Enzo Marinari Biography

March 4, 2024. Patrick Charbonneau

Vincenzo (Enzo) Marinari (July 7, 1957—) was born in Avellino, AV, Italia, the son of Attilio Marinari and Dora Tomasone Marinari, both high school principals and researchers in the humanities. He spent his youth in Avellino, but moved to Rome at 14, where he received a classical education at the Liceo Tasso.

Marinari studied physics at Università degli Studi di Roma "La Sapienza" from 1976, obtaining a Laurea in 1980 for a thesis entitled "Simulazione numeriche di teorie con fermioni" (Numerical simulations of theories with fermions), under the supervision of Francesco Guerra and Giorgio Parisi. From 1982-1984, he was a staff scientist at the Service de physique théorique of the CEA Saclay, in France. He joined the faculty at Università di Roma "Tor Vergata" in 1984 as *Ricercatore* and was promoted *Professore Associato* in 1988. He became *Professore Ordinario* at Università di Cagliari in 1994, and since 1999 he is *Professore Ordinario di Fisica Teorica* at La Sapienza. In parallel, Marinari has served as Physics Director for the Northeast Parallel Architecture Center (NPAC), in Syracuse, NY, USA (1992-1994) and as Scientific Director for physics of the Istituto per la Biocomputazione e la Fisica dei Sistemi Complessi (BIFI), at Universidad de Zaragoza, Spain (2004-2011). He authored three books: *Programmazione Scientifica* (Pearson 2006), translated as *Scientific Programming* (World Scientific, 2012); *La fisica dei sistemi complessi*, (RCS MediaGroup, 2022); and *Calcolo delle probabilità. Un trattatello per principianti volenterosi* (Zanichelli, 2023). He also co-edited four volumes: *Lattice 89, Nucl. Phys. B (Proc. Suppl.)* **17** (1990); *Random Surfaces and Quantum Gravity* (Plenum Press 1991); *String Theory, Quantum Gravity and the Unification of the Fundamental Interactions* (World Scientific 1993); and *Spin Glass Theory and Far Beyond: Replica Symmetry Breaking After 40 Years* (World Scientific 2023).

Marinari trained as a theoretical particle physicist and quickly became involved into numerical work on the topic, while at the same time analyzing problems in statistical mechanics with disorder and participating in the APE special-purpose computer project. This experience led him to gradually shift his research interests toward the statistical mechanics of disordered systems, including large-scale simulations of finite-dimensional spin glasses. In that context, he developed the simulated tempering method and participated in the JANUS special-purpose computer collaboration between Spain and Italy. Marinari has also played a key role in bringing the teaching of replica symmetry breaking ideas at La Sapienza.

Marinari received the Borsa Persico of the Accademia dei Lincei (1980) and was later named best physicist under the age of 35 by the same organization (1989). He received an essay prize from the Gravity Research Foundation (1992) as well as the best poster award from Supercomputing (2006) for his presentation of the JANUS project. He has

further received a 2024 award (1.5 million euros) from Fondo Italiano per la Scienza of the Ministero dell'Università e della Ricerca of Italy.