

Essen, 07.01.09

## Einladung zum

### Seminar Mechanik und Numerische Mathematik

**Prof. Dr. Siegfried Schmauder**

Universität Stuttgart,  
Institut für Materialprüfung, Werkstoffkunde und Festigkeitslehre (IMWF)

„Micromechanics of Composites“

In this contribution we report on recent advances in micromechanics of composites using continuum mechanical methods. The presentation includes aspects of nano simulations based on Molecular Dynamics and Monte Carlo Methods. The main focus is on nano, micro and macro scales using multiscale simulations of steels with precipitates and of metal matrix composites containing large particles. A further aspect will be hydrogen embrittlement as an example for inhomogeneities on the atomic scale. It will be shown that lower scales determine the macroscopic performance of composites in all cases.

**Ort:** Universität Duisburg-Essen, Campus Essen, **Raum T03 R03 D26**

**Zeit:** Freitag, den 30.01.2009 von 12.00 Uhr bis 13.00 Uhr

gez. Prof. Dr. A. Klawonn

gez. Prof. Dr.-Ing. J. Schröder