John von Neumann Institute for Computing

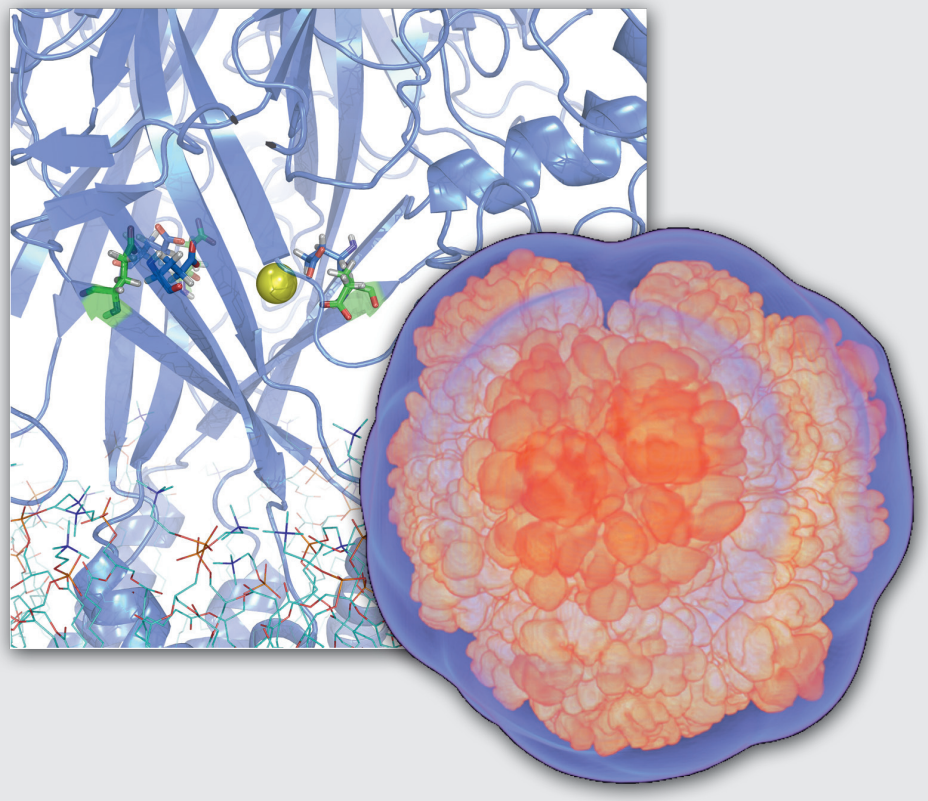
NIC Symposium 2012

25 Years HLRZ/NIC

7 – 8 February 2012 | Jülich, Germany

K. Binder, G. Münster, M. Kremer (Editors)

Proceedings



NIC Series

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

NIC Symposium 2012 – Proceedings

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Contents

Supercomputing at Scale – Architectural Evolution at Jülich Supercomputing Centre
N. Eicker, St. Graf, W. Gürich, H. Kleimann, B. Orth, U. Schmidt, M. Stephan, E. Suarez, L. Wollschläger, Th. Lippert **1**

The NIC Research Groups

The Chiral Transition, Deconfinement, and the Equation of State of QCD
F. Karsch, W. Söldner **15**

Computational Materials Physics at the JSC
M. H. Müser **25**

QCD Quantum Corrections from Computer Simulations
K. Jansen, R. Sommer **33**

Astrophysics

Introduction by P. L. Biermann **41**

Generation of Strong Magnetic Fields via the Small-Scale Dynamo During the Formation of the First Stars
R. Banerjee, S. Sur, Ch. Federrath, D. R. G. Schleicher, R. S. Klessen **43**

The Progenitor Systems of Thermonuclear Supernovae
W. Hillebrandt, M. Fink, M. Kromer, R. Pakmor, F. K. Röpke, I. R. Seitenzahl, S. A. Sim **53**

High Resolution Simulations of Planet Formation Processes: Gravoturbulent Planetesimal Formation on JUGENE
H. Klahr, A. Johansen **61**

Computational Biology and Biophysics

Introduction by W. Wenzel **71**

pH Dependence of ASIC1a Dynamics on a Sub-Microsecond Time Scale
K. Pluhackova, R. Böckmann **73**

Memory Consumption of Neuronal Network Simulators at the Brain Scale
S. Kunkel, M. Helias, T. C. Potjans, J. M. Eppler, H. E. Plesser, M. Diesmann, A. Morrison **81**

Structure, Specificity and Mechanism of ATP Synthase Membrane Motors
J. D. Faraldo-Gómez **89**

Mesoscale Simulations of Human Blood Flow: From Red Blood Cell Elasticity and Interactions to Blood Rheology
D. A. Fedosov, G. Gompper **97**

Chemistry
Introduction by W. Klopper **105**

***Ab initio* Molecular Dynamics Simulations of the Adsorption on Complex Surfaces**
A. Groß **107**

Mechanochemistry of Covalent Bond Breaking from First Principles Simulations
P. Dopieralski, J. Ribas-Arino, D. Marx **115**

Internal Dynamics in Endohedral Metallofullerenes as Studied by *ab initio* Born-Oppenheimer Molecular Dynamics
A. A. Popov **123**

Simulations of Electron Transfer and Electron Transport in Molecular Systems at Metal and Semiconductor Substrates
P. B. Coto, Ó. Rubio-Pons, R. Härtle, M. Bockstedte, M. Thoss **131**

Elementary Particle Physics
Introduction by G. Münster **141**

Searching for New Physics in Neutral Kaon Mixing
Ch. Hoelbling **143**

Nuclear Physics from Lattice Simulations
U.-G. Meißner **151**

Finite Temperature Lattice QCD with Wilson Quarks
S. Borsányi, Z. Fodor, Ch. Hoelbling, S. Katz, St. Krieg, K. Szabó, B. Tóth **159**

Probing the $N_f = 2$ QCD Phase Transition with Light Wilson Fermions
B. B. Brandt, O. Philipsen, H. Wittig, L. Zeidlewicz **167**

Materials Science

Introduction by R. O. Jones **175**

Understanding Molecular Electronics and Spintronics from First Principles Simulations
N. Atodiresei, V. Caciuc, P. Lazić, St. Blügel **177**

Quantum-Chemical Calculations on Ion-Permeable Membranes
M. Lumeij, M. Gilleßen, B. Eck, R. Dronskowski **189**

Graphene Building Blocks on Si (111): Going Towards Graphene-Based Nanoelectronics with the Help of Large Scale *ab initio* Simulations
J. Kiss, Th. Gruhn, C. Felser **197**

Atomic Structure of AgInSbTe Phase Change Materials: Simulations and a Model of Crystallization
J. Akola, R. O. Jones **207**

The Running-In of Hydrogenated Diamond-Like Carbon Coatings
L. Pastewka, M. Moseler **215**

First Principles Numerical Study of the Magnetic Properties of Transition-Metal Alloy Nanoparticles
L. E. Díaz-Sánchez, G. M. Pastor **223**

Condensed Matter

Introduction by K. Binder, A. Muramatsu **231**

Monte Carlo Simulation Studies of Interfacial Free Energies in Colloidal Suspensions
D. Deb, D. Wilms, A. Winkler, P. Virnau, K. Binder **235**

Coupled Lattice Boltzmann and Molecular Dynamics Simulations on Massively Parallel Computers
J. Harting, St. Frijters, F. Janoschek, F. Günther **243**

Computational Studies of Insulating Magnetic Oxides
M. Ležaić, P. Mavropoulos, K. Z. Rushchanskii, I. Slipukhina, St. Blügel **251**

Quantum Spin Liquid in Correlated Fermions on a Graphene-Like Structure
Z. Y. Meng, T. C. Lang, S. Wessel, F. F. Assaad, A. Muramatsu **259**

KKRnano: Precise Density Functional Calculations for Thousands of Atoms
R. Zeller, A. Thiess, M. Bolten, P. H. Dederichs, St. Blügel **267**

Computational Soft Matter Science

Introduction by K. Kremer **275**

Grafted versus Non-Grafted Polymer Adsorption

M. Möddel, M. Bachmann, W. Janke **277**

Structure and Dynamics at Polymer-Solid Interfaces: A Molecular Dynamics Simulation of 1,4-Polybutadiene at Graphite

W. Paul, L. Yelash, P. Virnau, K. Binder **285**

Earth and Environment

Introduction by U. Hansen **293**

Direct Numerical Simulation of Turbulent Mixing in the Planetary Boundary Layer

J. P. Mellado, C. Ansorge **295**

Simulation of Processes in Terrestrial Systems

J. Vanderborght, O. Ippisch, M. Blatt, St. Kollet, S. Rahman, T. Aljazzar, R. Maxwell, N. Schröder, M. Javaux, H.-J. Hendricks-Franssen, W. Kurtz J. van der Kruk, M. Oberröhrmann, A. Klotzsche, H. Vereecken **303**

Modelling of Atmospheric Processes

M. König, R. Wolke, O. Knoth, E. Renner **313**

Computer Science and Numerical Mathematics

Introduction by M. Griebel **321**

Highly Parallel Geometric Multigrid Algorithm for Hierarchical Hybrid Grids

B. Gmeiner, T. Gradl, H. Köstler, U. Rüde **323**

Comparable Corpora in Wikipedia Text for Machine Translation

J. Xu, C. Kennington, Č. Przywara, L. Wanzare **331**

Hydrodynamics and Turbulence

Introduction by D. Kröner **339**

Numerical Investigation of Reacting and Non-Reacting Flows in Gas Turbine Related Configurations

M. Di Domenico, E. Ivanova **341**

Walberla: Simulations of Complex Flows on Supercomputers

J. Götz, St. Donath, Ch. Feichtinger, K. Iglberger, H. Köstler, U. Rüde **349**

A Hybrid Aeroacoustic Prediction Method for Non-Reactive and Reactive Flows
G. Geiser, M. Meinke, W. Schröder **357**

Impact of the Heterogeneity of Random Sphere Packings on Hydrodynamic Dispersion
S. Khirevich, U. Tallarek **367**

Finite Size Particles in Homogeneous Turbulence
M. Uhlmann, T. Doychev **377**

Computational Plasma Physics
Introduction by K.-H. Spatschek **385**

Plasma Formation and Ionization Dynamics in Intense Laser-Droplet Interaction
T. Liseykina, D. Bauer **387**

Thomson Scattering on Inhomogeneous Targets
P. Sperling, T. Liseykina, D. Bauer, R. Redmer **395**

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 amd 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. This year's symposium stands out since it marks the 25th anniversary of the founding of the NIC's immediate predecessor, the Höchstleistungsrechenzentrum (HLRZ), in 1987.

The contributions for this sixth NIC Symposium are from projects that have been supported by the supercomputers JUROPA and JUGENE in Jülich. They cover selected topics in the fields of Astrophysics, Biophysics, Chemistry, Elementary Particle Physics, Materials Science, Condensed Matter, Computational Soft Matter Science, Earth and Environmental Research, Computer Science, Hydrodynamics and Turbulence, and Plasma Physics.

JÜLICH FORSCHUNGSZENTRUM

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