

Concept note

Quantum Physics School for Young Researchers 16–19 December 2025, Rabat

Hassan II Academy of Sciences and Technology- Kingdom of Morocco

The College of Physical and Chemical Sciences of the Hassan II Academy of Science and Technology is organizing the 1st edition of its annual winter school, dedicated in 2025 to Quantum Sciences and Technologies. This initiative is part of the International Year of Quantum Science and Technology, proclaimed by the United Nations and UNESCO, and commemorates the centenary of quantum mechanics. Quantum physics, at the heart of modern science, has transformed our understanding of nature and enabled groundbreaking innovations in computing, communications, materials, and medical technologies.

This year, the Nobel Prize in Physics 2025 was awarded jointly to John Clarke, Michel H. Devoret and John M. Martinis "for the discovery of macroscopic quantum mechanical tunnelling and energy quantisation in an electric circuit.

The School seeks to introduce young researchers to this fast-evolving field, foster cross-disciplinary collaboration, and strengthen Morocco's engagement with international scientific networks.

Objectives

- Capacity building: Train young Moroccan and African researchers in fundamental and applied aspects of quantum science.
- Knowledge transfer: Provide exposure to leading experts from Morocco, Africa, Europe, and beyond.
- Networking: Create a platform for exchange among early-career scientists, fostering future collaborations.
- Inspiration: Encourage students to pursue research careers in quantum physics and its applications in technology and innovation.

Program Overview

The school will take place over four intensive **days (16–19 December 2025)** and will combine lectures, discussions, and poster session