



Tuesday, November 20th 2018 - 11:00 am
CFEL Seminar room IV (Bldg. 99)

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Ultrafast control of matter by high-field terahertz pulses

Terahertz interaction with matter has become one of the hottest topics in ultrafast community. Indeed, intense terahertz pulses have recently proved to be a pivotal tool to manipulate and control the properties of materials and especially complex condensed matter systems.

The recent development of terahertz sources driven by lasers and accelerators has led to pioneering experiments demonstrating the access to new metastable phases of matter and nonlinear processes hindered to conventional laser excitation.

In this talk, I will give an overview on the high-field terahertz generation and present the capabilities of the nonlinear terahertz spectroscopy. Recent experiments, including terahertz driven insulator-to-metal transition, nonlinear optical processes and coherent phonon control, are discussed.

Host: Daniele Nicoletti / Andrea Cavalleri

