded the International Prize in Statistics-2023
Equivalent to the Nobel Prize in the field

In his remarkable 1945 paper published in the Bulletin of the Calcutta Mathematical Society, C.R. Rao demonstrated three fundamental results that paved the way for the modern field of statistics and provided statistical tools heavily used in science today. His early work helped develop the field of information geometry, which is now finding application in machine learning (AI) tools.

Calyampudi Radhakrishna Rao was born into a Telugu family on 10 September 1920 in Huvanna Hadagali in the current Indian state of Karnataka. He was the eighth of ten children of his parents, C. D. Naidu and Lakshmikantamma. In 1948, he found his life partner in Bhargavi, a psychology professor at Jadavpur University, Kolkata. Their journey, filled with mutual admiration and unwavering support, led them around the world, blending their academic and exploratory passions. C.R. Rao was first and foremost a loving and devoted family man. The Rao family grew to include their daughter Tejaswini and son-in-law Vincent O'Neill, son Veerendra and daughter-in-law Malini, grandsons Amar, and his wife Mitra along with a great grandson Khai, and Rohith and his partner Hannah Garfield.

C.R. Rao was a creature of habit, cherishing daily walks with his wife and the morning ritual of reading his newspaper. Every evening, like clockwork, he would indulge in a glass of wine at 7 pm while watching Jeopardy and Wheel of Fortune or his favorite sport, tennis. Beyond these routines, he held a passion for photography and gardening, and was a supporter and admirer of the arts. C.R. Rao is remembered for his humility, compassionate heart, gentle nature, and a mischievous sense of humor that never failed to bring a smile.

Professionally, C.R. Rao was known as a foundational figure in modern statistics and has left his mark on the field. Beginning his research at a time when statistics was still developing and not acknowledged as a distinct discipline, Rao was instrumental in shaping it into the science we recognize today. His explorations over nearly eight decades have not just deepened the understanding of statistics but have also immensely benefited the fields of physical, biological, mathematical, and engineering sciences and economics.

Rao initiated his storied career in 1941 at the Indian Statistical Institute (ISI) in Calcutta. He earned a Master's degree from Calcutta University and a Ph.D. from Cambridge University, UK. **Later, he was awarded the prestigious Sc.D. degree of Cambridge University based on peer review of his published work.** His exemplary contributions at ISI spanned four decades, holding numerous positions, including Head of Research and Training School, **Director, Jawaharlal Nehru Professor, and National Professor.** Post-retirement from ISI, he spent three decades at the University of Pittsburgh, The Pennsylvania State University, and later, the University at Buffalo as a Research Professor at the esteemed age of 90. He was deeply cherished and admired by his students. They appreciated his distinctive teaching approach and **nurturing them, channeling them to appropriate fields of study and career choices.**

Over his career, Rao was conferred 41 Honorary Doctorates from global universities and authored 476 research papers and 16 books. His awards included the **International Prize in Statistics by the International Statistical Institute, the equivalent to the Nobel Prize in the field; the National Medal of Science, the highest Presidential award given to a scientist in the USA; the India Science Award, the highest award given to a scientist in India; Padma Vibhushan, the second highest civilian award by the Government of India; and the Guy Medal in Gold, the highest award given to a statistician in the UK by the Royal Statistical Society.** The **CR Rao Advanced Institute of Mathematics, Statistics and Computer Science on the campus of the University of Hyderabad, India** stands as a tribute to his legacy, promoting research among the upcoming generations of scientists in India.

C.R. Rao passed away peacefully on August 22, 2023 in his residence in Williamsville, NY, surrounded by his adoring family. The legacy he leaves behind, both in the academic world and within the hearts of his family, will surely stand the test of time.