



SPIN+X
SFB/TRR 173
Kaiserslautern • Mainz



Fachbereich Physik, Mathematik und Informatik

**SONDERTERMIN:
SFB TRR 173 Spin+X - Kolloquium**

**Wednesday 22nd, 2020 at 10:30 am
online via Skype for Business**

Nadejda Bouldi

Institute for Theoretical Physics, Heidelberg University, Heidelberg, Germany

Core level spectroscopies to study magnetic materials

The study of complex magnetic materials often requires the use of advanced experimental methods. Synchrotron radiation based techniques have unique capabilities which I will illustrate using three examples. The first example is an X-ray absorption (XAS) study of two Co(II)-based molecular compounds which exhibit pressure-induced and light-induced spin-crossover transitions. The second example is about iron hydride FeH. X-ray magnetic circular dichroism (XMCD) and XAS experiment under pressure, in association with *ab-initio* DFT calculations, provide valuable information on the effect of H atoms on the electronic structure of the Fe lattice. In the third example, a bulk sensitive magnetic probe (RIXS-MCD) and a surface sensitive magnetic probe (XMCD) are combined to investigate the magnetic properties of core-shell nanoparticles.

The guest is invited by Prof. Dr. M. Kläui
Everybody interested is welcome!