

## Research Position

### Research Group

#### Computational Methods in Systems and Control Theory

### Type of position

Research associate (Ph.D./PostDoc) for *Nonlinear Model Reduction with Applications in CFD* within the Computational Methods in Systems and Control Theory group (CSC) headed by Prof. Peter Benner. This group is part of the Max Planck Institute for Dynamics of Complex Technical Systems in Magdeburg (MPI MD), Germany, an interdisciplinary institute at the interface of engineering and mathematics.

### Duration

The post is available immediately. Initial contract duration is two years, with the possibility of extension.

### Job Description

The research focus in this project is on developing novel model order reduction techniques for nonlinear systems. Of primary interest are applications in flow control, where the dynamics of the system are described by the incompressible Navier-Stokes equations. The methods to be developed will be based on interpolation techniques and Krylov subspace methods. If the position is given to a Ph.D. student, the results obtained in this project should serve as the basis for the dissertation project.

Candidates should hold a M.Sc. (or equivalent) or Ph.D. in (Applied) Mathematics or an Engineering degree with a primary focus on computational methods. Preferred background is in Numerical Linear Algebra, Computational Fluid Dynamics, or Computational Methods in Systems and Control. Programming experience in MATLAB is required, knowledge of Fortran/C/C++ and at least one Finite Element or CFD package is welcome.

### Compensation

The salary will be on the level of TVöD E13 (see <http://oeffentlicher-dienst.info/tvoed/bund/> for details), according to the rules of the Max Planck Society.

### Application procedure

Please send an application consisting of a cover letter, curriculum vitae, list of publications and names of two referees who are willing to provide a letter of recommendation upon request to Janine Holzmann ([holzmann@mpi-magdeburg.mpg.de](mailto:holzmann@mpi-magdeburg.mpg.de)) by **June 30, 2012**. Informal enquiries may be made to Peter Benner ([benner@mpi-magdeburg.mpg.de](mailto:benner@mpi-magdeburg.mpg.de)).

Prof. Dr. Peter Benner

Computational Methods in  
Systems and Control Theory

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June 11, 2012

Expiration date: July 1, 2012