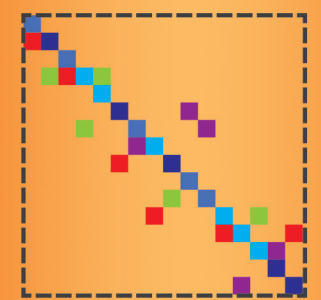
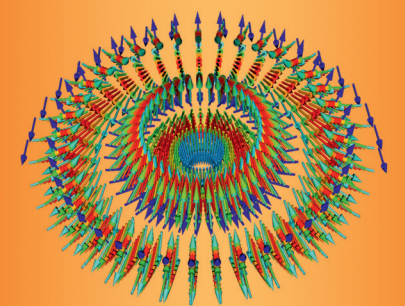
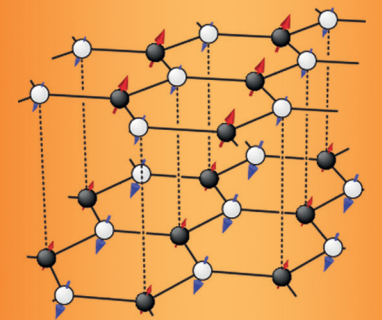
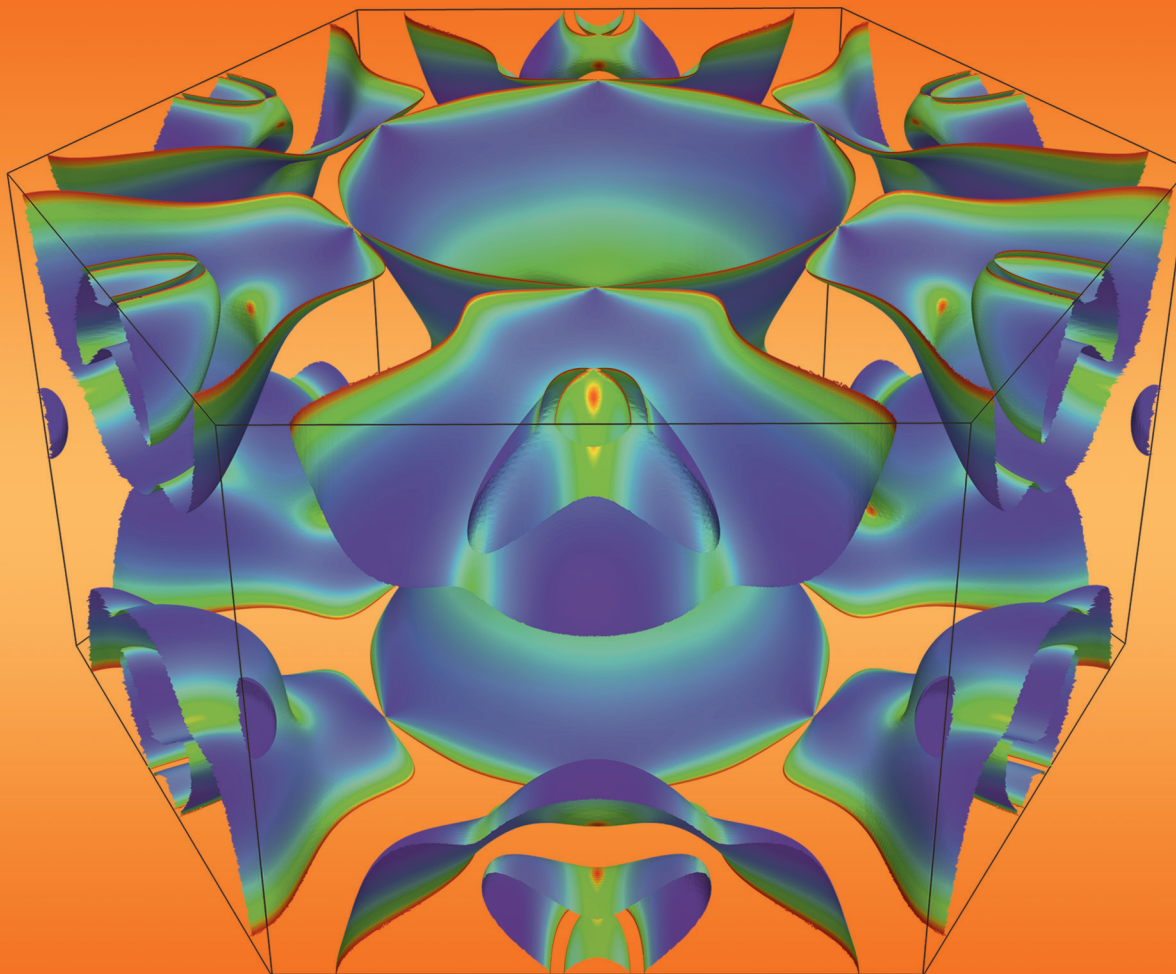


45<sup>th</sup> IFF Spring School 2014

# Computing Solids

## Models, ab-initio methods and supercomputing

March 10 – 21, 2014 • Jülich • Germany



- Density functional theory and methods
- Many-body perturbation theory
- Model Hamiltonians
- Renormalization group techniques
- Berry phase physics and Wannier functions
- Materials informatics and design
- Nonequilibrium quantum-transport and open systems
- Simulation techniques
- Parallel computing
- Applications to graphene, magnetic skyrmions and pnictides

Two-week course with about 45 hours of lectures for students and young scientists.

**Deadline for applications: January 31, 2014**

**Registration and information: [www.iff-springschool.de](http://www.iff-springschool.de)**

**In collaboration with universities and research institutions.**



Institute for Advanced Simulation, Institute of Complex Systems, Jülich Centre for Neutron Science, Peter Grünberg Institut