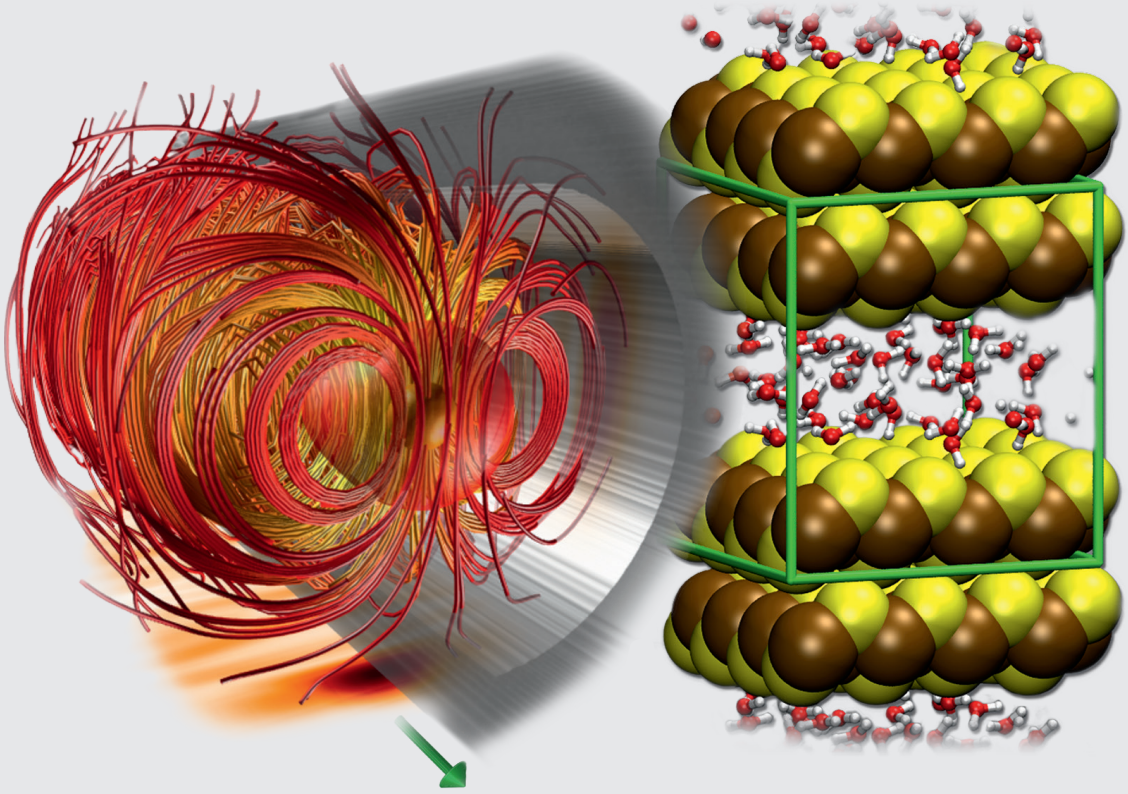
John von Neumann Institute for Computing

NIC Symposium 2016

11-12 February 2016 I Jülich, Germany

K. Binder, M. Müller, M. Kremer, A. Schnurpfeil (Editors)

Proceedings



NIC Series

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

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Publication Series of the John von Neumann Institute for Computing (NIC)

NIC Series Volume 48

ISBN 978-3-95806-109-5

Contents

Computational Biology and Biophysics

Computational Chemistry

Elementary Particle Physics

Materials Science

Condensed Matter

Computational Soft Matter Science

Earth and Environment

Computer Science and Numerical Mathematics

Fluid Mechanics

Computational Plasma Physics

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 NIC Symposium is held biennially to give an overview on activities and results obtained by the NIC projects in the last two years. The contributions for this 8th NIC Symposium are from projects that have been supported by the supercomputers JUROPA, JURECA, and JUQUEEN in Jülich. They cover selected topics in the fields of Astrophysics, Biology and Biophysics, Chemistry, Elementary Particle Physics, Materials Science, Condensed Matter, Soft Matter Science, Earth and Environment, Computer Science and Numerical Mathematics, Fluid Mechanics, and Plasma Physics.

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