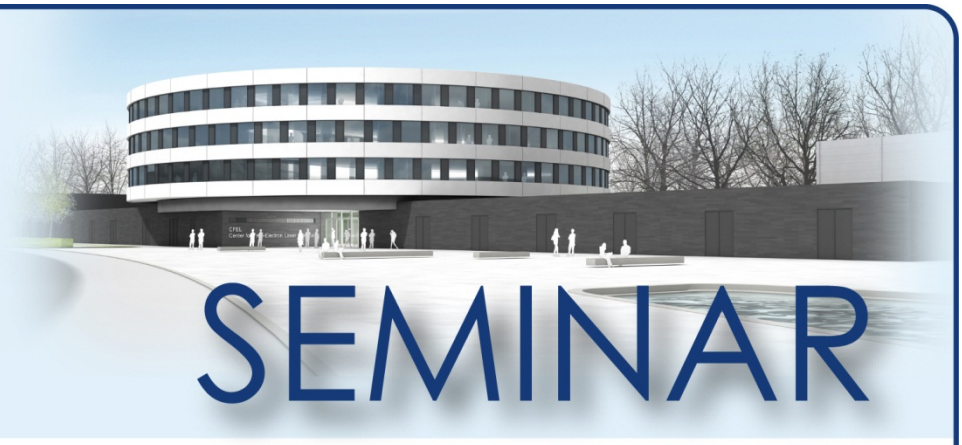
CFEL SCIENCE



SEMINAR

02nd February 2011 - 10:00
Building 49, Seminar Room (108)

Lorenzo Galli
University of Trieste

Toward a comprehensive picture of the orbital polarization and the magnetic properties of ruthenates

A study of the electronic and magnetic properties of the first three members of the Strontium-Ruthenium oxides of the Ruddlesden-Popper (R-P) series, $Sr_{(n+1)}Ru_nO_{(3n+1)}$ will be presented. Use was made of three different experimental techniques, namely: X-ray Magnetic Circular Dichroism (XMCD), time-resolved Reflectivity, and Resonant X-ray Emission Spectroscopy (RXES).

The experimental data of these techniques will be reported and the results of the analysis of the data will be discussed in the light of the more general open questions still pending on the physical properties of these systems.

In particular, the work has focused on the similar properties governing the ground states of $Sr_3Ru_2O_7$ and $Sr_4Ru_3O_{10}$, e.g. the transition between Fermi-liquid and non-Fermi-liquid electronic states, which reflects on several physical properties.

Host: Henry Chapman – CFEL Coherent Imaging Group