

Peer-Reviewed Conference and/or Journal Articles

- 1) **Title:** Scaling Performance for N-Body Stream Computation with a Ring of FPGAs
Year: 2019
Authors: Jens Huthmann, Artur Podobas, Shin Abiko, Kentaro Sano, Hiroyuki Takizawa
Proceedings: International Symposium on Highly Efficient Accelerators and Reconfigurable Technologies (HEART)
Publisher: ACM
DOI: 10.1145/3337801.3337813

- 2) **Title:** Learning Neural Representations for Predicting GPU Performance
Year: 2019
Authors: Shweta Salaria, Aleksandr Drozd, Artur Podobas, Satoshi Matsuoka
Proceedings: International Conference on High Performance Computing (ISC)
Publisher: Springer
DOI: 10.1007/978-3-030-20656-7_3

- 3) **Title:** Double-precision FPUs in High-Performance Computing: An Embarrassment of Riches?
Year: 2019
Authors: Jens Domke, Kazuaki. Matsumura, Mohammed Wahib, Haoyu Zhang, Keita Yashima, Toshiki Tsuchikawa, Yohei Tsuji, Artur Podobas, Satoshi Matsuoka
Proceedings: International Parallel and Distributed Processing Symposium (IPDPS)
Publisher: IEEE
DOI: 10.1109/IPDPS.2019.00019

- 4) **Title:** Predicting Performance Using Collaborative Filtering
Year: 2018
Authors: Shweta Salaria, Aleksandr Drozd, Artur Podobas, Satoshi Matsuoka
Proceedings: International Conference on Cluster Computing (CLUSTER)
Publisher: IEEE
DOI: 10.1109/CLUSTER.2018.00066

- 5) **Title:** High-Performance High-Order Stencil Computation on FPGAs Using OpenCL
Year: 2018
Authors: Hamid-Reza Zohouri, Artur Podobas, Satoshi Matsuoka
Proceedings: International Parallel and Distributed Processing Symposium Workshops (RAW)
Publisher: IEEE
DOI: 10.1109/IPDPSW.2018.00027

- 6) **Title:** Hardware Implementation of POSITs and Their Application in FPGAs
Year: 2018
Authors: Artur Podobas and Satoshi Matsuoka
Proceedings: International Parallel and Distributed Processing Symposium

Workshops (RAW)

Publisher: IEEE

DOI: 10.1109/IPDPSW.2018.00029

- 7) **Title:** MACC: An OpenACC Transpiler for Automatic Multi-GPU Use
Year: 2018
Authors: Kazuaki Matsumura, Mitsuhsa Sato, Taisuke Boku, Artur Podobas, Satoshi
Proceedings: Asian Conference on Supercomputing Frontiers (SCAsia)
Publisher: Springer
DOI: 10.1007/978-3-319-69953-0_7

- 8) **Title:** Combined Spatial and Temporal Blocking for High-Performance Stencil Computation on FPGAs using OpenCL
Year: 2018
Authors: Hamid-Reza Zohouri, Artur Podobas, Satoshi Matsuoka
Venue: International Symposium on Field-Programmable Gate Arrays (FPGA)
Publisher: ACM
DOI: 10.1145/3174243.3174248

- 9) **Title:** Designing and Accelerating Spiking Neural Networks using OpenCL for FPGAs
Year: 2017
Authors: Artur Podobas and Satoshi Matsuoka
Proceedings: International Conference on Field Programmable Technology (ICFPT)
Publisher: IEEE
DOI: 10.1109/FPT.2017.8280154

- 10) **Title:** Evaluating high-level design strategies on FPGAs for High-Performance Computing
Year: 2017
Authors: Artur Podobas, Hamid-Reza Zohouri, Naoya Maruyama, Satoshi Matsuoka
Proceedings: International Conference on Field Programmable Logic and Applications (FPL)
Publisher: IEEE
DOI: 10.23919/FPL.2017.8056760

- 11) **Title:** OpenCL-based High-Performance 3D Stencil Computation on FPGAs (Extended Abstract)
Year: 2017
Authors: Hamid-Reza Zohouri, Artur Podobas, Naoya Maruyama, Satoshi Matsuoka
Venue: International Conference on Computing, Network, Storage and Analysis
URL:
https://sc17.supercomputing.org/SC17%20Archive/tech_poster/poster_files/post114s2-file3.pdf

- 12) **Title:** Towards Unifying OpenMP under the Task-Parallel Paradigm
Year: 2016
Authors: Artur Podobas and Sven Karlsson
Proceedings: International Workshop on OpenMP (IWOMP)
Publisher: Springer
DOI: 10.1007/978-3-319-45550-1_9
- 13) **Title:** Empowering OpenMP with Automatically Generated Hardware
Year: 2016
Authors: Artur Podobas and Mats Brorsson
Proceedings: International Conference on Embedded Computer Systems: Architectures, Modeling and Simulation (SAMOS)
Publisher: IEEE
DOI: 10.1109/SAMOS.2016.7818354
- 14) **Title:** Grain graphs: OpenMP Performance Analysis Made Easy
Year: 2016
Authors: Ananya Muddukrishna, Peter Jonsson, Artur Podobas, Mats Brorsson
Proceedings: Principles and Practice of Parallel Programming (PPoPP)
Publisher: ACM
DOI: 10.1145/2851141.2851156
- 15) **Title:** Improving Performance and Quality-of-Service through the Task-Parallel Model
Year: 2015
Authors: Artur Podobas
Type: PhD Thesis
ISBN: 978-91-7595-711-1
- 16) **Title:** Using Transactional Memory to Avoid Blocking in OpenMP Synchronization Directives
Year: 2015
Authors: Lars Bonnichsen and Artur Podobas
Proceedings: International Workshop on OpenMP (IWOMP)
Publisher: Springer
DOI: 10.1007/978-3-319-24595-9_11
- 17) **Title:** TurboBLYSK: Scheduling for Improved Data-driven Task Performance with Fast Dependency Resolution (**best paper award**)
Year: 2014
Authors: Artur Podobas, Mats Brorsson, Vladimir Vlassov
Proceedings: International Workshop on OpenMP (IWOMP)
Publisher: Springer
DOI: 10.1007/978-3-319-11454-5_4
- 18) **Title:** Accelerating Parallel Computations with OpenMP-Driven System-on-Chip Generation for FPGAs
Year: 2014
Authors: Artur Podobas
Venue: International Symposium on Embedded Multicore/Manycore SoCs

(MCSoc)
Publisher: IEEE
DOI: 10.1109/MCSoc.2014.30

- 19) **Title:** Performance-driven exploration using Task-based Parallel Programming Frameworks
Year: 2015
Authors: Artur Podobas
Type: Licentiate Thesis
ISBN: 978-91-7501-718-1
- 20) **Title:** A Comparative Performance Study of Common and Popular Task-Centric Programming
Year: 2013
Authors: Artur Podobas, Mats Brorsson, Karl-Filip Faxén
Journal: Concurrency and Computation: Practice and Experience, vol 27
Publisher: Wiley
DOI: doi.org/10.1002/cpe.3186
- 21) **Title:** Considering Quality-of-Service for Resource Reduction using OpenMP
Year: 2012
Authors: Artur Podobas, Mats Brorsson, Vladimir Vlassov, Chi-Chi Ching, Ben Juurlink
Venue: MULTIPROG 2014: Programmability Issues for Heterogeneous Multicores
Publisher: Conference online proceedings.
URL: urn:nbn:se:kth:diva-143626
- 22) **Title:** Exploring Heterogeneous Scheduling using the Task-centric Programming Model
Year: 2012
Authors: Artur Podobas, Mats Brorsson, Vladimir Vlassov
Venue: International European Conference on Parallel Processing Workshop (HeteroPAR)
Publisher: Springer
DOI: 10.1007/978-3-642-36949-0_16
- 23) **Title:** Task Scheduling on Manycore Processors with Home Caches (**best paper award**)
Year: 2012
Authors: Ananya Muddukrishna, Artur Podobas, Mats Brorsson, Vladimir Vlassov
Venue: International European Conference on Parallel Processing Workshop (OMHi)
Publisher: Springer
DOI: 10.1007/978-3-642-36949-0_39
- 24) **Title:** Investigating the Potential of Energy-savings Using a Fine-grained Task Based Programming Model on Multi-cores

Year: 2011

Authors: Aleksandru Iordan, Artur Podobas, Lasse Natvig, Mats Brorsson
Venue: 2nd Workshop on Applications for Multi and Many Core Processors (ISCA'11 workshop)

Publisher: Conference online proceedings.

URL: urn:nbn:se:kth:diva-90371

25) **Title:** Architecture-aware Task-scheduling: A Thermal Approach

Year: 2011

Authors: Artur Podobas and Mats Brorsson

Venue: Future Architectural Support for Parallel Programming (ISCA'11 workshop)

Publisher: Conference online proceedings.

URL: urn:nbn:se:kth:diva-89634

26) **Title:** Thermal-aware Task Scheduling for OpenMP

Year: 2010

Authors: Artur Podobas and Mats Brorsson

Venue: Third Swedish Workshop on Multi-Core Computing (MCC)

Publisher: Conference online proceedings.

URL: urn:nbn:se:kth:diva-90370

27) **Title:** A Comparison of some Recent Task-Based Parallel Programming Models

Year: 2010

Authors: Artur Podobas, Mats Brorsson, Karl-Filip Faxén

Venue: 3rd Workshop on Programmability Issues for Multi-Core Computers

Publisher: Conference online proceedings.

URL: urn:nbn:se:ri:diva-23671