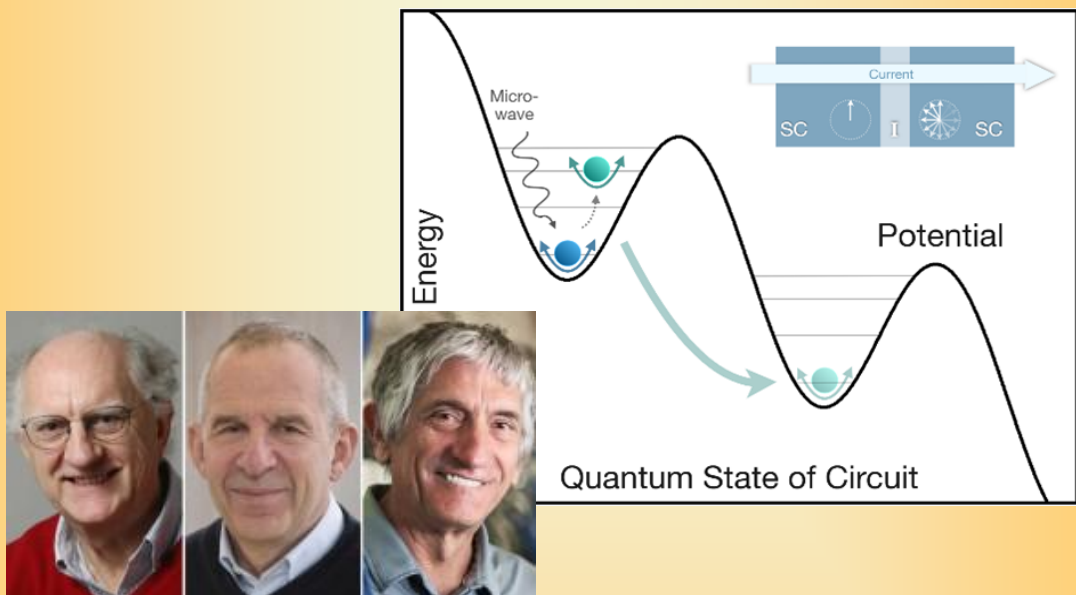


Terça-feira, 16 de Dezembro de 2025, às 15h
Anfiteatro de Física, Escola de Ciências, Campus de
Gualtar

From Macroscopic Quantum effects to Quantum Computing: The 2025 Nobel Prize in Physics

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Abstract: Quantum effects—such as energy quantization and tunneling—are typically associated with atoms and molecules, and are rarely observed in everyday macroscopic objects. This raises a fundamental question: where is the boundary between the quantum and classical worlds? In this talk I will describe, using non-technical language, how the search for answers to this question led to the experimental discovery of quantum behavior in macroscopic superconducting electrical circuits, the achievement recognized by the 2025 Nobel Prize in Physics. I will also explain how these breakthroughs laid the groundwork for using such circuits as qubits, forming the basis of today's superconducting quantum computers.