

# Donaldson and Narasimhan Receive 2006 King Faisal Prize

SIMON DONALDSON and M. S. NARASIMHAN have been jointly awarded the 2006 King Faisal International Prize for Science. The prize, presented by the King Faisal Foundation, consists of a gold medal and a cash prize of US\$200,000, which the two recipients will share.

Born in 1957 in Cambridge, England, Simon Kirwan Donaldson received his Ph.D. in 1983 from Oxford University, under the direction of Michael Atiyah. Donaldson was a professor at Oxford University and at Stanford University before becoming a professor at Imperial College, London. He is now a Royal Society Research Professor at Imperial and also serves as president of Imperial's Institute of Mathematical Sciences. His many honors include the Fields Medal (1986) and the Crafoord Prize (1994). He is a fellow of the Royal Society, London. Donaldson's early research revolutionized four-dimensional differential topology, revealing surprising new phenomena through the application of ideas from gauge theory. He has also made foundational contributions to complex and symplectic geometry and to global analysis of partial differential equations on manifolds.

Mudumbai Seshachalu Narasimhan was born in 1932 in Thandarai, in the state of Tamiladu, in India. He received his Ph.D. from the University of Bombay in 1960, under the direction of Komaravolu Chandrasekharan. For many years Narasimhan was a professor at the Tata Institute of Fundamental Research in Mumbai. In 1992, he went to the International Centre for Theoretical Physics in Trieste, where he headed the research group in mathematics. He is now an Honorary Fellow of the Tata Institute of Fundamental Research in India. In 1975 he received the Bhatnagar Prize for Mathematics (1975), which is the most prestigious award given in India. He also received the Third World Academy Award for Mathematics in 1987 and is a Fellow of the Royal Society, London. Narasimhan is a pioneer of the study of moduli spaces of holomorphic vector bundles on projective varieties. His work on projectively flat connections was the starting point for the development of the so-called Kobayashi-Hitchin correspondence linking the differential and algebraic geometry of vector bundles over complex manifolds.



Simon Donaldson



M. S. Narasimhan

The close connection between the research of the two prize winners is illustrated by the fact that one of Donaldson's earliest papers bears the title "A New Proof of a Theorem of Narasimhan and Seshadri" (*Journal of Differential Geometry*, 1983), referring to the landmark paper "Stable and Unitary Vector Bundles on Compact Riemann Surfaces", by Narasimhan and C. S. Seshadri (*Annals of Mathematics*, 1965). Narasimhan's paper with S. Ramanan on universal connections ("Existence of universal connections", *American Journal of Mathematics*, 1961 and 1963) has been very influential in the exchange of ideas between mathematics and theoretical physics surrounding index theory and gauge theory. This exchange of ideas is also the context for much of Donaldson's important work.

The King Faisal Foundation was established in 1976. Of its many philanthropic activities, the King Faisal International Prize is the most widely known. Prizes for Service to Islam, Islamic Studies, and Arabic Literature were established in 1977 and first awarded in 1979. In 1981 the Prize Board added Medicine; Science was included in 1982. The Science subcategories cover a broad scope: physics, mathematics, chemistry, and biology. The prizes are awarded during a ceremony in Riyadh, Saudi Arabia, under the auspices of the King of Saudi Arabia.

—Allyn Jackson