



Photographed by Thomas Huntke (source: Wikipedia)

International Workshop
6th Singular Days
on Asymptotic Methods for PDEs

WIAS Berlin, Germany
April 29th – May 1st, 2010

Organizers

A. Glitzky, D. Knees (both WIAS Berlin)

Scientific board

M. Costabel (Rennes), M. Dauge (Rennes), A. Glitzky (Berlin), D. Knees (Berlin), S. Nicaise (Valenciennes), A.-M. Sändig (Stuttgart)

Scope

Partial differential equations play a fundamental role in many applications in physics and mechanics. There, PDEs usually have changing boundary conditions or nonsmooth coefficients and have to be solved on nonsmooth domains. Furthermore, small inclusions or thin layers have to be taken into account. We aim for a better understanding of the influence of these effects on the overall behavior of the solutions. This knowledge is relevant, in particular, for the construction of efficient numerical algorithms for solving elliptic PDEs. The workshop focuses on the following topics:

- regularity for elliptic PDEs in nonsmooth domains or with nonsmooth coefficients,
- asymptotic expansion methods and energetic methods in mechanics and physics (e.g. fracture mechanics, thin layers, small defects, homogenization, singular perturbations),
- computational issues in this field.

Programme

Lectures are scheduled from Thursday morning until Saturday noon. The regular lecture will be 30 minutes including 5 minutes for discussion. For the keynote presentations 45 minutes will be reserved. Additionally a poster session is planned on Thursday afternoon.

Conference fee

The conference fee of 40 € covers break refreshments, a conference dinner and a booklet of abstracts, and is to be paid cash at the conference desk.

Registration and deadlines

For registration and abstract submission please use the registration form on the workshop homepage <http://www.wias-berlin.de/workshops/sing10>. The deadline for registration and abstract submission is March 1st, 2010.

Location

The conference will be hosted by the Weierstrass Institute for Applied Analysis and Stochastics Berlin, which is located in a historic building close to the famous Gendarmenmarkt square. The conference address is: WIAS Berlin, Mohrenstraße 39, 10117 Berlin, Germany.

The Erhard Schmidt lecture room of WIAS is equipped with a blackboard, two overhead projectors, a beamer with a laptop (Windows system), as well as intranet and internet.

Local organizing committee

A. Glitzky, H. Hanke, D. Knees, O. Kuphal (all WIAS Berlin)

Contact and further information

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<http://www.wias-berlin.de/workshops/sing10>,
<http://www.wias-berlin.de>.