

On behalf of the
Science College CMS
Vienna Computational Materials Laboratory
and Center for Computational Materials Science

we cordially invite you to the following seminar

Prof. Dr. Stefan Blügel

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Forschungszentrum Jülich and JARA, D-52425 Jülich

Spin-Orbit Physics at Metal Surfaces

Most physicists bump at least once during their lectures into the spin-orbit interaction and may remember it is really a tiny quantity. In condensed matter physics, this interaction has left a trace of effects coined after some illustrative names in physics: Dzyalo-shinskii-Moriya interaction, Elliot-Yafet, D'yakonov-Perel or Bir-Aronov-Pikus mechanism, Bychkov-Rasbha and Dresselhaus effect, to name a few. New physical insights, new mathematical techniques, new theoretical concepts and new experimental discoveries, such as the topological insulator, the Chern insulator, the spin and the quantum spin-Hall effect have made this field to one of the most active one in condensed matter physics today. In this colloquium talk I will touch upon these new discoveries in the context of metal surfaces and I will discuss topological magnetic phases in real space in contrast to topological phases of the momentum space of electrons as in topological insulators.

Date: Monday, Nov 14, 2011 16:00

Location: Seminar room 138C (TU Freihaus 9. Stock, **gelb**)
A-1040 Wien, Wiedner Hauptstraße 8-10