

SEMINAR ANNOUNCEMENT

FRIDAY, 16.02.2018

14:15 h ZEMOS 0.17

Prof. Dr. Fulvio Parmigiani

*Department of Physics - Università di Trieste
International Faculty - University of Cologne
Elettra-Sincrotrone Trieste S.C.p.A.N.N.*

“Science driven requirements for seeded soft x-ray free electron lasers”

Starting from the archetypal FERMI externally seeded FEL, recent theoretical and experimental progress has shown the possibility of producing fully coherent, variable polarization and tunable, soft-X-ray, ultra-short pulses at high repetition rate. This ultimate achievement will unlock the gate for performing X-ray-based experiments that are qualitatively different from those available at any current or planned X-ray source. Here we will review the experiments and the ideas that represent the science frontier in soft X-ray, time-resolved spectroscopy, coherent imaging and X-ray coherent optics non-equilibrium spectroscopy. These studies will lead to an understanding of fundamental dynamics, occurring on the ultrafast time and nanometer spatial scales, needed for addressing a broad range of science essential for resolving our complex and long-term energy challenges, environmentally urgent questions and demanding problems in bioscience and novel materials.

Guests are very welcome!