

Dipl.-Phys. Jan Janssen

March 07, 1990

Research experience:

- 6/2015 - today Max-Planck-Institut für Eisenforschung GmbH – Ph.D. student
Düsseldorf (Germany) - Computational Materials Design Department of Prof. Dr. Jörg Neugebauer
- Core-developer of pyiron - an integrated development environment (IDE)
for computational materials science - <http://pyiron.org>
- 9/2017-12/2017 Institute for Pure & Applied Mathematics (UCLA) – Visiting Ph.D. student
Los Angeles (USA) - Topic: Coarse graining in complex high-dimensional energy landscapes

Education:

- 6/2015 - today University of Paderborn – Ph.D. in theoretical physics
Paderborn (Germany) - Topic: Uncertainty quantification in ab initio thermodynamics
- Student in the International Max Planck Research School SurMat
- 04/2008 - 03/2015 Technical University of Kaiserslautern – Diploma in theoretical physics
Kaiserslautern - Thesis: Carbon in iron grain boundaries – atomistic simulations (Grade: 1.0)
(Germany) - Student assistant in the group of Prof. Dr. Urbassek (07/2009-02/2013)
- 08/2000 - 03/2009 Leininger Gymnasium – A-levels
Grünstadt (Germany) - Advanced courses in physics, math and social studies

Professional experience:

- 03/2013 - 08/2013 Hilti AG – Application Platform Services – internship in cloud computing
Buchs (Switzerland) - Prototyping customer-oriented IT application for the Amazon Web Services

Teaching / Mentoring Roles:

- 2016 - today Joint Supervision of student assistants (A. Biswas, M. Boeckmann, M. H. Celik,
M. Joulaiian and U. Gajera)
- 07/2016 Head-Tutor: Implementing electronic structure codes compact course (in Python)
- 07/2015 Tutor: Implementing electronic structure codes compact course (in Python)

Publications in peer-reviewed journals:

- pyiron: An integrated development environment for computational materials science, J. Janssen, S. Surendralal, Y. Lysogorskiy, M. Todorova, T. Hickel, R. Drautz, J. Neugebauer, *Comp. Mat. Sci.* 161 (2019)
- Transferability of interatomic potentials for molybdenum and silicon, Y. Lysogorskiy, T. Hammerschmidt, J. Janssen, J. Neugebauer, R. Drautz, *Model. Simul. Mater. Sci. Eng.* 27, 2 (2019)
- Influence of C concentration on elastic moduli of α' -Fe(1-x)Cx alloys, J. Janßen, N. Gunkelmann, H. M. Urbassek *Phil. Mag.* 96, 1448-1462 (2016)

Talks at international conferences:

- Automated error analysis and control for ab initio calculations,
[J. Janssen](#), T. Hickel, J. Neugebauer,
DPG Spring Meeting 2019, Regensburg, Germany
- Automated sensitivity analysis for high-throughput ab initio calculations,
[J. Janssen](#), T. Hickel, J. Neugebauer,
TMS Spring Meeting 2019, San Antonio, USA
- Generation of ab initio datasets with predefined precision using uncertainty quantification,
[J. Janssen](#), T. Hickel, J. Neugebauer,
DPG Spring Meeting 2018, Berlin, Germany
- Towards an uncertainty quantification for ab initio thermodynamics,
[J. Janssen](#), T. Hickel, J. Neugebauer,
MRS Fall Meeting 2017, Boston, USA
- Sensitivity analysis for large sets of density functional theory calculations,
[J. Janssen](#), T. Hickel, J. Neugebauer,
DPG Spring Meeting 2017, Dresden, Germany
- Automatized convergence and error analyses for high-precision DFT calculations,
[J. Janssen](#), T. Hickel, J. Neugebauer,
TMS Spring Meeting 2017, San Diego/California, USA
- Automated convergence checks with the python based library pyiron,
[J. Janssen](#), T. Hickel, J. Neugebauer,
DPG Spring Meeting 2016, Regensburg, Germany
- Automated convergence checks with the python based workbench pyiron,
[J. Janssen](#), T. Hickel, J. Neugebauer,
TMS Spring Meeting 2016, Nashville/Tennessee, USA

Further contributions:

- 8 Presentation at workshops, graduate student seminars and group seminars
- 9 Posters at international conferences and workshops

Volunteering:

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| 2018 - today | Maintaining opensource Python software packages for the conda-forge community
https://conda-forge.org |
| 2013 - today | Contributions to the opensource software development on GitHub
https://github.com/jan-janssen |

Technical certification:

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| 12/2013 - 04/2016 | Amazon Web Services - Certified Solutions Architect - Associate Level |
| 09/2012 - 09/2017 | Novell - Certified Linux Administrator |