Quantum science and technology has become a major pillar of modern scientific research, driven by massive investments of the public and the private sector. The field promises a new quantum era, where quantum information transmission and processing, as well as quantum sensing technologies, will bring about a profound transformation in our technological capabilities across a vast range of economic activities. Training the new quantum-agile workforce has become an urgent priority worldwide. This week-long summer school will feature Prof. Adesso (quantum information), Prof. Fabre (quantum optics), Prof. Kominis (quantum metrology & quantum biology), Prof. Makris (non-hermitian physics), Dr. Skotiniotis (quantum metrology), and Prof. Tisonis (nonlinear physics and machine learning). Besides formal training on modern concepts of quantum optical states, quantum measurements, open quantum systems, quantum resource theories, quantum parameter estimation, quantum noise, and quantum AI, the school will include interactive problem solving sessions led by Dr. Gasbarri (open quantum systems & gravity), as well as mini research projects by the participants. Finally, the school will provide ample time for social interactions between lecturers and participants.

Senior undergraduate and graduate students (Masters, PhD) are welcome to apply.

Lecturers

Gerardo Adesso  
Professor of Mathematical Physics  
University of Nottingham

Claude Fabre  
Professor Emeritus  
Sorbonne Université

Giulio Gasbarri  
Postdoctoral Researcher  
Autonomous University of Barcelona

Iannis Kominis  
Associate Professor of Physics  
University of Crete

Kostas Makris  
Assistant Professor of Physics  
University of Crete

Michael Skotiniotis  
Senior Researcher  
Autonomous University of Barcelona

Giorgos Tisonis  
Professor of Physics  
University of Crete

Organization  University of Crete - Institute of Theoretical and Computational Physics - Prof. Iannis Kominis - ikominis@physics.uoc.gr

Application  Ms. Eleni Kandidaki - kandida@physics.uoc.gr

Venue  3rd Floor Seminar Room - Department of Physics - University of Crete - Heraklion 70013 - Greece

Fee  125 € (covers lunches and school dinner)

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