

## Dipl.-Phys. Jan Janssen

March 07, 1990

### Research experience:

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

### Education:

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

### Professional experience:

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

### Teaching / Mentoring Roles:

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

### Publications in peer reviewed journals:

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- 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  $\alpha'$ -Fe(1-x)Cx alloys, J. Janßen, N. Gunkelmann, H. M. Urbassek Phil. Mag. 96, 1448-1462 (2016)

### **Talks at international conferences:**

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- 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:**

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- 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 <a href="https://conda-forge.org">https://conda-forge.org</a>
2013 - today	Contributions to the opensource software development on GitHub <a href="https://github.com/jan-janssen">https://github.com/jan-janssen</a>