Embedded Systems Engineering - Publications - DTU Orbit (17/06/2018)

Alshareef, Abdurrahman; Sarjoughian, Hessam S.; Zarrin, Bahram / Activity-based DEVS modeling.
Publication: Research - peer-review › Journal article – Annual report year: 2018

Schoeberl, Martin; Pezzarossa, Luca; Sparse, Jens / A multicore processor for time-critical applications.
Publication: Research - peer-review › Journal article – Annual report year: 2018

Zarrin, Bahram; Baumeister, Hubert / An Integrated Framework to Specify Domain-Specific Modeling Languages.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2018

De Donno, Michele; Dragoni, Nicola; Giaretta, Alberto; Mazzara, Manuel / AntibIoTic: Protecting IoT Devices Against DDoS Attacks.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2018

De Donno, Michele; Dragoni, Nicola; Giaretta, Alberto; Spognardi, Angelo / DDoS-Capable IoT Malwares: Comparative Analysis and Mural Investigation.
Publication: Research - peer-review › Journal article – Annual report year: 2018

Schoeberl, Martin / Design of a time-predictable multicore processor: the T-CREST project.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2018

Bardram, Jakob Eyvind; Frost, Mads / Double-Loop Health Technology: Enabling Socio-technical Design of Personal Health Technology in Clinical Practice.
Publication: Research - peer-review › Book chapter – Annual report year: 2018

Marso, Karol ; Nannarelli, Alberto (Supervisor) / Face Recognition using Approximate Arithmetic.
Publication: Research › Report – Annual report year: 2018

Bucchiarone, Antonio; Dragoni, Nicola; Dusdstar, Schahram; Larsen, Stephan T.; Mazzara, Manuel / From Monolithic to Microservices An Experience Report from the Banking Domain.
Publication: Research - peer-review › Journal article – Annual report year: 2018

Schoeberl, Martin / Lipsi: Probably the Smallest Processor in the World.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2018

Patou, François; Dimaki, Maria; Maier, Anja; Svendsen, Winnie Edith; Madsen, Jan / Model-Based Systems Engineering for Life-Sciences Instrumentation Development.
Publication: Research - peer-review › Journal article – Annual report year: 2018

Schoeberl, Martin / One-way shared memory.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2018
Alatraktchi, Fatima AlZahra'a; Noori, Jafar Safaa; Tanev, Georgi Plamenov; Mortensen, John; Dimaki, Maria; Johansen, Helle Krogh; Madsen, Jan; Molin, Saren; Svendsen, Winnie Edith / Paper-based sensors for rapid detection of virulence factor produced by Pseudomonas aeruginosa.
Publication: Research - peer-review › Journal article – Annual report year: 2018

Schoeberl, Martin; Puffitsch, Wolfgang; Hepp, Stefan; Huber, Benedikt; Prokesch, Daniel / Patmos: a time-predictable microprocessor.
Publication: Research - peer-review › Journal article – Annual report year: 2018

Pezzarossa, Luca / Reconfiguration of Computation and Communication Resources in Multi-Core Real-Time Embedded Systems.
Publication: Research › Ph.D. thesis – Annual report year: 2018

Sparsø, Jens / Selected papers from the 2nd IEEE Nordic Circuits and Systems Conference (NorCAS), 2016.
Publication: Research - peer-review › Editorial – Annual report year: 2018

Zarrin, Bahram; Baumeister, Hubert; Sarjoughian, Hessam S. / Towards Domain-specific Flow-based Languages.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2018

Bardram, Jakob Eyvind; Rohani, Darius A.; Tuxen, Nanna; Faurholt-Jepsen, Maria; Kessing, Lars V. / Supporting smartphone-based behavioral activation: A simulation study.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Cilku, Bekim; Puffitsch, Wolfgang; Prokesch, Daniel; Schoeberl, Martin; Puschner, Peter / Improving performance of single-path code through a time-predictable memory hierarchy.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Schneider, Alexander; Pop, Paul; Madsen, Jan / Pin-count reduction for continuous flow microfluidic biochips.
Publication: Research - peer-review › Journal article – Annual report year: 2017

Abdullah, Saeed; Murnane, Elizabeth L.; Musolesi, Mirco; Bardram, Jakob Eyvind; Choudhury, Tanzeem / 2nd International Workshop on Mental Health and Well-being: Sensing and Intervention: sensing and intervention.
Publication: Research › Article in proceedings – Annual report year: 2018

Pezzarossa, Luca; Schoeberl, Martin; Sparsø, Jens / A Controller for Dynamic Partial Reconfiguration in FPGA-Based Real-Time Systems.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017
Bardram, Jakob Eyvind; Esbensen, Morten; Tabard, Aurélien / **Activity-Based Collaboration for Interactive Spaces.**
Publication: Research - peer-review › Book chapter – Annual report year: 2017

Maggi, Alessandro; Petrocchi, Marinella; Spognardi, Angelo; Tiezzi, Francesco / **A language-based approach to modelling and analysis of Twitter interactions.**
Publication: Research - peer-review › Journal article – Annual report year: 2017

Nannarelli, Alberto / **A Multi-Format Floating-Point Multiplier for Power-Efficient Operations.**
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

De Donno, Michele; Dragoni, Nicola; Giaretta, Alberto; Spognardi, Angelo / **Analysis of DDoS-capable IoT malwares.**
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Sharp, Robin / **An Introduction to Malware.**
2017. 35 p.
Publication: Education › Compendium/lecture notes – Annual report year: 2017

Sørensen, Rasmus Bo; Pezzarossa, Luca; Schoeberl, Martin; Sparso, Jens / **A resource-efficient network interface supporting low latency reconfiguration of virtual circuits in time-division multiplexing networks-on-chip.**
Publication: Research - peer-review › Journal article – Annual report year: 2017

Hansen, Henrik Enggaard; Maroun, Emad Jacob; Kristensen, Andreas Toftegaard; Schoeberl, Martin; Marquart, Jimmi / **A Shared Scratchpad Memory with Synchronization Support.**
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Fazzolari, Michela; Cozza, Vittoria; Petrocchi, Marinella; Spognardi, Angelo / **A Study on Text-Score Disagreement in Online Reviews.**
Publication: Research - peer-review › Journal article – Annual report year: 2017

Munck, Allan; Madsen, Jan / **A systematic and practical method for selecting systems engineering tools.**
Publication: Research - peer-review › Article in proceedings – Annual report year: 2018

De Donno, Michele; Giaretta, Alberto; Dragoni, Nicola; Spognardi, Angelo / **A taxonomy of distributed denial of service attacks.**
Publication: Research - peer-review › Article in proceedings – Annual report year: 2019

Baig, Hasan; Madsen, Jan / **A Top-down Approach to Genetic Circuit Synthesis and Optimized Technology Mapping.**
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Schoeberl, Martin; Cilk, Bekim; Prokesch, Daniel; Puschner, Peter / **Best practice for caching of single-path code.**
Publication: Research - peer-review › Journal article – Annual report year: 2017
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Publication: Research › Book chapter – Annual report year: 2017

Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Publication: Research - peer-review › Conference abstract in journal – Annual report year: 2017

Publication: Research - peer-review › Journal article – Annual report year: 2017

Pedersen, Nicolai; Madsen, Jan (Main supervisor) / Co-Simulation of Cyber-Physical System with Distributed Embedded Control. DTU Compute, 2017. 136 p.
Publication: Research › Ph.D. thesis – Annual report year: 2017

Publication: Research - peer-review › Book chapter – Annual report year: 2017

Pedersen, Nicolai; Lausdahl, Kenneth; Sanchez, Enrique Vidal; Larsen, Peter Gorm; Madsen, Jan / Distributed co-simulation of embedded control software with exhaust gas recirculation water handling system using INTO-CPS. SIMULTECH 2017 - Proceedings of the 7th International Conference on Simulation and Modeling Methodologies, Technologies and Applications. SCITEPRESS Digital Library, 2017. p. 73-82.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Publication: Research - peer-review › Article in proceedings – Annual report year: 2017
Nielsen, Niels Axel; Bardram, Jakob Eyvind; Madsen, Jan; Jørgensen, John Bagterp; Riis, Mark Bernhard; Andersen, Henning Boje; Sørensen, Heige Bjarup Dissing; Svendsen, Winnie Edith; Andersen, Peter E.; Pryds, Nini; Lauritsen, Sune Nordenlof; Skov, Anne Ladegaard; Buch, Martin Jensen; Andersen, Morten; Billund, Charlotte Holm; Brückner, Lars; Kruse, Stine; Molzen, Jan Eiersted; Odgaard, Mads H / Helbredstjek af dansk sundhedsteknologi : Sektorudviklingsrapport. Technical University of Denmark (DTU), 2017. 72 p.
Publication: Commissioned › Report – Annual report year: 2017

Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Jensen, Nicklas Bo; Probst, Christian W. (Supervisor); Karlsson, Sven (Supervisor) / High Performance with Prescriptive Optimization and Debugging. Kgs. Lyngby : Technical University of Denmark (DTU), 2017. 204 p. (DTU Compute PHD-2016; No. 437).
Publication: Research › Ph.D. thesis – Annual report year: 2017

Publication: Research - peer-review › Journal article – Annual report year: 2017

Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Baig, Hasan; Madsen, Jan (Main supervisor); Pop, Paul (Supervisor) / Methods and Tools for the Analysis, Verification and Synthesis of Genetic Logic Circuits, 2017. 253 p. (DTU Compute PHD-2017, Vol. 456).
Publication: Research › Ph.D. thesis – Annual report year: 2017

Publication: Research - peer-review › Journal article – Annual report year: 2017

Ruecha, Nipapan; Lee, Jumi; Chae, Heedo; Cheong, Haena; Soum, Veasna; Preechakasedkit, Pattarachaya; Chailapakul, Orawon; Tanev, Georgi Plamenov; Madsen, Jan; Rodthongkum, Nadnudda; Kwon, Oh-Sun; Shin, Kwanwoo / Paper-Based Digital Microfluidic Chip for Multiple Electrochemical Assay Operated by a Wireless Portable Control System. In: Advanced Materials Technologies, Vol. 2, No. 3, 2017.
Publication: Research - peer-review › Journal article – Annual report year: 2017

Publication: Research - peer-review › Journal article – Annual report year: 2016

Publication: Research - peer-review › Article in proceedings – Annual report year: 2017
Faurholt-Jepsen, Maria; Frost, Mads; Martiny, Klaus; Tuxen, Nanna; Rosenberg, Nicole; Busk, Jonas; Winther, Ole; Bardram, Jakob Eyvind; Kessing, Lars Vedel / Reducing the rate and duration of Re-ADMIsSions among patients with unipolar disorder and bipolar disorder using smartphone-based monitoring and treatment - the RADMIS trials: Study protocol for two randomized controlled trials.
Publication: Research - peer-review › Journal article – Annual report year: 2017

Cardarilli, Gian Carlo; Nannarelli, Alberto; Re, Marco / RNS Applications in Digital Signal Processing.
Publication: Research - peer-review › Book chapter – Annual report year: 2017

Nannarelli, Alberto; Re, M.; Cardarilli, Gian Carlo; Nunzio, L. Di ; Brunella, M. Spaziani ; Fazzolari, R. ; Carbonari, F. / Robust Throughput Boosting for Low Latency Dynamic Partial Reconfiguration.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Pop, Paul; Scholle, Detlef; Sljivo , Irfan; Hansson, Hans ; Widforss, Gunnar; Rosqvist, Malin / Safe Cooperating Cyber-Physical Systems using Wireless Communication.
Publication: Research - peer-review › Journal article – Annual report year: 2017

Minhass, Wajid Hassan; McDaniel, Jeffrey; Raagaard, Michael Lander; Brist, Philip; Pop, Paul; Madsen, Jan / Scheduling and Fluid Routing for Flow-Based Microfluidic Laboratories-on-a-Chip.
Publication: Research - peer-review › Journal article – Annual report year: 2017

Handler, Daniel Tolboe; Hauge, Lotte; Spognardi, Angelo; Dragoni, Nicola / Security And Privacy Issues in Healthcare Monitoring Systems: A Case Study.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Argyriou, Marios; Dragoni, Nicola; Spognardi, Angelo / Security flows in OAuth 2.0 framework: A case study.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Baig, Hasan; Madsen, Jan / Simulation Approach for Timing Analysis of Genetic Logic Circuits.
Publication: Research - peer-review › Journal article – Annual report year: 2017

Cresci, Stefano; Di Pietro, Roberto; Petrocchi, Marinella; Spognardi, Angelo; Tesconi, Maurizio / Social Fingerprinting: detection of spambot groups through DNA-inspired behavioral modeling.
Publication: Research - peer-review › Journal article – Annual report year: 2017

Potluri, Seetal; Schneider, Alexander Rüdiger; Hørslev-Petersen, Martin; Pop, Paul; Madsen, Jan / Synthesis of on-chip control circuits for mVLSI biochips.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Patou, François; Dimaki, María; Kjærgaard, Claus; Madsen, Jan; Svendsen, Winnie Edith / System-Level Sensitivity Analysis of SiNW-bioFET-Based Biosensing Using Lockin Amplification.
Baig, Hasan; Madsen, Jan / Taming Living Logic using Formal Methods. 

Munck, Allan; Madsen, Jan (Main supervisor); Lindqvist, Lars (Supervisor); Schmidt, Flemming (Supervisor); Pop, Paul (Supervisor) / Test-Driven, Model-Based Systems Engineering. 

Munck, Allan; Madsen, Jan / Test-driven modeling and development of cloud-enabled cyber-physical smart systems. 

Kessing, Lars Vedel; Munkholm, Klaus; Faurholt-Jepsen, Maria; Miskowiak, Kamilla Woznica; Nielsen, Lars Bo; Frikke-Schmidt, Ruth; Ekstrøm, Claus Thorn; Winther, Ole; Pedersen, Bente Klarlund; Poulsen, Henrik Enghusen; McIntyre, Roger S; Kapczinski, Flavio; Gattaz, Wagner F; Bardram, Jakob Eyvind; Frost, Mads; Mayura, Oscar; Knudsen, Gitte Mads; Phillips, Mary; Vinberg, Maj / The Bipolar Illness Onset study: research protocol for the BIO cohort study. 

Dragoni, Nicola; Giaretta, Alberto; Mazzara, Manuel / The Internet of Hackable Things. 

Zhao, Luxi; Pop, Paul; Li, Qiao; Chen, Junyan; Xiong, Huagang / Timing analysis of rate-constrained traffic in TTEthernet using network calculus. 

Schoeberl, Martin; Sparsø, Jens / Timing organization of a real-time multicore processor. 

Avasalcai, Cosmin Florin; Budhrani, Dhanesh; Pop, Paul / Towards industry strength mapping of AUTOSAR automotive functionality on multicore architectures : work in progress. 

Liu, Chunfeng; Li, Bing; Yao, Hailong; Pop, Paul; Ho, Tsung-Yi; Schlichtmann, Ulf / Transport or Store? Synthesizing Flow-based Microfluidic Blochips using Distributed Channel Storage. 

Schneider, Alexander Rüdiger; Pop, Paul; Madsen, Jan / Volume management for fault-tolerant continuous-flow microfluidics. 

Schneider, Alexander Rüdiger; Pop, Paul; Madsen, Jan / Waste-aware fluid volume assignment for flow-based microfluidic blochips. 
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Publication: Research - peer-review › Journal article – Annual report year: 2016

Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Rocha, André; Silva, Cláudio; Sørensen, Rasmus Bo; Sparsø, Jens; Schoeberl, Martin / Avionics Applications on a Time-Predictable Chip-Multiprocessor. Proceedings of the 24th Euromicro International Conference on Parallel, Distributed, and Network-Based Processing (PDP 2016). IEEE, 2016. p. 777-785.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Faurholt-Jepsen, Maria; Vinberg, Maj; Frost, Mads; Debel, Sune; Christensen, Ellen Margrethe; Bardram, Jakob Eyvind; Kessing, Lars Vedel / Behavioral activities collected through smartphones and the association with illness activity in bipolar disorder. In: International Journal of Methods in Psychiatric Research, Vol. 25, No. 4, 2016, p. 309–323.
Publication: Research - peer-review › Journal article – Annual report year: 2016

Publication: Research - peer-review › Journal article – Annual report year: 2016

Publication: Research › Report – Annual report year: 2016

Publication: Research - peer-review › Journal article – Annual report year: 2016

Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Publication: Research - peer-review › Journal article – Annual report year: 2016
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Publication: Research › Report – Annual report year: 2016

Vester, Steen; Hansen, Michael Reichhardt (Main supervisor) / Game-based verification and synthesis. Kgs. Lyngby: Technical University of Denmark (DTU), 2016. 203 p. (DTU Compute PHD-2016; No. 414).
Publication: Research › Ph.D. thesis – Annual report year: 2016

Vester, Steen; Hansen, Michael Reichhardt (Main supervisor) / Game-based verification and synthesis. Kgs. Lyngby: Technical University of Denmark (DTU), 2016. 203 p. (DTU Compute PHD-2016; No. 414).
Publication: Research › Ph.D. thesis – Annual report year: 2016

Publication: Research - peer-review › Journal article – Annual report year: 2016

Publication: Research › Report – Annual report year: 2016

Publication: Research - peer-review › Journal article – Annual report year: 2017

Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2016

Pop, Paul; Minhass, Wajid Hassan; Madsen, Jan / Microfluidic Very Large Scale Integration (VLSI) : Modeling, Simulation, Testing, Compilation and Physical Synthesis. Springer, 2016. 270 p.
Publication: Research - peer-review › Book – Annual report year: 2016

Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Publication: Research - peer-review › Journal article – Annual report year: 2016
Publication: Research › Book – Annual report year: 2016

Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Publication: Research - peer-review › Conference article – Annual report year: 2016

Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Schoeberl, Martin; Dalsgaard, Andreas Engelbredt; Hansen, René Rydhof; Korsholm, Stephan E.; Ravn, Anders P.; Rios Rivas, Juan Ricardo; Stram, Torur Biskopste; Søndergaard, Hans; Wellsing, Andy; Zhao, Shuai / Safety-critical Java for embedded systems.
Publication: Research - peer-review › Journal article – Annual report year: 2016

Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Patou, François; Dimaki, Maria; Svendsen, Winnie Edith; Kjærgaard, Claus; Madsen, Jan / Smartphone-based biosensing platform evolution: implementation of electrochemical analysis capabilities. Proceedings of the 10th International Symposium on Medical Information and Communication Technology (ISMICT). IEEE, 2016.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Kluge, Florian; Schoeberl, Martin; Ungerer, Theo / Support for the Logical Execution Time Model on a Time-predictable Multicore Processor.
Publication: Research - peer-review › Conference article – Annual report year: 2016

Alistar, Mirela; Pop, Paul; Madsen, Jan / Synthesis of Application-Specific Fault-Tolerant Digital Microfluidic Biochip Architectures.
Publication: Research - peer-review › Journal article – Annual report year: 2016
Kasting, Patrick Frederik Soelmark; Hansen, Michael Reichhardt; Vester, Steen / Synthesis of railway-signaling plans using reachability games.
28th Symposium on the Implementation and Application of Functional Programming Languages., Vol. Part F127410
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Falk, Heiko; Altmeier, Sebastian; Hellinckx, Peter; Lisper, Bjørn; Puffitsch, Wolfgang; Rochange, Christine; Schoeberl, Martin; Sørensen, Rasmus Bo; Wägeman, Peter; Wegener, Simon / TACLeBench: A benchmark collection to support worst-case execution time research.
Publication: Research - peer-review › Journal article – Annual report year: 2017

Bardram, Jakob Eyvind; Frost, Mads / The Personal Health Technology Design Space.
Publication: Research - peer-review › Journal article – Annual report year: 2016

Pop, Paul; Scholle, Detlef; Hansson, Hans; Widforss, Gunnar; Rosqvist, Malin / The SafeCOP ECSEL Project: Safe Cooperating Cyber-Physical Systems Using Wireless Communication.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Sørensen, Rasmus Bo; Sparso, Jens (Supervisor); Schoeberl, Martin (Supervisor) / Time-Predictable Communication on a Time-Division Multiplexing Network-on-Chip Multicore.
Kgs. Lyngby : Technical University of Denmark (DTU), 2016. 143 p. (DTU Compute PHD-2016; No. 423).
Publication: Research › Ph.D. thesis – Annual report year: 2016

Abbaspourseyedi, Sahar; Schoeberl, Martin (Supervisor); Sparso, Jens (Supervisor) / Time-predictable Stack Caching.
Publication: Research › Ph.D. thesis – Annual report year: 2016

Puffitsch, Wolfgang; Schoeberl, Martin / Time-Predictable Virtual Memory.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Baig, Hasan; Madsen, Jan / Timing Analysis of Generic Logic Circuits using D-VASim.
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2016

Podobas, Artur; Karlsson, Sven / Towards Unifying OpenMP Under the Task-Parallel Paradigm Implementation and Performance of the taskloop Construct.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Gavrilut, Voica Maria; Pop, Paul / Traffic class assignment for mixed-criticality frames in TTEthernet.
Publication: Research - peer-review › Conference article – Annual report year: 2016

Faurholt-Jepsen, M.; Busk, Jonas; Frost, M.; Vinberg, M.; Christensen, E. M.; Winther, Ole; Bardram, Jakob Eyvind; Kessing, L. V. / Voice analysis as an objective state marker in bipolar disorder.
Publication: Research - peer-review › Journal article – Annual report year: 2016

Publication: Research - peer-review › Article in proceedings – Annual report year: 2015


Publication: Research - peer-review › Article in proceedings – Annual report year: 2015


Publication: Research - peer-review › Article in proceedings – Annual report year: 2015


Publication: Research - peer-review › Article in proceedings – Annual report year: 2015


Publication: Research - peer-review › Journal article – Annual report year: 2015

Tamas-Selicean, Domitian; Pop, Paul (Main supervisor); Madsen, Jan (Supervisor) / Design of Mixed-Criticality Applications on Distributed Real-Time Systems. Kgs. Lyngby : Technical University of Denmark (DTU), 2015. 160 p. (DTU Compute PHD-2014; No. 329).

Publication: Research › Ph.D. thesis – Annual report year: 2015


Publication: Research - peer-review › Journal article – Annual report year: 2015


Publication: Research - peer-review › Journal article – Annual report year: 2014


Publication: Research - peer-review › Article in proceedings – Annual report year: 2015


Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2015


Jensen, Nicklas Bo; Schleuniger, Pascal; Hindborg, Andreas Erik; Walter, Maxwell; Karlsson, Sven / Experiences with Compiler Support for Processors with Exposed Pipelines.

Cresci, Stefano; Di Pietro, Roberto; Petrocchi, Marinella; Spognardi, Angelo; Tesconi, Maurizio / Fame for sale: Efficient detection of fake Twitter followers.

Orfanidis, Charalampos; Zhang, Yue; Dragoni, Nicola / Fault Detection in WSNs - An Energy Efficiency Perspective Towards Human-Centric WSNs.

Pop, Paul / Flow-Based Biochips: Fault-Tolerant Design and Error Recovery.

Strøm, Torur Biskopsta; Schoeberl, Martin / Hardware Locks with Priority Ceiling Emulation for a Java Chip-Multiprocessor.

Bonnichsen, Lars Frydendal; Probst, Christian W.; Karlsson, Sven / Hardware Transactional Memory Optimization Guidelines, Applied to Ordered Maps.
Schoeberl, Martin / *Scala for Real-Time Systems?*
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Nielsen, Carsten; Schoeberl, Martin / *Stack Caching Using Split Data Caches.*
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Alistar, Mirela; Pop, Paul / *Synthesis of Biochemical Applications on Digital Microfluidic Biochips with Operation Execution Time Variability.*
Publication: Research - peer-review › Journal article – Annual report year: 2015

Micconi, Laura; Madsen, Jan; Pop, Paul / *System-level synthesis of multi-ASIP platforms using an uncertainty model.*
Publication: Research - peer-review › Journal article – Annual report year: 2015

Schoeberl, Martin; Abbaspourseyedi, Sahar; Jordan, Alexander; Kasapaki, Evangelia; Puffitsch, Wolfgang; Sparse, Jens; Akesson, Benny; Audsley, Neil; Garside, Jamie; Capasso, Raffaele; Toschi, Alessandro; Goossens, Kees; Goossens, Sven; Li, Yonghui; Hansen, Scott; Heckmann, Reinhold; Hepp, Stefan; Huber, Benedikt; Knoop, Jens; Proksch, Daniel; Puschnre, Peter; Rocha, André; Silva, Cláudio / *T-CREST: Time-predictable multi-core architecture for embedded systems.*
Publication: Research - peer-review › Journal article – Annual report year: 2015

Munck, Allan; Madsen, Jan / *Test-driven modeling of embedded systems.*
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Kasapaki, Evangelia; Sparse, Jens / *The Argo NOC: Combining TDM and GALS.*
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Winther, Andreas Thor; Liu, Wei; Nannarelli, Alberto; Vrudhula, Sarma / *Thermal Aware Floorplanning Incorporating Temperature Dependent Wire Delay Estimation.*
Publication: Research - peer-review › Journal article – Annual report year: 2015

Puffitsch, Wolfgang; Sørensen, Rasmus Bo; Schoeberl, Martin / *Time-division multiplexing vs network calculus: A comparison.*
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Tamas-Selicean, Domitian; Pop, Paul; Steiner, Wilfried / *Timing Analysis of Rate Constrained Traffic for the TTEthernet Communication Protocol.*
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Pop, Paul; Alistar, Mirela / *Towards droplet size-aware biochemical application compilation for AM-EWOD biochips.*
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015
Degasperi, Philipp; Hepp, Stefan; Puffitsch, Wolfgang; Schoeberl, Martin / A method cache for Patmos. In: International Symposium on Object-Oriented Real-Time Distributed Computing, 2014, p. 100-108. Publication: Research - peer-review › Conference article – Annual report year: 2014


Pfreundt, Andrea; Patou, François; Zulfiqar, Azeem; Dimaki, Maria; Madsen, Jan; Svendsen, Winnie Edith / A novel single-step, multipoint calibration method for instrumented Lab-on-Chip systems. 2014. Poster session presented at Lab-on-a-Chip European Congress 2014, Berlin, Germany. Publication: Research - peer-review › Poster – Annual report year: 2014


Hindborg, Andreas Erik; Schleuniger, Pascal; Jensen, Nicklas Bo; Walter, Maxwell; Brock-Nannestad, Laust; Bonnichsen, Lars Frydendal; Probst, Christian W.; Karlsson, Sven / Automatic generation of application specific FPGA multicore accelerators. Conference Record of the 48th Asilomar Conference on Signals, Systems & Computers. ed. / Michael B. Matthews. IEEE, 2014. p. 1440-1444. Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

Jensen, Nicklas Bo; Probst, Christian W.; Karlsson, Sven / Code Commentary and Automatic Refactorings using Feedback from Multiple Compilers. 

Jensen, Nicklas Bo; Probst, Christian W.; Karlsson, Sven / Collaborative Compiler Vectorization. 
2014. Poster session presented at 9th International Conference on High-Performance and Embedded Architectures and Compilers, Vienna, Austria.

Alistar, Mirela; Pop, Paul (Main supervisor); Madsen, Jan (Supervisor) / Compilation and Synthesis for Fault-Tolerant Digital Microfluidic Biochips. 

Mottin, Julien; Pacull, François; Keryell, Ronan; Schleuniger, Pascal / Compilation Tool Chains and Intermediate Representations. 

Jensen, Nicklas Bo; Karlsson, Sven ; Probst, Christian W. / Compiler Feedback using Continuous Dynamic Compilation during Development. 
Proceedings - Workshop on Dynamic Compilation Everywhere. 2014.


Vuckovic, Dusan; Madsen, Jan (Main supervisor) / Design and Implementation of Energy Harvesting Powered Wireless Sensor Networks. 

Jensen, Nicklas Bo; Karlsson, Sven ; Quarfot Nielsen, Niklas ; Lee, Gregory L.; Ahn, Dong H.; Legendre, Matthew ; Schulz, Martin / DySectAPI: Scalable Prescriptive Debugging. 

Jensen, Nicklas Bo; Karlsson, Sven ; Quarfot Nielsen, Niklas ; Lee, Gregory L.; Ahn, Dong H.; Legendre, Matthew ; Schulz, Martin / DySectAPI: Scalable Prescriptive Debugging. 

Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

Publication: Research › Poster – Annual report year: 2014

Publication: Research › Book chapter – Annual report year: 2015

Publication: Research › Journal article – Annual report year: 2014

Publication: Research › Ph.D. thesis – Annual report year: 2014

Publication: Research › Ph.D. thesis – Annual report year: 2014

Publication: Research › Poster – Annual report year: 2014

Publication: Research › Conference abstract for conference – Annual report year: 2014
Nannarelli, Alberto; Seidel, Peter-Michael; Tang, Ping Tak Peter / Guest Editors' Introduction: Special Section on Computer Arithmetic.
Publication: Research - peer-review > Journal article – Annual report year: 2014

Hindborg, Andreas Erik; Karlsson, Sven / Hardware Realization of an FPGA Processor - Operating System Call Offload and Experiences.
Publication: Research > Poster – Annual report year: 2014

Hindborg, Andreas Erik; Karlsson, Sven / Hardware Realization of an FPGA Processor - Operating System Call Offload and Experiences.
Publication: Research - peer-review > Conference abstract in proceedings – Annual report year: 2014

Hindborg, Andreas Erik; Schleuniger, Pascal; Jensen, Nicklas Bo; Karlsson, Sven / Hardware Realization of an FPGA Processor – Operating System Call Offload and Experiences.
Publication: Research - peer-review > Article in proceedings – Annual report year: 2015

Nielsen, Glen; Vedel, Michael; Jensen, Christian D. / Improving Usability of Passphrase Authentication.
Publication: Research - peer-review > Article in proceedings – Annual report year: 2014

Abbaspourseyedi, Sahar; Jordan, Alexander; Brandner, Florian / Lazy Spilling for a Time-Predictable Stack Cache: Implementation and Analysis.
Publication: Research - peer-review > Article in proceedings – Annual report year: 2014

Brock-Nannestad, Laust; Karlsson, Sven / Library Support for Resource Constrained Accelerators.
Publication: Research - peer-review > Article in proceedings – Annual report year: 2014

Fafoutis, Xenofon; Dragoni, Nicola (Main supervisor); Madsen, Jan (Supervisor) / Medium Access Control in Energy Harvesting - Wireless Sensor Networks.
Publication: Research > Ph.D. thesis – Annual report year: 2014

Brock-Nannestad, Laust; DelSignore, John; Squyres, Jeffrey M.; Karlsson, Sven; Mohror, Kathryn / MPI Debugging with Handle Introspection.
Publication: Research - peer-review > Paper – Annual report year: 2014
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

Schleuniger, Pascal; Karlsson, Sven (Main supervisor); Madsen, Jan (Supervisor) / Performance Aspects of Synthesizable Computing Systems. Kgs. Lyngby : Technical University of Denmark (DTU), 2014. 213 p. (DTU Compute PHD-2014; No. 337).
Publication: Research › Ph.D. thesis – Annual report year: 2014

Pop, Paul; Madsen, Jan; Understrup, Kasper; Alistar, Mirela; Minhass, Wajid Hassan; Krühne, Ulrich / Programming language and tools for Multipurpose Lab-on-a-Chip Platforms. 2014. Poster session presented at 6th Annual Lab-on-a-Chip European Congress, Berlin, Germany.
Publication: Research - peer-review › Poster – Annual report year: 2014

Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

Publication: Research › Ph.D. thesis – Annual report year: 2014

Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

Publication: Research - peer-review › Poster – Annual report year: 2014

Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2014
Sparsø, Jens; Kasapaki, Evangelia; Schoeberl, Martin / **An area-efficient network interface for a TDM-based Network-on-Chip.**
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Tseng, Kai-Han; You, Sheng-Chi; Minhass, Wajid Hassan; Ho, Tsung-Yi; Pop, Paul / **A network-flow based valve-switching aware binding algorithm for flow-based microfluidic biochips.**
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Lakis, Edgar; Schoeberl, Martin / **An SDRAM controller for real-time systems.**
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

Alistar, Mirela; Pop, Paul; Madsen, Jan / **Application-specific fault-tolerant architecture synthesis for digital microfluidic biochips.**
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Jozwiak, Lech; Lindwer, Menno; Corvino, Rosilde; Meloni, Paolo; Micconi, Laura; Madsen, Jan; Diken, Erkan; Gangadharan, Deepak; Jordans, Roel; Pomata, Sebastiano; Pop, Paul; Tuveri, Giuseppe; Raffo, Luigi; Notarangelo, Giuseppe / **ASAM: Automatic architecture synthesis and application mapping.**
Publication: Research - peer-review › Journal article – Annual report year: 2014

Abbaspour, Sahar; Brandner, Florian; Schoeberl, Martin / **A Time-predictable Stack Cache.**
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Abbaspour, Sahar; Brandner, Florian; Schoeberl, Martin / **A Time-predictable Stack Cache.**
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

Rohani, Darius Adam; Henning, William S.; Thomsen, Carsten E.; Kjaer, Troels W.; Puthusserypady, S.; Sorensen, Helge B.D. / **BCI using imaginary movements: The simulator.**
Publication: Research - peer-review › Journal article – Annual report year: 2013

Alistar, Mirela; Pop, Paul; Madsen, Jan / **Biochemical Application Compilation and Architecture Synthesis for Fault-Tolerant Digital Microfluidic Biochips.**
2013. Poster session presented at Lab-on-a-Chip World Congress, San Diego, CA, United States.
Publication: Research - peer-review › Poster – Annual report year: 2014

Strøm, Torur Biskopstø; Puffitsch, Wolfgang; Schoeberl, Martin / **Chip-Multiprocessor Hardware Locks for Safety-Critical Java.**
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Minhass, Wajid Hassan; Pop, Paul; Madsen, Jan; Ho, Tsung-Yi / **Control Synthesis for the Flow-Based Microfluidic Large-Scale Integration Biochips.**
Schoeberl, Martin; Huber, Benedikt; Puffitsch, Wolfgang / Data cache organization for accurate timing analysis.
Publication: Research › Article in proceedings – Annual report year: 2013

Publication: Research › Article in proceedings – Annual report year: 2013

Mazzucco, M.; Mazzara, M.; Dragoni, Nicola / Dynamic allocation and admission policies for QoS-aware provisioning systems.
Publication: Research › Journal article – Annual report year: 2013

Bonnichsen, Lars Frydendal; Karlsson, Sven; Probst, Christian W. / ELB-trees an efficient and lock-free B-tree derivative.
Publication: Research › Article in proceedings – Annual report year: 2013

Bonnichsen, Lars Frydendal; Karlsson, Sven; Probst, Christian W. / ELB-trees - Efficient Lock-free B+trees.
Publication: Research › Poster – Annual report year: 2014

Puffitsch, Wolfgang; Noulard, Eric; Pagetti, Claire / Explicit Precedence Constraints in Safety-Critical Java.
Publication: Research › Article in proceedings – Annual report year: 2013

Jakobsen, Mikkel Koefoed; Madsen, Jan (Main supervisor); Hansen, Michael Reichhardt (Supervisor) / Formal methods for design and simulation of embedded systems.
Publication: Research › Ph.D. thesis – Annual report year: 2014

Publication: Research › Article in proceedings – Annual report year: 2013

Hansen, Michael Reichhardt; Rischel, Hans / Functional Programming Using F#.
Publication: Research › Book – Annual report year: 2013

Gruian, Flavius; Schoeberl, Martin / Hardware support for CSP on a Java chip multiprocessor.
In: Microprocessors and Microsystems, Vol. 37, No. 4-5, 2013, p. 472-481.
Publication: Research › Article in proceedings – Annual report year: 2013

Micconi, Laura; Corvino, Rosilde; Gangadharan, Deepak; Madsen, Jan; Pop, Paul; Jozwiak, Lech / Hierarchical DSE for multi-ASIP platforms.
Publication: Research › Article in proceedings – Annual report year: 2013
Publication: Research - peer-review › Journal article – Annual report year: 2013

Jozwiak, Lech; Madsen, Jan / Quality-Driven Model-Based Design of MultiProcessor Embedded Systems for Highlydemanding Applications.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Kasapaki, Evangelia; Sparsø, Jens; Sørensen, Rasmus Bo; Goossens, Kees / Router Designs for an Asynchronous Time-Division-Multiplexed Network-on-Chip.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Mazzara, Manuel; Biselli, Luca; Greco, Pier Paolo; Dragoni, Nicola; Marraffa, Antonio; Qamar, Nafees; de Nicola, Simona / Social Networks and Collective Intelligence: A Return to the Agora.
Publication: Research - peer-review › Book chapter – Annual report year: 2013

Jordan, Alexander; Brandner, Florian; Schoeberl, Martin / Static analysis of worst-case stack cache behavior.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Fafoutis, Xenofon; Di Mauro, Alessio; Dragoni, Nicola / Sustainable medium access control: Implementation and evaluation of ODMAC.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Fafoutis, Xenofon; Di Mauro, Alessio; Dragoni, Nicola / Sustainable Performance in Energy Harvesting - Wireless Sensor Networks.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Schleuniger, Pascal; Kusk, Anders; Dall, Jørgen; Karlsson, Sven / Synthetic Aperture Radar Data Processing on an FPGA Multi-Core System.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Schleuniger, Pascal; Karlsson, Sven / Task Based Programming on Embedded Multicores.
2013. Poster session presented at 8th International Conference on High-Performance and Embedded Architectures and Compilers, Berlin, Germany.
Publication: Research › Poster – Annual report year: 2014

Stöckel, Morten; Vildhej, Hjalte Wedel; Bøg, Søren / The hardness of the functional orientation 2-color problem.
Publication: Research - peer-review › Journal article – Annual report year: 2014

Albicocco, Pietro; Cardarilli, Gian Carlo; Nannarelli, Alberto; Petricca, Massimo; Re, Marco / Truncated multipliers through power-gating for degrading precision arithmetic.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014
Ho, Tsung-Yi; Huang, Juinn-Dar; Pop, Paul / Tutorial: Digital microfluidic biochips: Towards hardware/software co-design and cyber-physical system integration.
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014

Tamas-Selicean, Domitian; Marinescu, S. O.; Pop, Paul / Analysis and Optimization of Mixed-Criticality Applications on Partitioned Distributed Architectures.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Papini, Davide; Sharp, Robin (Main supervisor); Jensen, Christian D. (Supervisor) / Attacker Modelling in Ubiquitous Computing Systems.
Publication: Research › Ph.D. thesis – Annual report year: 2014

Albicocco, Pietro; Papini, Davide; Nannarelli, Alberto / Direct Measurement of Power Dissipated by Monte Carlo Simulations on CPU and FPGA Platforms.
Publication: Research › Report – Annual report year: 2013

Larsen, Per; Ladelsky, Razya; Lidman, Jacob ; McKee, Sally A.; Karlsson, Sven ; Zaks, Ayal / Parallelizing More Loops with Compiler Guided Refactoring.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Schleuniger, Pascal; Karlsson, Sven / Software Managed Cache for Parallel Systems.
Publication: Research › Poster – Annual report year: 2014

Minhass, Wajid Hassan; Pop, Paul (Main supervisor); Madsen, Jan (Supervisor) / System-Level Modeling and Synthesis Techniques for Flow-Based Microfluidic Very Large Scale Integration Biochips.
Publication: Research › Ph.D. thesis – Annual report year: 2013

Marinescu, Sorin Ovidiu ; Tamas-Selicean, Domitian; Acretoaie, Vlad; Pop, Paul / Timing Analysis of Mixed-Criticality Hard Real-Time Applications Implemented on Distributed Partitioned Architectures.
Publication: Research - peer-review › Paper – Annual report year: 2013