

# Roberto Benzi Biography

February 9, 2024. Patrick Charbonneau

Roberto Benzi (March 9, 1952—) was born in Roma, Italy.

Benzi started at Università di Roma, La Sapienza, in 1970, and obtained a Laurea in Physics in July 1975, for research done within the group of Nicola Cabibbo, under the close supervision of Giorgio Parisi. After a year-long military service in 1977, he joined the oceanography research group of Consiglio Nazionale delle Ricerche (CNR) (1978-1981), which included a month-long expedition to the Indian Ocean in 1979 to measure the momentum and heat flux exchange at the air-sea interface. He subsequently joined the IBM Scientific Center (1981-1983), and later became manager of the Computational Fluid Mechanics Group at the IBM European Centre for Parallel and Vector Computing (1983-1988). Over the period 1978-1986, he also visited to Washington University and Yale University for several months. Since 1988, he is Professor of Theoretical Physics at Università di Roma Tor Vergata, where he became emeritus in 2022. From 1995 to 2003, he served on the board of L'Autorità per l'informatica nella pubblica amministrazione, and, from 2020 to 2024, he served on the board of Il Museo Storico della Fisica e Centro Studi e Ricerche Enrico Fermi.

Benzi trained in the statistical mechanics of phase transitions, but quickly after moved to the study of various complex dynamical systems. He notably formulated the idea of stochastic resonance, the multifractal description of turbulence, and lattice Boltzmann simulations. Although he did not work on replica symmetry breaking, per se, he was a close collaborator of Giorgio Parisi at the time the notion was developed.

Benzi is a member of the Accademia Europea (2012). He received the Enrico Persico scholarship from Accademia Nazionale dei Lincei in 1974 and 1975, and the 1985 IBM International Prize for Outstanding Technical and Scientific Innovation. He also received the 2006 Lewis Fry Richardson Medal from European Geophysical Union “for his original work on hydrodynamic stability, stochastic resonance in climate change, lattice Boltzmann methods, and the theoretical and numerical aspects of turbulence”. He has further given the 2006 Slichter Lecture at UCLA and was the 2009 CN Yang professor at the Chinese University of Hong Kong. In 2021, Benzi—along with Alessandro Corbetta, Jasper Meeusen, Chung-min Lee, and Federico Toschi—received the Ig Nobel Physics Prize “for conducting experiments to learn why pedestrians do not constantly collide with other pedestrians”.