

Curriculum Vitae

Personal Information

Name
Affiliation

Josef Weinbub

Associate Professor
Christian Doppler Laboratory for High Performance TCAD
Institute for Microelectronics, TU Wien
Gußhausstraße 27-29/E360
1040 Vienna, Austria



Nationality
Institute Staff Web
Group Web
Personal Web
Email

Austrian (AT)
<http://www.iue.tuwien.ac.at/staff/weinbub/>
<http://www.iue.tuwien.ac.at/hptcad/>
<http://www.josefweinbub.net/>
Josef.Weinbub@TUWien.ac.at

Positions

since 6/2022
10/2018-5/2022
3/2018-5/2018
1/2016-9/2018
3/2014-12/2015
10/2012-11/2012
10/2012-11/2012
1/2010-2/2014

Associate Professor, [Institute for Microelectronics](#), TU Wien
Assistant Professor, [Institute for Microelectronics](#), TU Wien
Visiting Researcher, [Silvaco, Inc.](#), Santa Clara, CA, USA
Senior Scientist, [Institute for Microelectronics](#), TU Wien
Postdoctoral Researcher, [Institute for Microelectronics](#), TU Wien
Visiting Researcher, [Device Modelling Group](#), University of Glasgow, Scotland, UK
Visiting Researcher, [EPCC](#), University of Edinburgh, Scotland, UK
Research Assistant, [Institute for Microelectronics](#), TU Wien

Education

1/2020
2/2014
2009

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

Project Leader- and Partnerships

since 1/2022
since 3/2020
since 5/2019
8/2015-12/2022
5/2017-5/2020

Austrian Science Representative and Co-Task Leader of the
EU Horizon 2020 EuroHPC JU Project 101051997:
[EUMaster4HPC – HPC European Consortium Leading Education Activities](#)
Principal Investigator of the Austrian Science Fund (FWF) Project P33609:
[General Nano-Electromagnetic Quantum Phase Space Model](#)
Partner of the TU Wien Innovative Project:
Resonant Sensing Between Continuum Mechanics and Microscopic Interactions
Principal investigator: Dr. Daniel Platz
Principal Investigator of the
[Christian Doppler Laboratory for High Performance TCAD](#)
Partner company: [Silvaco, Inc.](#)
Partner of the TU Wien Innovative Project:
Ensuring Quality in Interfaces for Parallel and High-Performance Computing (EQuIP)
Principal investigator: Prof. Jesper Träff

4/2016-4/2019	Principal Investigator of TU Wien Innovative Project: Parallel 3D Mesh Generation for Bio-Micro- & Nanoelectromechanical Systems
2/2015-12/2018	Co-Principal Investigator of the VSC School research project: ViennaCL
12/2016-10/2017	Principal Investigator of the US Office of Naval Research Global CSP project: International Wigner Workshop 2017
7/2015-7/2016	Co-Principal Investigator of the NVIDIA GPU Research Center at the TU Wien

Additional Positions

since 12/2022	Vice Chair, IEEE Nanotechnology Council, Modeling and Simulation Committee
since 5/2022	Guest Editor, IEEE Nanotechnology Magazine , Special Issue on Theory, Modeling and Design for Nanodevices
since 4/2020	Associate Editor, Journal of Computational Electronics
since 12/2014	Co-Founder and Steering Committee Member, Wigner Initiative
7/2021-11/2022	Member, IEEE Nanotechnology Council, Modeling and Simulation Committee
10/2018-5/2022	Chair of Curriculum Commission, TU Wien Master's Program Computational Science and Engineering
10/2016-5/2022	Substitute Member of the Senate , TU Wien
9/2020-12/2021	Guest Editor, Journal of Computational Electronics , Special Issue on Wigner Functions in Computational Electronics and Photonics
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, TU Ostrava, Czech Republic
2015	Guest Editor, Journal of Computational Electronics , Special Issue on Wigner Functions
2014-2015	Co-Founder, Organizer of the luE 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 interns

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 2015	International Wigner Workshop (IWW) Co-Chair and Program Committee Chair (since 2015) Co-Founder (2015)
2022	IEEE International Conference on Nanotechnology (NANO) 2022 Special Session Organizer
2022	EMRS Symposium on Nanomaterials: Group-IV Semiconductor Materials for Nano-electronics and Cryogenic Electronics Scientific Committee Member

2021-2022	IEEE Nanotechnology Materials and Devices Conference (NMDC) Technical Program Committee Member
2014-2020	High Performance Computing Symposium (HPC) Steering Committee Member (2019-2020) Program Vice-Chair (2017-2018) General Chair (2016) General Vice-Chair (2015) Program Committee Member (2014)
2017,2019	SIAM Conference on Computational Science and Engineering (CSE) Co-Organizer: Minisym. Computational and Numerical Methods in Electronics
2016-2019	International Conference on Computational Science (ICCS) Program Committee Member
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 Scientific Computing, 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

Personal Awards

2021	Best Poster Award (Lead Author: L.F.Aguinsky), Joint International EuroSOI Workshop and International Conference on Ultimate Integration on Silicon (EUROSOI-ULIS), Caen, FR
2020	Senior Member, Institute of Electrical and Electronics Engineers (IEEE), NYC, US
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, AT
2012	HPC-Europa2 Fellowship, Edinburgh, Scotland, UK
2012	Best Paper Award, IAENG World Congress on Engineering, London, England, UK

Awards of Team Members

2022	'Sub Auspiciis' Doctoral Graduation, TU Wien, Alexander Toifl
2022	Erwin Schrödinger Fellowship, Austrian Science Fund (FWF), Luiz F. Aguinsky
2018	Master's Thesis Award, Faculty of Electrical Engineering and Information Technology, TU Wien, Alexander Toifl
2017	Rector's Award, University of Maribor, Slovenia, Vito Šimonka

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

1/2020-9/2021	Collaborator, 3D Solution of the Boltzmann Equation on Supercomputers Austrian Science Fund (FWF), Stand-alone project
7/2016-2/2021	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, Modeling Silicon Spintronics European Research Council (ERC), Advanced grant
1/2009-2/2010	Collaborator, Mesh Generation, Error Estimation, and Adaptation Austrian Science Fund (FWF), Stand-alone project

Professional Memberships

since 1/2013	Member, Senior Member (since 6/2020), IEEE: Nanotechnology Council, Computer Society, Electron Devices Society, and Rebooting Computing Initiative
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Publications

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