

S.K.S.D MAHILA KALASALA (UG AND PG) (AUTONOMOUS)



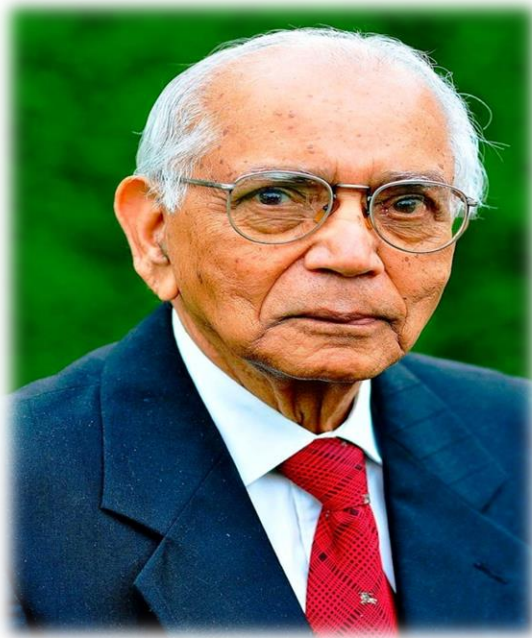
TANUKU

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# Mini Project on A Living Legend

Prof Dr.C.R Rao(MA,PhD,DSc)



PRESENTED BY:

Students of final  
Statistics

## THE LIVING LEGEND



If there is a problem to be solved, seek statistical advice instead of appointing a committee of experts. Statistics can throw more light than the collective wisdom of the articulate few.

# **INTRODUCTION:**

*The aim of our mini-project is to get inspiration from legendary statistician C.R.Rao and to get a overview of his contributions.*

# **METHODOLOGY:**

- Begin by conducting a thorough literature review on C.R. Rao's life, career, and contributions.*
- Read academic papers, books, and articles written by or about C.R. Rao.*
- Organize the collected information into categories such as early life, education and career.*
- Review your mini project, ensuring that it meets the defined objectives*

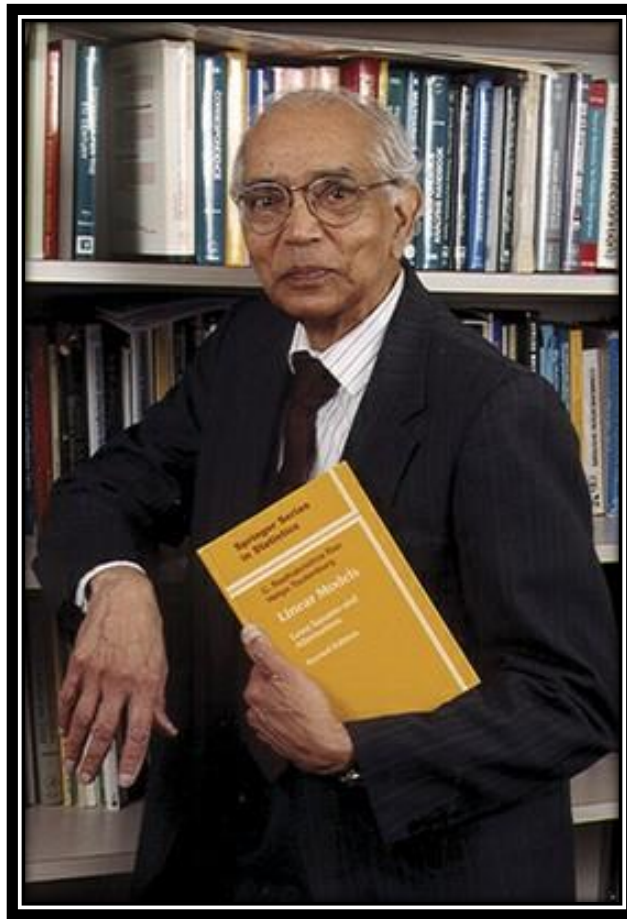
**SCOPE:** *The scope of a mini project related to C.R. Rao could be diverse, depending on the specific aspect of his work or contributions you want to focus on.*

*C.R. Rao has made significant contributions to various fields, particularly in statistics and mathematics. Here are a few potential scopes for a mini project related to C.R. Rao*

[\*C.R. Rao with former Prime Minister Manmohan Singh\*](#)



# Dr. C Radha Krishna Rao



**BORN** : 10 September 1920, Hoovina Hadagali,  
Madras Presidency ,British India  
(Present day Vijayanagara, Karnataka, India)

**CITIZEN** : Indian (formerly) American.

**EDUCATION** : Andhra University(MA),  
University of Calcutta(MA),  
King's College, Cambridge(PhD, DSc).

**KNOWN FOR** : Cramer rao bound and Rao Blackwell theorem.

**AWARDS** : Padma Vibhushan  
National Medal of Science (2001)  
S. S. Bhatnagar Prize  
Guy Medal (Silver 1965, Gold 2011)  
International Prize in Statistics (2023)

**DIED** : 22 August 2023,(aged 102) ,Buffalo, New York, U.S



## **EARLY LIFE**

*C. R. Rao was the eighth of the ten children born to a Telugu family in Hoovina Hadagali, Bellary, Madras Presidency, Britain ruled India (now in Vijayanagara, Karnataka, India). His schooling was completed in Gudur, Nuzvid, Nandigama, and Visakhapatnam, all in the present state of Andhra Pradesh.*

## **EDUCATION**

- He received an MSc in mathematics from Andhra University*
- MA in statistics from Calcutta University in 1943.*
- He obtained a PhD degree at King's College, Cambridge, under R. A. Fisher in 1948, to which he added a DSc degree, also from Cambridge, in 1965.*

## **CAREER**

- Rao first worked at the Indian Statistical Institute and the Anthropological Museum in Cambridge.

Later he held several important positions, as the Director of the Indian Statistical Institute, Jawaharlal Nehru Professor & National Professor in India, University Professor at the University of Pittsburgh.



- Rao was the President of the International Statistical Institute, Institute of Mathematical Statistics (USA), and the International Biometric Society. He was inducted into the Hall of Fame of India's National Institution for Quality and Reliability (Chennai Branch) for his contribution to industrial statistics and the promotion of quality control programs in industries.

## **RESEARCH CONTRIBUTIONS**

- Cramer Rao bound and Rao-Blackwell theorem
- Estimation theory
- Statistical inference and linear models
- Multivariate analysis
- Combinatorial design
- Orthogonal arrays
- Biometry
- Statistical genetics
- Generalized matrix inverses
- Functional equations

# CONTRIBUTIONS TO STATISTICS

## handbook of statistics 39

Integrated Population  
Biology and Modeling,  
Part A

Edited by  
Arni S.R. Srinivasa Rao  
C.R. Rao



*C R Rao is the author of 477 research papers published in prestigious journals and 15 books, one of which, *Statistics and Truth* were translated into French, German, Japanese, Main Land, Taiwan Chinese, Turkish, and Korean, and another book *Linear Statistical Inference*, used as a textbook, has been in the market for over 50 years and is available in Russian, German, Czech, Polish, Chinese, and Japanese languages. He has edited 39 volumes of Handbook of Statistics dealing with the latest methodologies in Statistics and practical applications.*

## IMPACT ON VARIOUS FIELD

*Rao held that the field of statistics should be driven by applications of it. The building blocks of statistical signs that he contributed have had a huge impact in agricultural sciences, biomedical research, econometrics, industrial engineering, social sciences and signal processing. For example, his methods were used to uncover signs of the Higgs Boson in data from CERN- Europe's particle- physics laboratory near Geneva, Switzerland. Rao's techniques were also applied to the design of experiments and devices, such as computer chips. These optimal configurations, termed orthogonal arrays, were taken forward by Japanese engineer Genichi Taguchi, and underlie Japan's revolution in industrial quality since the 1970s.*

# **AWARDS AND MEDALS**

- India Science Award 2010 (the highest award in scientific field presented by government of India).
- International Mahalanobis Prize (2003) of the International Statistical Institute.
- Srinivasa Ramanujan Medal (2003) of the Indian National Science Academy.
- President George W. Bush, on 12 June 2002, honoured him with the National Medal of Science, the highest award in US in the scientific field.
- Guy Medal in Gold(2011) of the Royal Statistical Society.
- Padma Vibhushan (2001) by the Government of India.
- Padma Bhushan (1968).
- He was also awarded an honorary Doctor of Science by the University of Calcutta in 2003.
- 2023 International Prize in Statistics, considered the Noble prize for the field.



“A living legend whose work has influenced not just statistics, but has had far reaching implications for fields as varied as economics, genetics and many more”

## **TimeLine:**

- we have taken 2 days for collecting the essential data for the project.
- We took 2 days for organizing the whole data and also collected the relevant pictures.
- In the next 3 days we presented our projects to our lecturers

## **Resource:**

- We used various books in the library for references.
- Took guidance from our lecturers.
- Used online platforms to get significant information.

## **Conclusion:**

*This Project contributed us with valuable insights that can serve as a foundation for further studies, paving the way for advancements and improvements in the relevant area.*

*”The country and the world will always be indebted to Professor Rao for his pioneering contributions to the field of statistics”.*