

<b>Lecture Title</b>	Soft X ray Interactions with Materials and Soft X ray Absorption Spectroscopy
<b>Speaker</b>	Wolfgang Eberhardt  TU-Berlin and DESY CFEL
<b>Abstract</b>	Soft X-rays are transmitted reflected or absorbed by solids, which can be detected by measuring not only the photons, but also electrons generated in the absorption process. The spectra show the excitations of core electrons, which are reflecting on chemical and magnetic interactions.
<b>Keywords</b>	Soft X rays, Core shell spectroscopy, X-Ray absorption Spectroscopy, X-ray Photoelectron Spectroscopy, X-Ray Fluorescence, X-Ray Holografy
<b>Level of the audience</b>	Beginners and experts
<b>Language</b>	English
<b>Contents</b>	<ol style="list-style-type: none"> <li>1. Electromagnetic spectrum --- X ray and soft X ray region,</li> <li>2. Electronic configuration and core shells,</li> <li>3. The X ray absorption and relaxation processes,</li> <li>4. Applications: Molecular orientation on surfaces, molecular fingerprinting</li> <li>5. CMXD of magnetic systems</li> <li>6. Coherence and soft X-ray Holografy</li> </ol>