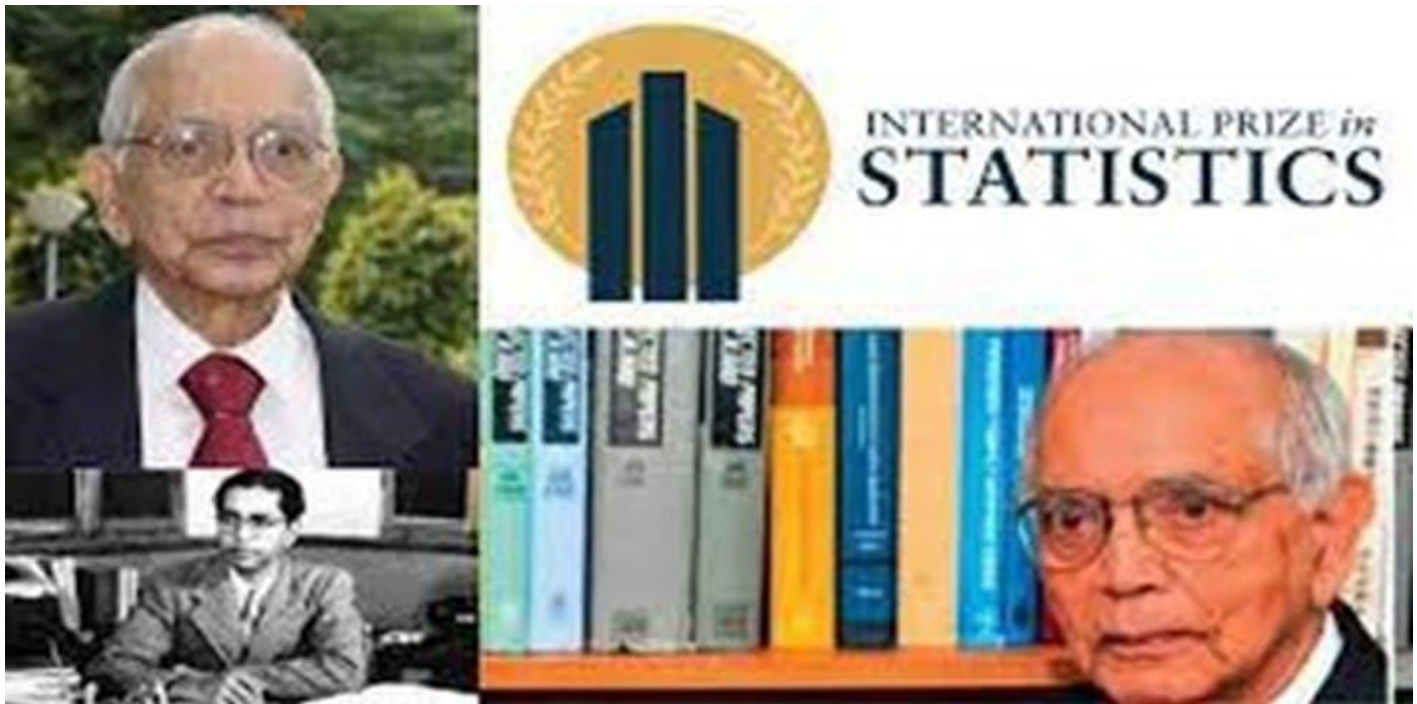


International Prize in Statistics

April 11, 2023 • vajiramandravi.com



About International Prize in Statistics:

- The International Prize in Statistics is awarded **every two years** by a **collaboration among five leading international statistics organisations**.
- The prize recognises a major achievement by **an individual or team in the statistics field**.
- The prize is modelled after the Nobel prizes, Abel Prize, Fields Medal and Turing Award and called as **Math's Nobel**.

Who is C. R. Rao?

- Rao, a prominent **Indian-American mathematician and statistician** was born to a Telugu family in **Hadagali, Karnataka**.
- He is currently a professor emeritus at Pennsylvania State University and Research Professor at the University at Buffalo.
- Rao has received many honours, like **Padma Bhushan (1968) and Padma Vibhushan (2001)**.
- In his remarkable **1945 paper** published in the Bulletin of the Calcutta Mathematical Society, Rao demonstrated **three fundamental results** that paved the way for the modern field of statistics and provided statistical tools heavily used in science today.

- The **first**, known as **the Cramer-Rao lower bound**, **2nd** known as **the Rao-Blackwell** and the **third result** provided insights that pioneered a new interdisciplinary field that has flourished as **“information geometry.”**
- Combined, these results help scientists more efficiently extract information from data.

Applications of his theories:

- The Cramer-Rao lower bound is of great importance in such diverse fields as **signal processing, spectroscopy, radar systems**, multiple image radiography, risk analysis, and **quantum physics**.
- The Rao-Blackwell process has been applied to stereology, particle filtering, and **computational econometrics**.
- Information geometry has recently been used to aid the understanding and optimization of **Higgs boson measurements at the Large Hadron Collider**.
 - It has also found applications in recent research on **radars and antennas** and contributed significantly to advancements in artificial intelligence, **data science, signal processing**, shape classification and image segregation.

Q1) What is the Abel Prize?

The Abel Prize is awarded annually to outstanding international mathematicians. The prize was established by the Norwegian Government in 2002, and is managed by The Norwegian Academy of Science and Letters.

Source: [Indian-American mathematician CR Rao awarded International Prize in Statistics at 102](#)

Source: <https://vajiramandravi.com/current-affairs/international-prize-in-statistics/>

© Vajiram & Ravi. For personal use only.