

Prof. Dr. Holger Fröning

Heidelberg University, Faculty of Engineering Sciences, Faculty of Mathematics and Computer Science
Computing Systems Group, Institute of Computer Engineering (ZITI)

Universität Heidelberg
Institute of Computer Engineering (ZITI)
Im Neuenheimer Feld 368
69120 Heidelberg

phone: +49-6221-54 16442
e-mail: holger.froening@ziti.uni-heidelberg.de

University Education and Academic Degrees

- 2015 Positive evaluation as junior professor (equivalent to Venia Legendi), Heidelberg University
- 2002 – 2007 PhD in Computer Engineering, University of Mannheim, Germany
- 1995 – 2001 Diploma in Computer Engineering, University of Mannheim, Germany

Academic Positions

- 2023 – Head of Institute of Computer Engineering (ZITI), Heidelberg University
- 2019 – Professor of Computing Systems (W3), Institute of Computer Engineering (ZITI), Heidelberg University
- 2019 – 2022 Dean of Studies for Computer Science, Faculty of Mathematics and Computer Science, Heidelberg University
- 2018 – 2019 Interim Professor (Vertretungsprofessur), Heidelberg University
- 2016 Visiting Scientist, NVIDIA Research (Santa Clara, CA, US)
- 2015 Visiting Professor, Graz University of Technology, Austria
- 2011 – 2018 Associate Professor (Juniorprofessor), Institute of Computer Engineering (ZITI), Heidelberg University
- 2008 – 2011 Senior Scientist, Universidad Politécnica de Valencia, Spain

Selected Professional Activities, Awards, Honors

- 2023 Visiting Professor at Xi'an University of Technology
- 2023 Best paper award, 2nd Practical-DL Workshop, AAAI Conference on Artificial Intelligence
- 2021 Visiting Scientist at the Chinese Academy of Sciences (CAS), funded by President's International Fellowship Initiative (PIFI 2020)
- 2021 Special session chair, International Symposium on Highly Efficient Accelerators and Reconfigurable Technologies (HEART 2021)
- 2020 Best paper finalist, Int. Conf. on Machine Learning, Optimization, and Data Science (LOD)
- 2019 – Co-organizer, ITEM Workshop, European Conference on Machine Learning and Principles and Practice of Knowledge Discovery (ECML-PKDD)
- 2017 Best paper finalist, International Supercomputer Conference (ISC)
- 2017 Best paper award, 31th International Parallel and Distributed Processing Symposium
- 2014 Google Faculty Research Award
- 2010 Best paper award, 9th International Conference on Networks
- 2009 Best paper award, 5th International Workshop on Applied Reconfigurable Computing
- 2008 Best paper award, 37th International Conference on Parallel Processing (ICPP)

Five relevant publications

- L. Braun, S. Nikas, C. Song, V. Heuveline, and H. Fröning, *A Simple Model for Portable and Fast Prediction of Execution Time and Power Consumption of GPU Kernels*, ACM Trans. Archit. Code Optim. 18, 1, Article 7 (2021).
- G. Schindler, W. Roth, F. Pernkopf, and H. Fröning, *Parameterized Structured Pruning for Deep Neural Networks*, LOD 2020.
- W. Roth, G. Schindler, M. Zöhrer, L. Pfeifenberger, R. Peharz, S. Tschatschek, H. Fröning, F. Pernkopf, and Z. Ghahramani, *Resource-Efficient Neural Networks for Embedded Systems*

ArXiv:2001.03048 [Cs, Stat], Jan. 2020.

- W. Roth, G. Schindler, H. Fröning, and F. Pernkopf, *Training Discrete-Valued Neural Networks with Sign Activations Using Weight Distributions*, ECML-PKDD 2019.
- G. Schindler, M. Zöhrer, F. Pernkopf, and H. Fröning, *Towards Efficient Forward Propagation on Resource-Constrained Systems*, ECML-PKDD 2018.