



# Einladung zum Oberseminar Wissenschaftliches Rechnen

Julius-Maximilians-Universität Würzburg  
Lehrstuhl für Wissenschaftliches Rechnen IX

*Prof. Dr. Ingenuin Gasser*

Universität Hamburg  
Department of Mathematics

## Modelling, simulation and optimisation of power plants based on renewable energies

We develop mathematical models to describe power plants based on renewable resources.

We consider well known applications such as parabolic trough power plants as well as non-standard possible future applications like solar updraft towers, energy towers or pressure retarded osmosis power plants. Due to their complexity all these applications require substantial modelling effort to extract reasonable models, which can be simulated fastly and which are appropriate for optimisation tasks.

All applications involve thermo-fluid dynamic models which have to be reduced under the restriction of keeping the most relevant physical effects.

At the end we maximize the power output of the power plant with respect to operational or system parameters.

Ort: Raum 30.02.003 (Mathematik West, 2.Stock)

Zeit: Freitag, 01.07.2022, 12:00 Uhr

Zu diesem Vortrag laden wir Sie herzlich ein.  
You are cordially invited to this lecture.

*gez. Prof. Dr. Alfio Borzì*  
*gez. Prof. Dr. Frank Werner*