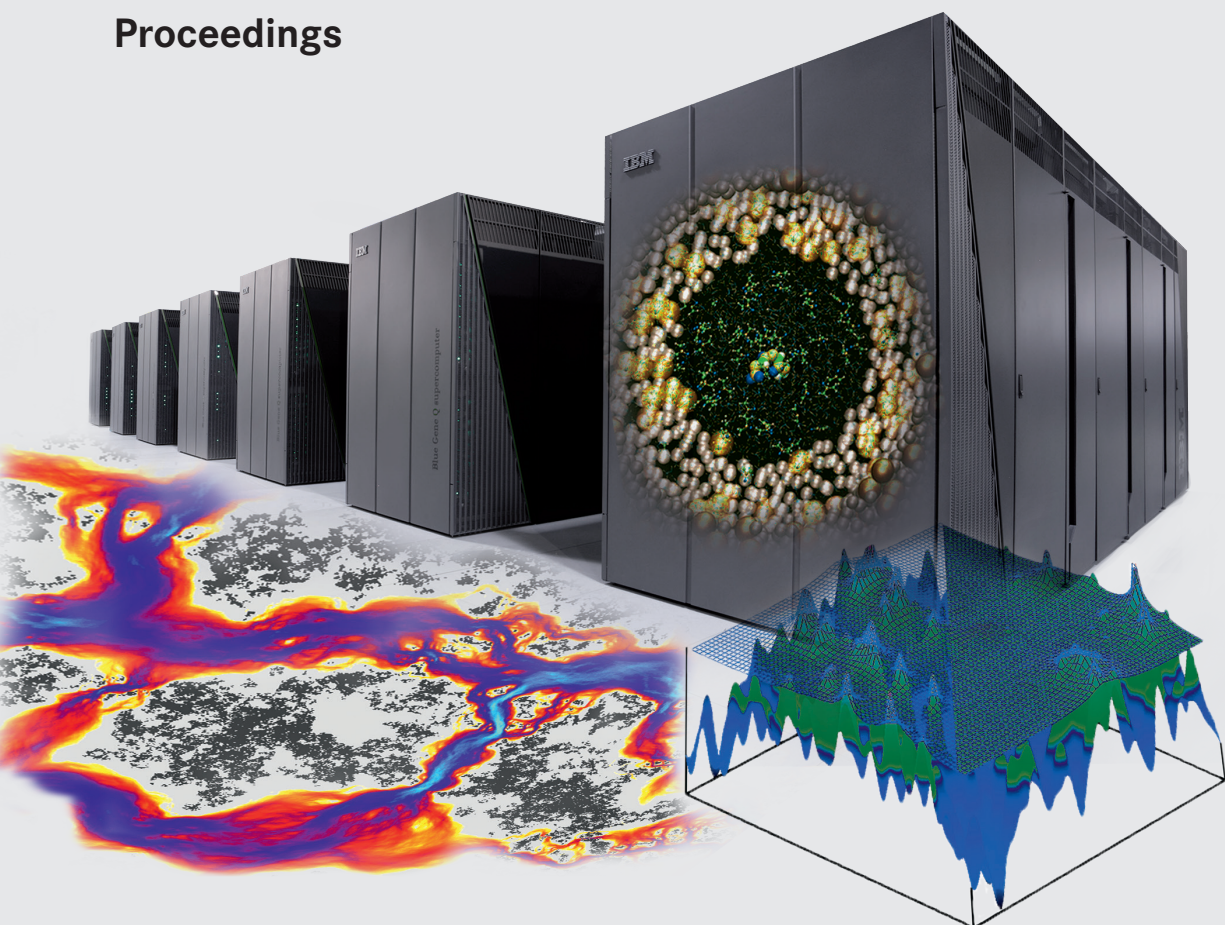


Hybrid Particle-Continuum Methods in Computational Materials Physics

4 - 7 March 2013 | Jülich, Germany

Martin H. Müser, Godehard Sutmann, Roland G. Winkler (Editors)

Proceedings



Forschungszentrum Jülich GmbH
John von Neumann Institute for Computing (NIC)

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The John von Neumann Institute for Computing (NIC) was established in 1998 by Forschungszentrum Jülich and Deutsches Elektronen-Synchrotron DESY to support the supercomputer-oriented simulation sciences. In 2006, GSI Helmholtzzentrum für Schwerionenforschung joined NIC as a contract partner.

The core task of NIC is the peer-reviewed allocation of supercomputing resources to computational science projects in Germany and Europe. The NIC partners also support supercomputer-aided research in science and engineering through a three-way strategy:

- Provision of supercomputing resources for projects in science, research, and industry.
- Supercomputer-oriented research and development by research groups in selected fields of physics and natural sciences.
- Education and training in all areas of supercomputing by symposia, workshops, summer schools, seminars, courses, and guest programmes for scientists and students.

The research groups of the John von Neumann Institute for Computing (NIC) regularly conduct workshops on leading-edge subjects in computational physics. In this tradition, the Computational Materials Physics Group organized a workshop on Hybrid Particle-Continuum Methods jointly with the Institute of Advanced Simulation on March 4 - 7, 2013 at the Forschungszentrum Jülich. The goal of the workshop was to foster the exchange of ideas between the communities working on complex fluids and complex solids. Particular emphasis was placed on continuum-mediated interactions between particles as well as on the adaptive and non-adaptive coupling between particle-based and continuum-based descriptions of materials.



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