



# ABEL PRISEN

The Norwegian Academy of Science and Letters has decided to award the Abel Prize for 2007 to Srinivasa S.R. Varadhan, Courant Institute of Mathematical Sciences, New York. He receives the prize “for his fundamental contributions to probability theory and in particular for creating a unified theory of large deviation”.

Probability theory is the mathematical tool for analyzing situations governed by chance. The theory of large deviations studies the occurrence of rare events. This subject has concrete applications to fields as diverse as physics, biology, economics, statistics, computer science, and engineering.

Varadhan’s theory of large deviations provides a unifying and efficient method for clarifying a rich variety of phenomena arising in complex stochastic systems, in fields as diverse as quantum field theory, statistical physics, population dynamics, econometrics and finance, and traffic engineering. It has also greatly expanded our ability to use computers to simulate and analyze the occurrence of rare events. Over the last four decades, the theory of large deviations has become a cornerstone of modern probability, both pure and applied.

“Varadhan’s work has great conceptual strength and ageless beauty. His ideas have been hugely influential and will continue to stimulate further research for a long time”, to quote the Abel Committee.

Srinivasa S. R. Varadhan was born January 2, 1940 in Madras (Chennai), India. He received his B.Sc. honours degree in 1959 and his M.A. the following year, both from Madras University. In 1963 Varadhan received his Ph.D. from the Indian Statistical Institute, Calcutta.

Srinivasa Varadhan began his academic career at the Courant Institute of Mathematical Sciences as a postdoctoral fellow (1963–66). Varadhan has stayed loyal to Courant, where he served as assistant professor (1966–68), associate professor (1968–72), and became a full professor in 1972.



Srinivasa S. R. Varadhan is currently Professor of Mathematics and Frank J. Gould Professor of Science at the Courant Institute of Mathematical Sciences, New York University.

Photo: Cheryl Sylvant

He was appointed Director of Courant (1980-84), following Peter Lax, and then came back to serve a second period as Director of Courant (1992-94).

His awards and honours include the Birkhoff Prize (1994), the Margaret and Herman Sokol Award of the Faculty of Arts and Sciences, New York University (1995), and the Leroy Steele Prize (1996).

Srinivasa Varadhan has been elected a member of the American Academy of Arts and Sciences (1988), the Third World Academy of Sciences (1988), and the National Academy of Sciences (1995). He was elected a Fellow of the Institute of Mathematical Statistics (1991), the Royal Society (1998) and the Indian Academy of Sciences (2004).