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From Schrödinger's Cat to Quantum Technologies: A Revolution Unfolding

Saturday, 27 June 2026 17:00 (1 hour)

Quantum mechanics was born to describe the world of atoms and elementary particles, and since the beginning it challenged our deepest intuitions about reality. Schrödinger's famous cat became the symbol of a quantum world governed by superposition, entanglement and tunneling concepts that still inspire both scientific and philosophical debate. Today, these once paradoxical ideas are driving a technological revolution. Quantum technologies are transforming the way we communicate, process information, and probe the fundamental laws of nature. At the same time, they raise new questions about measurement, decoherence, and the boundary between the quantum and classical worlds. In this public lecture, Catalina Curceanu will guide the audience from the foundations of quantum physics to the frontiers of modern research. Drawing on her work in experiments testing quantum foundation in the Gran Sasso underground laboratory, she will show how fundamental experiments both deepen our understanding of reality and inspire new quantum technologies.

The lecture will highlight how curiosity-driven research, born from profound questions about nature, can lead to transformative discoveries with scientific, technological, and cultural impact.

Collaboration

Presenter: CURCEANU, Catalina Oana (INFN-LNF)

Session Classification: Public lecture