



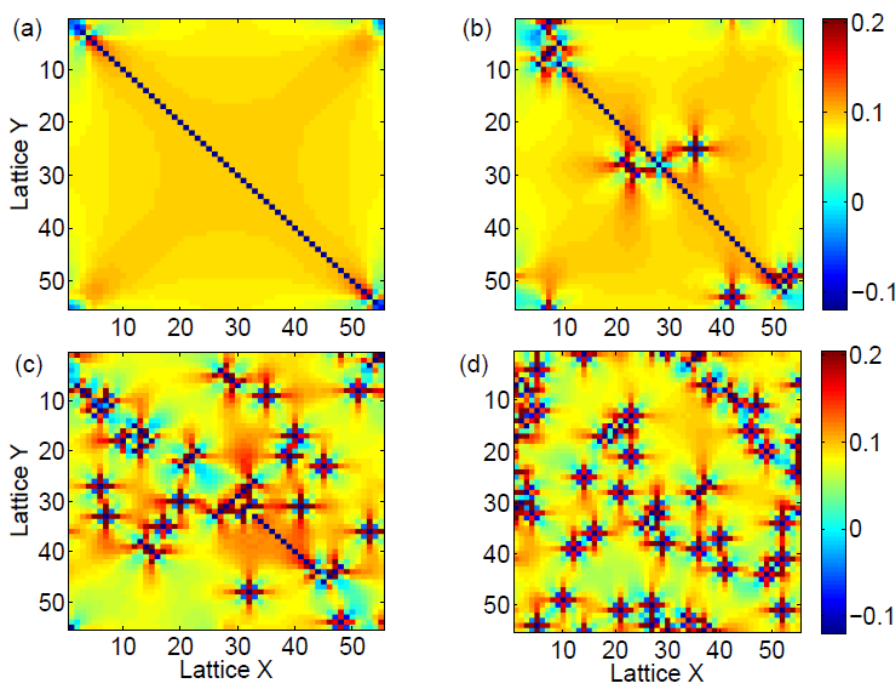
## CELOÚSTAVNÍ SEMINÁŘ Ústavu fyziky materiálů AV ČR

dne **26.1.2011** (středa) v **10:00 h**  
v přednáškovém sále (4. patro)  
Ústavu fyziky materiálů AV ČR, Žižkova 22, Brno

**Dr. Panagiotis Maniadis**  
Los Alamos National Laboratory, USA

### Mesoscopic Ginzburg-Landau modeling of layered transition metal oxides

Transition metal oxides, like cuprates and manganites, exhibit some surprising properties like high temperature superconductivity, metal to insulator transitions, ferro- and antiferromagnetism, colossal magnetoresistance, and other multiferroic properties. When thin layers of different oxides are stacked together, the formation of interfaces and the lattice reorganization leads into more complicated behavior, with many possible applications. We use a mesoscopic phase field theory, to study the long range effect of the interface reorganization into the electronic and magnetic properties of these layered oxides. We use this coupled model to study the formation of polaron stripes in the bulk of the material, as well as the emerging properties of the interface of the layered oxides.



*Kontakt:* Dr. Roman Gröger (tel. 532 290 448, e-mail: groger@ipm.cz)