

## Summer School on Time-Resolved X-Ray Processes in Atoms, Molecules and Solids

July 29 - August 2, 2008

*Scientific coordination:*

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Jointly sponsored by the **Max Planck Institute for the Physics of Complex Systems (mpipks)**  
and the **Asian Pacific Center for Theoretical Physics, Pohang, Korea (APCTP)**

Due to recent technological developments simultaneous atomic resolution in space and time to follow microscopic dynamics is within reach. X-ray free electron lasers such as FLASH in Hamburg and other similar sources under construction world wide deliver the appropriate light pulses. In a parallel development intense VUV pulses with duration in the attosecond regime can be created. Finally, the next generation synchrotrons will reach sub-picosecond time resolution. This opens a completely new parameter regime for light-matter interaction, namely time-resolved X-ray dynamics.

The summer school introduces the tools to understand and work with time-resolved X-ray dynamics starting from a very basic level. The format is not research talks but blackboard lectures (in the morning) and discussion groups (in the afternoon), concluded by a plenum where the discussion groups exchange their results (before dinner).

Four mini courses with three lectures each will be delivered by experts in the field:

<b>Robin Santra (ANL Argonne):</b>	Introduction to X-ray physics
<b>Christian Schroer (TU Dresden):</b>	Coherent X-ray imaging
<b>Alexander Föhlisch (U Hamburg):</b>	Ultrafast dynamics on the atomic scale from X-ray spectroscopy
<b>Christoph Bostedt (TU Berlin):</b>	Experiments at FLASH

Participants are encouraged to stay for the research workshop (until August 8, see separate announcement) which immediately follows the summer school.

Applications for participation and poster contributions are welcome and should be made by using the application form on the workshop web page (please see URL below). The number of attendees is limited. There is a **registration fee of 100 €** to be paid by all participants. Costs for accommodation and meals will be covered by the Max Planck Institute. Limited funding is available to partially cover travel expenses. A parent-child apartment and childcare are available upon request.

**Deadline for registration is June 15, 2008.**



For further information please contact:

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