

# Curriculum Vitae

## Personal Information

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## Positions

since 10/2018 Assistant Professor, [Institute for Microelectronics](#), TU Wien  
3/2018-5/2018 Visiting Researcher, [Silvaco, Inc.](#), Santa Clara, CA, USA  
1/2016-9/2018 Senior Scientist, [Institute for Microelectronics](#), TU Wien  
3/2014-12/2015 Postdoctoral Researcher, [Institute for Microelectronics](#), TU Wien  
10/2012-11/2012 Visiting Researcher, [Device Modelling Group](#), University of Glasgow, Scotland, UK  
10/2012-11/2012 Visiting Researcher, [EPCC](#), University of Edinburgh, Scotland, UK  
1/2010-2/2014 Research Assistant, [Institute for Microelectronics](#), TU Wien

## Education

1/2020 Habilitation/venia docendi (Privatdozent), TU Wien  
2/2014 Doctoral degree in technical sciences (Dr. techn.) with distinction, TU Wien  
2009 Master's degree in microelectronics (Dipl.-Ing.), TU Wien  
Bachelor's degree in electrical engineering and information technology (BSc), TU Wien

## Project Leader- and Partnerships

since 3/2020 Principal Investigator of the [Austrian Science Fund \(FWF\) project P 33609](#):  
*General Nano-Electromagnetic Quantum Phase Space Model*  
Funding for 1 postdoctoral researcher, 4 year runtime

since 5/2019 Partner of the TU Wien Innovative Project:  
*Resonant Sensing Between Continuum Mechanics and Microscopic Interactions*  
Principal investigator: [Dr. Daniel Platz](#)  
Funding for 1 doctoral student, 3 year runtime

since 8/2015 Principal Investigator of the [Christian Doppler Laboratory for High Performance TCAD](#)  
Partner company: [Silvaco, Inc.](#)  
Funding for 9 doctoral students, 7 year runtime

5/2017-5/2020 Partner of the TU Wien Innovative Project:  
*Ensuring Quality in Interfaces for Parallel and High-Performance Computing (EQUIP)*  
Principal investigator: [Prof. Jesper Träff](#)  
Funding for specialized high performance computing cluster

4/2016-4/2019 Principal Investigator of TU Wien Innovative Project:  
*Parallel 3D Mesh Generation for Bio-Micro- & Nanoelectromechanical Systems*  
Funding for 1 doctoral student, 3 year runtime

2/2015-12/2018 Co-Principal Investigator of the [VSC School](#) research project: *ViennaCL*  
Funding for 1 doctoral student, 3 year runtime

12/2016-10/2017 Principal Investigator of the US Office of Naval Research Global CSP project:  
*International Wigner Workshop 2017*  
Funding for travel support for invited speakers

7/2015-7/2016 Co-Principal Investigator of the *NVIDIA GPU Research Center at the TU Wien*  
Hardware donations

## Additional Positions

since 4/2020 Associate Editor, [Journal of Computational Electronics](#)

since 10/2018 Chair of Curriculum Commission, TU Wien Master's Program  
[Computational Science and Engineering](#)

since 10/2016 [Substitute Member of the Senate](#), TU Wien

since 12/2014 Co-Founder and Steering Committee Member, [Wigner Initiative](#)

12/2019-6/2020 Habilitation Committee Member, Lado Filipovic, TU Wien

4/2019-12/2019 Habilitation Committee Substitute Member, Albana Ilo, TU Wien

12/2016-8/2019 Member of [IDC Technical Computing Advisory Panel](#)  
HPC User Forum, IDC, St. Paul, Minneapolis, USA

3/2016-9/2018 Founder and Working Group Chair, TU Wien Master's Program  
*Computational Science and Engineering*

2016 PhD Committee Member of Václav Hapla, Technical University of Ostrava, Czech Republic

2015 Guest Editor, [Journal of Computational Electronics](#), Special Issue on Wigner Functions

2014-2015 Co-Founder, Organizer of the IuE Summer of Code, TU Wien  
(Co-)Supervision of 16 summer intern students

2011-2014, 2016 Co-Founder, (Deputy) Head, and Mentor of the Google Summer of Code Organization  
[Computational Science and Engineering at TU Wien](#)  
Supervision of 30+ researchers, 10+ software projects, and 52 summer intern students

## Conference Activities

since 2019 [International Workshop on Computational Nanotechnology \(IWCN\)](#)  
Advisory Committee Member (since 2019)  
Co-Organizer and Communications Chair (2019)

since 2017 [Workshop on Innovative Nanoscale Devices and Systems \(WINDS\)](#)  
Communications Chair (since 2019)  
Program Committee Member (since 2017)  
General Chair (2018)  
Europe Co-Chair (2017)

since 2017 [SIAM Conference on Computational Science and Engineering \(CSE\)](#)  
Co-Organizer: Minisymp. Computational and Numerical Methods in Electronics (2019)  
Co-Organizer: Minisymp. Computational and Numerical Methods in Electronics (2017)

since 2016 [International Conference on Computational Science \(ICCS\)](#)  
Program Committee Member

since 2015 [International Wigner Workshop \(IW2\)](#)  
Co-Chair and Program Committee Chair (2015,2017,2019)  
Co-Founder (2015)

since 2014 [High Performance Computing Symposium \(HPC\)](#)  
Steering Committee Member (since 2019)  
Program Vice-Chair (2017-2018)  
General Chair (2016)  
General Vice-Chair (2015)  
Program Committee Member (2014)

2019 [Workshop on High Performance TCAD \(WHPTCAD\)](#)  
Organizer

2017 [IEEE International Parallel & Distributed Processing Symposium \(IPDPS\)](#)  
Program Committee Member

- 2016 [IEEE International Conference on Computational Science and Engineering \(CSE\)](#)  
Program Committee Member
- 2015 [Large-Scale Scientific Computations \(LSSC\)](#)  
Co-Organizer Workshop on Computational Microelectronics

## Reviewer Activities

- Research Funding [ETH Zurich Research Commission, Switzerland](#)
- Books [IOP Book Publishing](#)
- Journals [SIAM Journal on Numerical Analysis, Applied Surface Science, Journal of Computational Physics, ACM Transactions on Mathematical Software, AIP Advances, Physics of Fluids, Micromachines, Open Physics, Computers and Mathematics with Applications, Physica A: Statistical Mechanics and its Applications, Mathematics and Computers in Simulations, Applied Mathematics and Computation, Journal of Mechanical Engineering Science](#)

## Awards

- 2016 Collaborative Science Program, US Office of Naval Research Global, London, UK
- 2015 Science Recognition Award of the Federal State of Lower Austria, St.Pölten, Austria
- 2012 HPC-Europa2 Fellowship, Edinburgh, Scotland, UK
- 2012 Best Paper Award, IAENG World Congress on Engineering, London, England, UK

## Teaching at TU Wien

- since 3/2020 *Numerical Simulation and Scientific Computing II* (VU 360.243)
- since 10/2019 *Introduction to Computational Science and Engineering* (VO 360.239)
- since 10/2019 *Numerical Simulation and Scientific Computing I* (VU 360.242)
- since 10/2019 *Operating Systems and Software Engineering for High Performance Computing Systems* (SE 360.240)
- since 10/2019 *Recent Advances in Computational Electronics* (SE 360.244)
- since 10/2019 *Selected Topics - Computational Electronics* (PR 360.245)
- since 10/2018 *EDP-Oriented Project* (AG 360.130)
- since 10/2018 *Programming 1* (VU 360.016)
- since 10/2018 *Programming 2* (VU 360.017)
- since 10/2018 *Selected Topics-Numerical Aspects for the Simulation of Micro-Structures* (VU 360.222)
- since 10/2018 *Programming* (PR 360.206)
- since 2/2017 *Operating Systems and Software Engineering* (SE 360.037)
- since 2/2017 *Software Engineering Seminar* (SE 360.236)
- 10/2018-2/2019 *Methods of Calculating in Quantum Electronics* (LU 360.229)
- 10/2017-6/2018 *Emerging Devices* (SE 360.230)

## Additional Involvement in Research Projects

- since 7/2016 Co-Author, Advisor, and Collaborator, [Wigner State Control for Entangled Electronics](#)  
Austrian Science Fund (FWF), Stand-alone project
- 10/2016-12/2018 Collaborator, [Stability Under Process Variability for Advanced Interconnects and Devices Beyond 7 nm node](#)  
European Commission (EC), Horizon 2020-ICT
- 7/2015-6/2016 Collaborator, [Centre of Excellence for Mathematical Modeling and Advanced Computing](#)  
European Commission (EC), Horizon 2020-Widespread-Teaming
- 3/2014-6/2015 Collaborator, [Void Evolution due to Electromigration](#)  
Austrian Science Fund (FWF), Stand-alone project
- 1/2012-6/2014 Advisor, [Wigner-Boltzmann Particle Simulations](#)  
Austrian Science Fund (FWF), Stand-alone project

3/2010-2/2014	Collaborator, <a href="#">Modeling Silicon Spintronics</a> European Research Council (ERC), Advanced grant
1/2009-2/2010	Collaborator, <a href="#">Mesh Generation, Error Estimation, and Adaptation</a> Austrian Science Fund (FWF), Stand-alone project

### Science Communication Efforts

since 2016	<a href="#">Lange Nacht der Forschung</a> – Institute for Microelectronics Booth Organizer (2016, 2018)
2016	European Researchers' Night – Institute for Microelectronics Booth Organizer
2016	<a href="#">Radio NJOY</a> (in German) Interview

### Professional Memberships

since 6/2020	Senior Member, Institute of Electrical and Electronics Engineers (IEEE): Computer Society, Electron Devices Society, and Rebooting Computing Initiative
1/2013-5/2020	Member, Institute of Electrical and Electronics Engineers (IEEE): Computer Society, Electron Devices Society, and Rebooting Computing Initiative

## Publications

Please visit <http://www.iue.tuwien.ac.at/publications/weinbub/> for a verified list of publications.