

ICAMS Compact Course “Introduction to Multiscale Modelling”

All courses take place at ICAMS in Universitaetsstrasse 90a (ground floor, room 008, practical parts in CIP pool on 4th floor)

Morning: 9:15 to 12:30 hrs

Afternoon: 13:30 to 16:45 hrs

February 25 - March 01, 2013

Monday (Neugebauer/Drautz)

1. Fundamentals of ab initio simulations and their application to surface physics
2. Atomic interactions and dynamics

Tuesday (Drautz/Hammerschmidt)

3. Setup and Analysis of molecular dynamics simulations
4. Calculation of material properties (practical exercise)

Wednesday (Steinbach/Shchyglo)

5. Microstructure evolution and phase transitions
6. Phasefield method

Thursday (Varnik/Ma)

7. Modeling of complex fluids
8. Continuum plasticity and finite element method

Friday (Hartmaier)

9. Models for microstructure properties relations
10. Modeling multiphase materials (incl. numerical exercises)