



Università degli Studi di Pavia
DIPARTIMENTO DI FISICA



Majed Chergui

Ecole Polytechnique Fédérale, Lausanne, Switzerland

MATTER IN ACTION OBSERVED BY ULTRASHORT PULSES FROM THE VISIBLE TO THE X-RAYS

Martedì 28 Maggio 2019, ore 16
Aula 102 del Dipartimento di Fisica, via Bassi 6

Abstract: The advent of femtosecond ($1 \text{ fs} = 10^{-15} \text{ s}$) laser technology some twenty-five years ago opened a whole new era in Science by its ability to probe in “real-time” nuclear motion in molecules, crystals, liquids and proteins. In the past fifteen years, huge efforts have been deployed aimed at combining the high time resolution of fs lasers with the high spatial resolutions of structural techniques, such as X-ray and electron diffraction and X-ray spectroscopies. In this talk, I will demonstrate the power of ultrafast spectroscopy from the visible to the X-ray range to monitor the electronic, spin and structural dynamics of chemical and biological systems and of solid materials. Examples will include the correlated spin and structural dynamics in hemoproteins and transition metal complexes, and the charge carrier dynamics in transition metal oxides.

Majed Chergui is Professor of Physics and Chemistry and director of the Laboratory of Ultrafast Spectroscopy, EPFL, Lausanne (<https://lsu.epfl.ch/>), where he pursues a variety of ultrafast UV and X-ray spectroscopic studies on chemical and biological systems. He is currently a member of the Administrative Council (CdA) of the University of Pavia.



Tutti gli interessati sono cordialmente invitati a partecipare