



Institute of Solid State Physics
Wiedner Hauptstrasse 8-10
1040 Vienna

Doctoral Program

<https://www.ifp.tuwien.ac.at/spectroscopy>

W³S³ - Wien Winter Workshop on Solid-State Spectroscopy

Tuesday, 13 December, Fachgruppenraum Physik (Freihaus, 1st floor yellow)

- 14:00-15:30 Alexey Shuvaev (TU Wien, Institute of Solid State Physics)
Magnons and electromagnons in cycloidal incommensurate antiferromagnet
(Landau-Lifshitz equation, classical spin-wave theory, Heisenberg Hamiltonian)
- 15:30-17:00 Dávid Szaller (TU Wien, Institute of Solid State Physics)
Quantum-mechanical description of spin-waves in real materials
(Heisenberg antiferromagnets, spin-stretching modes, numerical methods)
- 17:00-17:30 Coffee break
- 17:30-18:30 Joachim Deisenhofer (University of Augsburg, Experimental Physics V)
Vacuum Rabi-oscillations in some magnets and beyond
(vacuum-Rabi oscillations in THz time-domain spectra of antiferromagnets, "cavity-QED" effects observed without a cavity)
- 18:30-19:15 Jakub Vít (Institute of Physics of the Czech Academy of Sciences, Prague)
Experiments using intense THz radiation
(laser-based table-top vs. linear-accelerator-based THz sources, probing techniques following THz pump, quantitative data evaluation)

Wednesday, 14 December, Hörsaal 4 (Freihaus, 2nd floor yellow)

- 10:00-11:30 Péter Balla (Wigner Research Centre for Physics, Budapest)
Group theory and spins
(Symmetries in quantum mechanics as applied to spins; multipoles, dynamics and selection rules)
- 11:40-13:10 Evan Constable (TU Wien, Institute of Solid State Physics)
Neutron scattering theory and techniques