

# QUANTUM DAYS

## Photonics, Devices, Information

May 17, 2024

Department of Physics, University of Crete

The Physics Department of the University of Crete, together with the Institute of Theoretical and Computational Physics are organizing a one-day workshop to discuss several hot topics driving the current surge of quantum science and technology. The presentations will be pedagogical and accessible by undergraduate and graduate students. The workshop will feature Professor Efstratios Manousakis (Florida State University and University of Athens) as invited speaker.

3rd Floor Seminar Room, Physics Department

09:50 Giorgos Tsironis

*Welcome*

10:00 Efstratios Manousakis

*Density Functional Theory: New Ideas for an Accurate Density Functional*

11:00 Vasilis Apostolopoulos

*Lasers, Frequency Combs and Micro-resonators*

11:30 Coffee Break

12:00 Eleftherios Iliopoulos

*Quantum Nanoelectronics: From Single Electron Transistors to Spin Qubits*

12:30 Kostas Makris

*Introduction to Non-Hermitian Physics*

13:00 Lunch

13:30 Giorgos Tsironis

*Quantum Data in Medicine*

14:00 Dionysis Antypas

*Pedagogical Introduction to Atomic Clocks*

14:30 Spyros Sotiriadis

*Tackling the Quantum Many-Body Problem with Tensor Networks*

15:00 Closing Remarks