



## **Professor G. Sankaranarayanan**

**(19 Feb 1924 – 11 Nov 2006)**

Professor G. Sankaranarayanan was born on 19 February 1924 at Kottayam. He was the only child to his parents Sri Ganapathy and Smt. Rukmani Ammal and he had shown a lot of affection towards his parents. He passed away on 11 November 2006 at Bangalore where he lived during his last five years. He had two sons, G.S. Natarajan and S. Venkatakrishnan, and two daughters, Sivakama Sundari and Gomathy. He spent his early days at Kottayam and had his school education and Intermediate at CMS college, Kottayam. Then he had his Honours Degree and Master's Degree in Mathematics at the then Travancore University, Thiruvananthapuram.

His interest in teaching and research was influenced by Professor U.S.Nair, a student of Professor Karl Pearson, U.K. Immediately after his studies, he chose to join the Teaching profession. He started his teaching career as a Lecturer in S.B. College at Changanassery and subsequently he joined the SRDM College, Sivaganga. His thirst for teaching and research took off after joining Annamalai University in 1950 under the stewardship of great analyst Professor V. Ganapathi Iyer. He was awarded the Doctor of Philosophy in Mathematics of Annamalai University in 1959 for his thesis “Contributions to the Study of some Topics in Mathematical Statistics-Sequences of Independent Random Variables, Distribution of Quadratic Forms, and Tests of Hypothesis” .

He was elevated as Reader in Mathematics in the same year and occupied the UGC Professor in 1964, UGC Post-Graduate Professor in 1966, and served as the Head of the Mathematics Division of the Faculty of Engineering, Annamalai University. He moved to the main Department of Mathematics in 1972 as a successor to Professor V. Ganapathy Iyer and continued till his retirement in 1984; but he continued to work in the Department as Professor and Head till 1991 steering UGC Research Projects.

His research interests were Probability Theory and Stochastic Models. Under his guidance 15 students were awarded Ph.D. degree. His significant contribution is in the fields of Limit Theorems in Probability, Renewal Theory, Theory of Counters, Branching Processes, Queues, Inventory, Reliability, and Random Polynomials.

## Selected Publications

- Sankaranarayanan, G., Usha, K., and Ramanarayanan, R. The Single Server Queue with Erlang Input and Semi-Markov Service Times. *Zastosowania Matematyki Applications Mathematicae*. **XVII**(4), 539-548, 1983.
- Sankaranarayanan, G. and Ramanarayanan, R. Reliability and availability of 1-out-of-n:G cold standby systems with arbitrary failure rate and constant repair rate. *Statistische Hefte*, **21**(4), 315–320, 1980.
- Sankaranarayanan, G. and Usha, K. 2-Unit Standby System and Alertness of the Worker. *IEEE Transactions on Reliability*. **R-29**(3), 282–283, 1980.
- Sankaranarayanan, G. and Usha, K. Availability of a 2-Unit Paralleled System *IEEE Transactions on Reliability*, **R-28**(5), 416, 1979.
- Sankaranarayanan, G. and Balakrishnan, V. A renewal theorem for a sequence of dependent random variables. *Acta Mathematica Academiae Scientiarum Hungaricae*. **31**(1-2), 1-8, 1978.
- Sankaranarayanan, G. and Krishnamoorthy, A. Branching process with immigration subject to disasters. *Journal of Mathematical and Physical Sciences*, I.I.T., **12**(2), 165-176, 1978..
- Sankaranarayanan, G. and Ramanarayanan, R. On a power series whose Co-efficients are convolutions of a stable distribution of a positive random variable, *Statistische Hefte*, **18**(1), 53–57, 1977.
- Sankaranarayanan G., Athreya, K.B., and Parthasarathy, P.R. Super-critical Branching processes with immigration. *Journal of Applied Probability*. **10**, 695-702, 1974.
- Sankaranarayanan, G. and Suyambulingom, C. Distribution of the maximum of the number of impulses at any instant in a type II counter in a given interval of time. *Metrika*, **18**(1), 227-233, 1972.
- Sankaranarayanan, G. Limit distributions in Prob. Theory. *Journal of Annamalai University-Sciences*. 197-215, 1972.
- Sankaranarayanan G. and P.R. Parthasarathy, Age dependent Branching processes with immigration. *Indian census centenary conference*, 1972.
- Balakrishnan, V., Sankaranarayanan, G., and Suyambulingom, C. Ordered cycle lengths in a random permutation, *Pacific Journal of Mathematics*, **36**(3), 603–613, 1971.
- Sankaranarayanan, G. and Suyambulingom, C. Some renewal theorems concerning a sequence of correlated random variables, *Pacific Journal of Mathematics*, **30**(3), 785–803, 1969.
- Sankaranarayanan, G. A survey of recent development in inventory theory. *The Mathematics Teacher*. **4**, 33-40, 1967.
- Sankaranarayanan, G. On some probability problem in a Type II counter. *Journal of the Indian Mathematical Society*. **30**, 79-86, 1966.
- Sankaranarayanan, G. Theory of particle counters, *Mathematics Student*, **32**, 29-38, 1964.

- Sankaranarayanan, G. A note on the equi - distribution of sums of independent random variables. *Journal of Indian Mathematical Society*. **22**, 93-98, 1958.
- Sankaranarayanan, G. Some asymptotic properties of Poisson process. *Tohoku Mathematical Journal*, **10**(1), 60–68, 1958.
- Sankaranarayanan, G. A note on the physical measurements of students. *Sankhya*, **15**, 214-217, 1955.
- Sankaranarayanan, G. Some interesting problems and their solutions. *Mathematics Student*. **18**, 141-142, 1951.

## Books Published

- G. Sankaranarayanan, *Elementary Theory of Mathematical Statistics and its Applications*, Oxford & IBH Publishing Co., New Delhi, 1986.
- G. Sankaranarayanan, *Branching Process and its Estimation Theory*,: Wiley Eastern Limited, New Delhi, 1989.

## Awards

- F.N.A.Sc.
- UGC National Lectureship
- Visiting Research Fellowship, University of Toronto, Canada

## Administrative Positions Held

- Dean, Faculty of Science, Annamalai University
- Member of the Syndicate, Annamalai University
- Member of the both Mathematics and Statistics Panel, UGC, New Delhi (for nearly 15 years)
- Member, National Committee on Mathematical Education and Research, DST, Govt. of India
- Member, Technical Advisory Committee, ISI, Calcutta

## Memberships of Academia

- Member, Institute of Mathematical Statistics
- Member, Applied Probability Trust
- Member, Indian Mathematical Society
- Founder Member and the First President of Indian Society for Probability and Statistics (formerly Indian Society for Probability and its Applications)
- Founder Member and the First President of the Ramanujan Mathematical Society

## Professor G. Sankaranarayanan Endowment Symposium

His students and friends have created Professor G. Sankaranarayanan Endowment Symposium (which is dynamic in nature) on Specific topic during annual conference of the Indian Society for Probability and Statistics from 2021 onwards with following vision and mission.

**Vision:** *To propagate interest in basic and advanced concepts in the area of probability and statistics for students, research scholars, and teachers.*

**Mission:** *To focus on specific topic on Probability and Statistics to impart ideas of basics to current status of the topic.*

### **Contributors of this Endowment**

<b>Name</b>	<b>Contribution ₹</b>
R.Ramanarayanan and K.Usha	75,000
V. Thangaraj	60,000
R. Kalyanaraman	10,000
G. Ayyappan	10,000
A. Srinivasan	25,000
R. Nadarajan and R. Anitha	50,000
A.Subramanian	25,000
S.Sivaraman	25,000
A.Krishnamoorthi	44,948
P.R.Vittal	50,000
G.Arivarignan	10,000
N.Ekambaram	25,050
N.Renganathan	10,002
P.Dhanavandhan	5,000
N.Ravichandran	25,000
M.Sambandham	50,000
R. Rajasekhara Reddy	10,000
K.P.Subramanian	11,000
A.Santhakumaran	1,000
<b>Total</b>	<b>₹ 5,22,000</b>

Rupees Five lakh twenty two thousand only

