



# Einladung zum Oberseminar Wissenschaftliches Rechnen

Julius-Maximilians-Universität Würzburg  
Lehrstuhl für Wissenschaftliches Rechnen IX

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## Model-based magnetic particle imaging

Magnetic particle imaging (MPI) is a tracer-based imaging modality developed to detect the concentration of superparamagnetic iron oxide nanoparticles. It is highly sensitive to the nanoparticle's nonlinear response to a dynamic applied magnetic field. Model-based reconstruction techniques are still not able to reach the quality of data-based approaches in which the linear system function is determined by a time-consuming measurement process. Possible reasons include the relaxation behavior of nanoparticles in fast changing magnetic fields. However, the equilibrium model described by the Langevin function is still used to predict the system behavior. In this talk we discuss the model-based MPI reconstruction problem and possible extensions.

Ort: Raum 30.02.003 (2. Stock) (Mathegeb. 30 West)      Zeit: Montag, 20.11.2017, 14.00 Uhr

Zu diesem Vortrag laden wir Sie herzlich ein.

*gez. Prof. Dr. Alfio Borzi*  
*gez. Prof. Dr. Roland Griesmaier*  
*gez. Prof. Dr. Bernadette Hahn*