

Benedikt Zönnchen

Curriculum vitae

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Experience

08/2020 - today *Munich University of Applied Sciences (MUAS)*
Senior Advisor for Computer Science Education
Subject CSplus and plusCS education

Academic education

03/2016 - 07/2020 *Technical University of Munich (TUM)*, Prof. Hans-Joachim Bungartz
Munich University of Applied Sciences (MUAS), Prof. Gerta Köster
Computer Science (Dr. rer. nat.), summa cum laude
PhD Thesis Efficient parallel algorithm for pedestrian simulation

10/2013 - 02/2016 *Technical University of Munich (TUM)*, **Computer Science (M. Sc.)**, final grade: 1.5
Master Thesis Implementation of an efficient equivalence test for sequential & linear tree-to-word transducers

10/2010 - 09/2013 *Munich University of Applied Sciences (MUAS)*, **Computer Science (B. Sc.)**, final grade: 1.17 (valedictorian)
Bachelor Thesis Navigation around pedestrian groups and queueing using a dynamic adaption of travelling times in the fast marching algorithm

Teaching

Winter 2020/21 **Preparation for Computer Science**, 5-day course (Bachelor), *Trainer and coordinator*, MUAS

Winter 2019/20 **Machine Learning in Crowd Modeling and Simulation**, Lecture (Master), *Invited as a guest lecturer*, TUM

Winter 2016/17 **Linear Algebra**, Lecture (Bachelor), *Lecturer*, MUAS

Summer 2016 **Scientific Computing**, Seminar (Bachelor), *Lecturer*, MUAS

Summer 2016 **Theoretical Computer Science**, Lecture (Bachelor), *Trainer*, MUAS

Publications

- 2020 **Benedikt Zönnchen**, and Gerta Köster, GPGPU computing for microscopic pedestrian simulation, In *Parallel Computing: Technology Trends*, 10 . 3233/APC200029
- 2020 **Benedikt Zönnchen**, Benedikt Kleinmeier and Gerta Köster, Vadere – a simulation framework to compare locomotion models, In *Traffic and Granular Flow 2019*, 10 . 1007/978-3-030-55973-1_41
- 2019 **Benedikt Zönnchen**, Benedikt Kleinmeier, Marion Gödel and Gerta Köster, Vadere: an open-source simulation framework to promote interdisciplinary understanding, In *Collective Dynamics*, 4, 10 . 17815/CD . 2019 . 21
- 2019 **Benedikt Zönnchen**, Matthias Laubinger and Gerta Köster, Towards faster navigation algorithms on four fields, In *Traffic and Granular Flow '17*, 10 . 1007/978-3-030-11440-4_34
- 2018 **Benedikt Zönnchen** and Gerta Köster, A parallel generator for sparse unstructured meshes to solve the eikonal equation, In *Journal of Computational Science*, 10 . 1016/j . jocs . 2018 . 09 . 009



- 2015 Gerta Köster and **Benedikt Zönnchen**, A queuing model based on social attitudes, In *Traffic and Granular Flow '15*, 10 . 1007/978-3-319-33482-0
- 2016 **Benedikt Zönnchen** and Gerta Köster, Detecting arbitrarily shaped queues using the fast marching method, *8th International Conference on Pedestrian and Evacuation Dynamics*, Hefei, China
- 2014 Gerta Köster and **Benedikt Zönnchen**, Queuing at bottlenecks using a dynamic floor field for navigation, In *Transportation Research Procedia*, 10 . 1016/j . trpro . 2014 . 09 . 029

Field of interests

- Modelling and simulation of pedestrian dynamics
- Mesh generation and its application
- Design of efficient and parallel algorithms
- Automata theory
- Free education
- Algorithmic art (Processing, P5js, SuperCollider, Sonic Pi)
- Algorithm visualization

Private interests

- Film criticism and analysis
- Philosophy in films
- Chess

Scholarships

- 04/2012 – 05/2016 **German Academic Scholarship Foundation** (Studienstiftung des deutschen Volkes)
- 06/2012 – 05/2016 **Max Weber-Program of the State of Bavaria** (Max Weber-Programm Bayern)
- 2013 **RiMEA sponsorship award**

München, 5. Juni 2021