

HISTORIC DISCOVERIES LEADING TO QUANTUM TURBULENCE

Abstract

Quantum turbulence (QT) is the turbulent state of quantum fluids, some of whose properties depend on quantum mechanics. QT has remarkable similarities with classical turbulence but shows a much richer behavior. In this talk, I will identify similarities and differences between the two types of turbulence. Considering the partially ceremonial nature of the talk in honoring Professor CNR Rao, it will be quite general and attempt to describe the highlights of the subject through key historic developments.

K.R. SREENIVASAN
New York University, USA

About the Speaker

Professor Katepalli Sreenivasan is a University Professor and Eugene Kleiner Chair for Innovation, Professor in the Physics Department, Courant Institute of Mathematical Sciences, and Tandon School of Engineering, and he directs the Center for Space Science at the NYU Abu Dhabi campus. He is a fluid dynamicist with a broad range of interests, and expertise spanning experiment, theory and simulations. Prof. Sreenivasan served as Dean of Engineering at New York University (NYU). He also served as the Director and Abdus Salam Professor of the International Centre for Theoretical Physics (ICTP) in Trieste, Italy. He received the Distinguished Alumnus Award and Centennial Professorship of the Indian Institute of Science. He is a member of the US National Academy of Sciences; US National Academy of Engineering; the American Academy of Arts and Sciences; the Accademia die Lincei, Rome; Honorary Membership, Accademia Torre e Tasso, Duino-Aurisina, Trieste, Italy; Indian Academy of Sciences; Indian National Science Academy; Indian National Academy of Engineering; the World Academy of Sciences (TWAS); and the African Academy of Sciences.