



UNIVERSITÀ DEGLI STUDI
DI PERUGIA



AVVISO DI SEMINARIO

Giovedì 24 gennaio 2019 - ore 14:30

Aula F (Fisica)

Dr. Giorgio Schirò

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"X-ray pulses for time-resolved experiments on photosensitive systems I - Principles and instrumentation"

Abstract:

Electron accelerators for X-ray production (X-ray free electron lasers - XFEL - and synchrotrons) are able to deliver short (~ 100 ps at synchrotrons and ~ 10 fs at XFELs) and bright X-ray pulses [1,2]. If synchronized with optical lasers to trigger a photoreaction, X-rays can provide structural snapshots after the photoreaction with high time (fs) and space (\AA) resolution. The basic principles of the approach and their technical implementation will be introduced, in particular for studying biological macromolecules in action [3,4]. Experimental challenges and limitations will also be discussed.

[1] Pellegrini et al., *Rev. Mod. Phys.* 88, 015006 (2016).

[2] Bostedt et al., *Rev. Mod. Phys.* 88, 015007 (2016).

[3] Neutze et al., *Curr. Opin. Struct. Biol.* 22, 651 (2012).

[4] Colletier, Schirò, Weik, in *X-ray Free Electron Lasers.- A Revolution in Structural Biology*, Springer (2019).

Tutti gli interessati sono invitati a partecipare

Il Responsabile:

Dr. Lucia Comez

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