



## Invitation to a talk

### Controlling collective ordering phenomena in correlated oxides – interfaces, domain walls and topological defects

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**Termin:** Monday, April 29, 2024, 16:00

**Ort:** Lise-Meitner-Lecture Hall

9. Boltzmannngasse 5

#### Abstract:

In quantum materials, electron-electron interactions can lead to the spontaneous emergence of various nearly-degenerate collective electronic and magnetic phases, whose balance can readily be shifted by modest perturbations. A ubiquitous and remarkably functional tool for the manipulation of phase behavior is the spatial boundary of the phase itself.

I will present select aspects of my research investigating spin and charge ordering phenomena with an emphasis on the manipulated phase behaviour at interfaces and domain walls. The special case of antiferromagnetic domains and topological defects is addressed through the development of a novel imaging technique based on resonant coherent x-ray scattering.

As part of the presentation, there will be a teaching demonstration on the topic  
"Perfect conductors vs. superconductors".