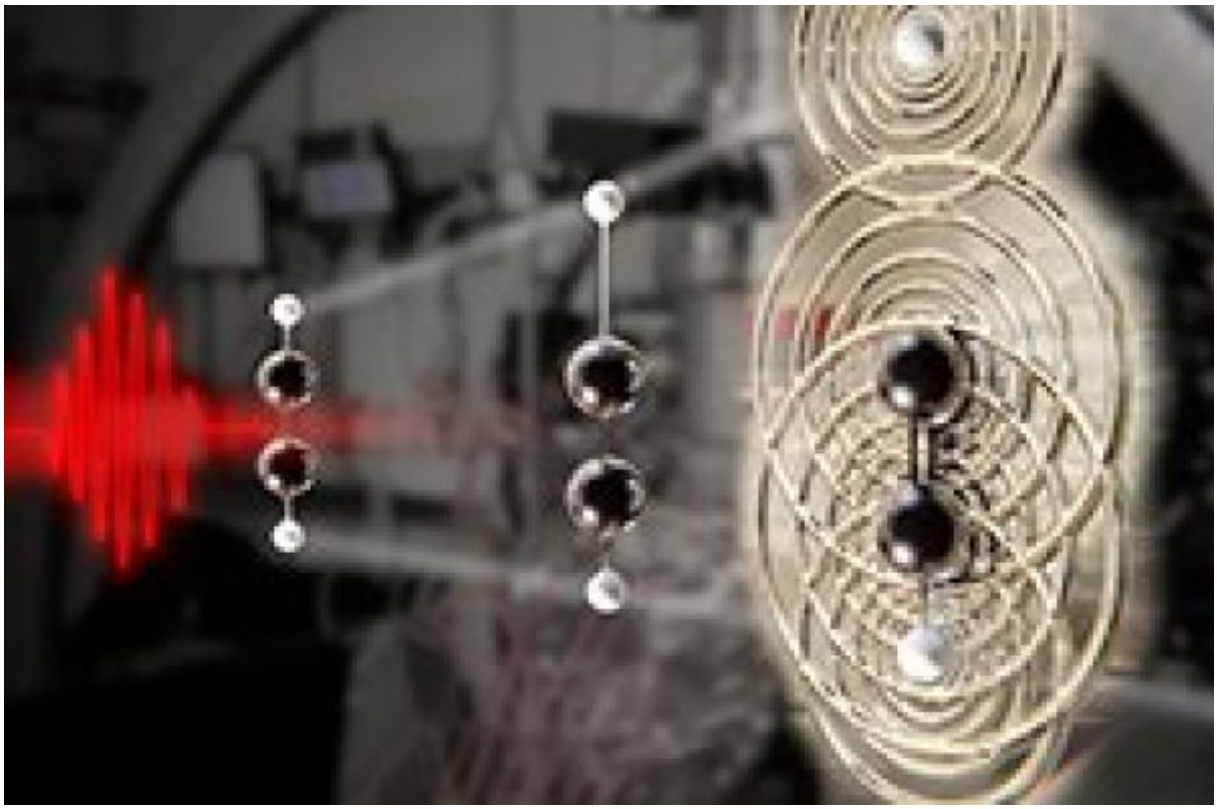

ICFO SCHOOL ON THE FRONTIERS OF LIGHT: Attosecond science and extreme photonics

July 08, 2019
ICFO Auditorium

Announcing the launch of this year's ICFO School on the Frontiers of Light.

Attosecond pulses access the natural time scale of electronic motion, thus provide a first tool to study the dynamic behaviour of the quantum world. Not surprisingly, since the inception of attosecond pulse generation nearly two decades ago, the field has seen exponential growth and spectacular progress was made in studying the dynamics of atoms, molecules and solids. Presently, we are witnessing an amazing convergence of attosecond physics, ultrafast x-ray science and xray free-electron laser research to address fundamental problems across physics, chemistry and material science with revolutionary new tools and methodologies.

The tremendous prospects and growth in these areas require the training of young scientists who will further advance these fields. The lectures of the ICFO School on Frontiers of Light will be held by renowned experts and pioneers of atomic and molecular physics, attosecond science, chemistry and solid state physics, who will cover the fundamentals as well as the cutting edge in both theory and experiment. Lectures and discussions will range from molecular imaging to high harmonic spectroscopy in solid state and to superconductivity.

Lecturers:

Kenneth Schafer, Louisiana State University
Olga Smirnova, MBI for Nonlinear Optics and Short Pulse Spectroscopy
Mikhail Ivanov, MBI for Nonlinear Optics and Short Pulse Spectroscopy
Stephen R. Leone, University of California, Berkeley
Jochen Küpper, Center for Free-Electron Laser Science, Hamburg
Hamed Merdji, Lasers, Interactions and Dynamics Laboratory, CEA
Giulio Vampa, Stanford PULSE Institute

Scientific Organisers: Prof. Jens Biegert (ICFO), Prof. Maciej Lewenstein (ICFO) and Dr Robert Sewell (ICFO).

Supported by the Fundacio Catalunya - La Pedrera - Ignacio Cirac Program Chair, Frontiers of Light Schools aim at giving talented young researchers and students worldwide a first introduction to a thematic research area and a taste of an international research environment. They incorporate a dynamic and social learning environment beyond participating in lectures, including group discussions, direct interactions with the lecturers, student talks, poster presentations, and visits to labs.