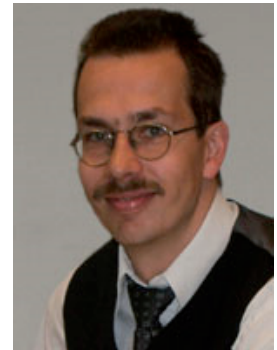**laden gemeinsam zum**

GASTVORTRAG

Bernhard Preim
Otto-von-Guericke-Universität Magdeburg

"Visual Exploration of MR Data and Simulated Bloodflow for Diagnosis of Vascular Diseases"

Abstract:
Based on specific problems, in neuroradiological diagnosis and interventional treatment, the talk describes a pipeline of processing steps from medical image data to reliable blood flow simulation results.
This pipeline includes model generation, where a trade-off between smoothness, accuracy, low mesh complexity, and high triangle quality is required. The exploration of the resulting data is challenging since the flow data has to be put in anatomic context. Focus and context rendering and overview map visualizations are among the techniques to support medical users. In addition to provide mere diagnostic support, we also consider treatment options and discuss how to predict the outcome of therapies. This requires, for example, to include geometric models of stent geometries in the simulation. Since the talk is based on ongoing research, some portions of the talk rather reflect a preliminary state and not finished results.

Biography:
1989 - 1994 Computer Science Studies (Diplom-Informatiker), University of Magdeburg, Germany
1994 - 1998 Research Associate at the Department of Simulation and Graphics in Magdeburg
1998   Dissertation defense (Dr.-Ing.), University of Magdeburg
1999   Assistant Professor at CeVis (Center for Complex Systems and Visualization) and head of the group „Computer Assisted Liver Surgery Planning" at MeVis (Center for Medical Diagnosis System and Visualization) Bremen
2002   Habilitation; Venia Legendi: Informatik, University Bremen
since 2003   Full Professor (C4) Applied Informatics / Visualization, Otto-von-Guericke ´ University of Magdeburg
since 2003   Guest Professor, University of Bremen

Datum: 5. März 2010 10:30 Uhr s.t.
Ort: TU Wien, Favoritenstr. 9, Stiege 1, 5. Stock, Seminarraum E186