



Institut für Numerische Simulation  
Rheinische Friedrich-Wilhelms-Universität Bonn



Einladung zu einem Vortrag

**Dr. Thomas Voigtmann**

Deutsches Zentrum für Luft- und Raumfahrt (DLR)  
Institut für Materialphysik im Weltraum Köln

spricht zum Thema

**Simulation Studies of Slow Dynamics in Dense Liquids**

**Zeit:** Dienstag, den 22. November 2011,  
14:00 Uhr bis 15:00 Uhr

**Ort:** Institut für Numerische Simulation, Wegelerstrasse 6,  
53115 Bonn, Seminarraum 6.020, 6. Etage

gez. Prof. Dr. Michael Griebel, Dr. Jan Hamaekers

**Abstract:** A large class of materials from metallic melts to colloidal suspensions can be characterized as dense liquids. Their dynamics becomes increasingly slow and complex (spanning several orders of magnitude in time) as one approaches the regime where they solidify. I will give an overview of recent research topics in the field, and how simulation methods from particle-based Monte Carlo and molecular dynamics to mesoscopic approaches help to shed light on these issues. A particular focus will be on the non-linear effects of external driving forces, and on the interrelation between simulation, experiment, and statistical-physics theory.