

# Gastvortrag

Mittwoch, 20. April 2016  
17.00 Uhr  
Seminarraum I

Prof. Dr. Ernst P. Stephan  
Leibniz Universität Hannover

## **Coupling of BEM and FEM in the Time Domain for Fluid-Structure Interaction**

### Abstract:

We consider well-posedness, convergence and a posteriori error estimates for fluid-structure interaction in the time-domain. For an elastic body immersed in a fluid, a Galerkin time-domain boundary element method (TDBEM) for the wave equation in the exterior is coupled to a finite element method for the Lamé equation. Based on ideas from the time-independent coupling formulation and its a posteriori error analysis, we give a priori and a posteriori error estimates, which demonstrate the convergence and give rise to adaptive mesh refinement procedures.

Einladender: Lothar Banz