Embedded Systems Engineering - Publications - DTU Orbit (08/04/2018)

Activity-based DEVS modeling
Publication: Research - peer-review › Journal article – Annual report year: 2018

An Integrated Framework to Specify Domain-Specific Modeling Languages
Publication: Research - peer-review › Article in proceedings – Annual report year: 2018

AntibIoTic: Protecting IoT Devices Against DDoS Attacks
Publication: Research - peer-review › Article in proceedings – Annual report year: 2018

DDoS-Capable IoT Malwares: Comparative Analysis and Mirai Investigation
Publication: Research - peer-review › Journal article – Annual report year: 2018

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

Face Recognition using Approximate Arithmetic
Publication: Research › Report – Annual report year: 2018

Model-Based Systems Engineering for Life-Sciences Instrumentation Development
Publication: Research - peer-review › Journal article – Annual report year: 2018

Patmos: a time-predictable microprocessor
Publication: Research - peer-review › Journal article – Annual report year: 2018

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

Selected papers from the 2nd IEEE Nordic Circuits and Systems Conference (NorCAS), 2016.
Sparsø, J. 2018 In : Microprocessors and Microsystems. 3 p.
Publication: Research - peer-review › Editorial – Annual report year: 2018

Towards Domain-specific Flow-based Languages
Publication: Research - peer-review › Article in proceedings – Annual report year: 2018

Supporting smartphone-based behavioral activation: A simulation study
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017
Improving performance of single-path code through a time-predictable memory hierarchy
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Pin-count reduction for continuous flow microfluidic biochips
Publication: Research - peer-review › Journal article – Annual report year: 2017

A Controller for Dynamic Partial Reconfiguration in FPGA-Based Real-Time Systems
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Activity-Based Collaboration for Interactive Spaces
Publication: Research - peer-review › Book chapter – Annual report year: 2017

A language-based approach to modelling and analysis of Twitter interactions
Publication: Research - peer-review › Journal article – Annual report year: 2017

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

Analysis of DDoS-capable IoT malwares
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

An Introduction to Malware
Publication: Education › Compendium/lecture notes – Annual report year: 2017

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

A Shared Scratchpad Memory with Synchronization Support
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

A Study on Text-Score Disagreement in Online Reviews
Fazzolari, M., Cozza, V., Petrocchi, M. & Spognardi, A. 2017 In : Cognitive Computation. 9, 5, p. 689-701
Publication: Research - peer-review › Journal article – Annual report year: 2017
A systematic and practical method for selecting systems engineering tools
Publication: Research - peer-review › Article in proceedings – Annual report year: 2018

A Top-down Approach to Genetic Circuit Synthesis and Optimized Technology Mapping
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Best practice for caching of single-path code
Publication: Research - peer-review › Journal article – Annual report year: 2017

Best Practice for Caching of Single-Path Code
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Big Data hvor N=1
Publication: Research › Book chapter – Annual report year: 2017

Can Real-Time Systems Benefit from Dynamic Partial Reconfiguration?
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Can smartphone-based electronic markers discriminate between patients with bipolar disorder, healthy first-degree relatives and healthy control individuals
Publication: Research - peer-review › Conference abstract in journal – Annual report year: 2017

Collaborative Affordances of Medical Records
Publication: Research - peer-review › Journal article – Annual report year: 2017

Co-Simulation of Cyber-Physical System with Distributed Embedded Control
Publication: Research › Ph.D. thesis – Annual report year: 2017

Digital Arithmetic: Division Algorithms
Publication: Research - peer-review › Book chapter – Annual report year: 2017

Distributed co-simulation of embedded control software with exhaust gas recirculation water handling system using INTO-CPS
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

EEG source imaging assists decoding in a face recognition task
Fast architecture-level synthesis of fault-tolerant flow-based microfluidic biochips
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Fault-Tolerant Topology and Routing Synthesis for IEEE Time-Sensitive Networking
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Helbredstjek af dansk sundhedsteknologi: Sektorudviklingsrapport
Publication: Commissioned › Report – Annual report year: 2017

High-level synthesis for reduction of WCET in real-time systems
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

High Performance with Prescriptive Optimization and Debugging
Publication: Research › Ph.D. thesis – Annual report year: 2017

Improving Loop Dependence Analysis
Publication: Research - peer-review › Journal article – Annual report year: 2017

Logic analysis and verification of n-input genetic logic circuits
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Methods and Tools for the Analysis, Verification and Synthesis of Genetic Logic Circuits,
Publication: Research › Ph.D. thesis – Annual report year: 2017

Microservices: Yesterday, Today, and Tomorrow
Publication: Research - peer-review › Journal article – Annual report year: 2017

Paper-Based Digital Microfluidic Chip for Multiple Electrochemical Assay Operated by a Wireless Portable Control System
Publication: Research - peer-review › Journal article – Annual report year: 2017

Performance Improvements and Congestion Reduction for Routing-based Synthesis for Digital Microfluidic Biochips
Publication: Research - peer-review › Journal article – Annual report year: 2016
Real-Time Audio Processing on the T-CREST Multicore Platform

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

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
Faurholt-Jepsen, M., Frost, M., Martiny, K., Tuxen, N., Rosenberg, N., Busk, J., Winther, O., Bardram, J. E. & Kessing, L. V. 2017 In : Trials. 18, 1, 13 p., 277

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

RNS Applications in Digital Signal Processing

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

Robust Throughput Boosting for Low Latency Dynamic Partial Reconfiguration

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

Safe Cooperating Cyber-Physical Systems using Wireless Communication

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

Scheduling and Fluid Routing for Flow-Based Microfluidic Laboratories-on-a-Chip

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

Security And Privacy Issues in Healthcare Monitoring Systems: A Case Study

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

Security And Privacy Issues in Healthcare Monitoring Systems: A Case Study

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

Security flows in OAuth 2.0 framework: A case study

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

Simulation Approach for Timing Analysis of Genetic Logic Circuits

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

Social Fingerprinting: detection of spambot groups through DNA-inspired behavioral modeling

Publication: Research - peer-review › Journal article – Annual report year: 2017
Volume management for fault-tolerant continuous-flow microfluidics
Publication: Research - peer-review › Conference article – Annual report year: 2017

Waste-aware fluid volume assignment for flow-based microfluidic biochips
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

A Framework for Dynamically-Loaded Hardware Library (HLL) in FPGA Acceleration
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

A Hardware Framework for on-Chip FPGA Acceleration
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

A Matter of Words: NLP for Quality Evaluation of Wikipedia Medical Articles
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

An Adaptive Middleware for Improved Computational Performance
Publication: Research › Ph.D. thesis – Annual report year: 2016

An Area-Efficient TDM NoC Supporting Reconfiguration for Mode Changes
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

A Pin-Count Reduction Algorithm for Flow-Based Microfluidic Biochips
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Architecture Synthesis for Cost-Constrained Fault-Tolerant Flow-based Biochips
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Argo: A Real-Time Network-on-Chip Architecture With an Efficient GALS Implementation
Publication: Research - peer-review › Journal article – Annual report year: 2015

A scalable lock-free hash table with open addressing
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017
A Software Managed Stack Cache for Real-Time Systems
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

A Stack Cache for Real-Time Systems
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

A Survey of Man in the Middle Attacks
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Publication: Research - peer-review › Journal article – Annual report year: 2016

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Publication: Research › Report – Annual report year: 2016

Dedicated workspaces: Faster resumption times and reduced cognitive load in sequential multitasking
Publication: Research - peer-review › Journal article – Annual report year: 2016

Design and Simulation of a Quaternary Memory Cell based on a Physical Memristor
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Designing Context-Aware Cognitive Behavioral Therapy for Unipolar and Bipolar Disorders
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016
Design optimization for security-and safety-critical distributed real-time applications
Publication: Research - peer-review › Journal article – Annual report year: 2016

Design Optimization of Cyber-Physical Distributed Systems using IEEE Time-sensitive Networks (TSN)
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DNA-Inspired Online Behavioral Modeling and Its Application to Spambot Detection
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Baig, H. & Madsen, J. 2016 Case study.
Publication: Research › Internet publication – Annual report year: 2016

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Efficient Worst-Case Execution Time Analysis of Dynamic Branch Prediction
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Electronic self-monitoring of mood using IT platforms in adult patients with bipolar disorder: A systematic review of the validity and evidence
Faurholt-Jepsen, M., Munkholm, K., Frost, M., Bardram, J. E. & Kessing, L. V. 2016 In : Molecular Psychiatry. 16, 7, p. 1-14
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Evolvable Smartphone-Based Platforms for Point-Of-Care In-Vitro Diagnostics Applications
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Experimental Measures of News Personalization in Google News
FMI for Co-Simulation of Embedded Control Software

FPGA Acceleration by Dynamically-Loaded Hardware Libraries

Game-based verification and synthesis

Hardware locks for a real-time Java chip multiprocessor

Implementation of Hardware Accelerators on Zynq

Improved 64-bit Radix-16 Booth Multiplier Based on Partial Product Array Height Reduction

Lessons learned from the EU project T-CREST

Logic and Timing Analysis of Genetic Logic Circuits using D-VASim

Microfluidic Very Large Scale Integration (VLSI): Modeling, Simulation, Testing, Compilation and Physical Synthesis

Mind the tracker you wear: a security analysis of wearable health trackers

Model-Based Evaluation Of System Scalability: Bandwidth Analysis For Smartphone-Based Biosensing Applications
Performance/Power Space Exploration for Binary64 Division Units
Publication: Research - peer-review › Journal article – Annual report year: 2016

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Reconfiguration in FPGA-Based Multi-Core Platforms for Hard Real-Time Applications
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Routing Optimization of AVB Streams in TSN Networks
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Safety-critical Java for embedded systems
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Security And Privacy Issues in Health Monitoring Systems: eCare@Home Case Study
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Smartphone-based biosensing platform evolution: Implementation of electrochemical analysis capabilities
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State-based Communication on Time-predictable Multicore Processors
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Support for the Logical Execution Time Model on a Time-predictable Multicore Processor
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Synthesis of Application-Specific Fault-Tolerant Digital Microfluidic Biochip Architectures
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Synthesis of railway-signaling plans using reachability games
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TACLeBench: A benchmark collection to support worst-case execution time research
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The Personal Health Technology Design Space
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Time-Predictable Communication on a Time-Division Multiplexing Network-on-Chip Multicore
Publication: Research › Ph.D. thesis – Annual report year: 2016

Time-predictable Stack Caching
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Towards Unifying OpenMP Under the Task-Parallel Paradigm Implementation and Performance of the taskloop Construct
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Traffic class assignment for mixed-criticality frames in TTEthernet
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Why Hackers Love eHealth Applications
Adaptive Multipath Key Reinforcement for Energy Harvesting Wireless Sensor Networks
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A Framework and Classification for Fault Detection Approaches in Wireless Sensor Networks with an Energy Efficiency Perspective
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A Probabilistic Approach for the System-Level Design of Multi-ASIP Platforms
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A Scalable Prescriptive Parallel Debugging Model
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A Time-Composable Operating System for the Patmos Processor
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Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Characterization of RNS multiply-add units for power efficient DSP
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Continuous Context-Aware Device Comfort Evaluation Method
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Design Optimization of Mixed-Criticality Real-Time Embedded Systems
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Design optimization of TTEthernet-based distributed real-time systems
Publication: Research - peer-review › Journal article – Annual report year: 2014

Developing merged CDIO based curricula for diploma (B.Eng.) IT study programs at DTU
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

D-VASim: Dynamic Virtual Analyzer and Simulator for Genetic Circuits
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Efficient Context Switching for the Stack Cache: Implementation and Analysis
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

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Fame for sale: Efficient detection of fake Twitter followers
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Publication: Research › Book – Annual report year: 2015

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

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Hardware Transactional Memory Optimization Guidelines, Applied to Ordered Maps
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Publication: Research › Report – Annual report year: 2015

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

Interfacing Hardware Accelerators to a Time-Division Multiplexing Network-on-Chip
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015
Introduction
Publication: Research › Book chapter – Annual report year: 2015

Message Passing on a Time-predictable Multicore Processor
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Microfluidic Very Large-Scale Integration for Biochips: Technology, Testing and Fault-Tolerant Design
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Modelling and Analysis for Cyber-Physical Systems: An SMT-based Approach
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Off-Line Mapping of Multi-Rate Dependent Task Sets to Many-Core Platforms
Publication: Research - peer-review › Journal article – Annual report year: 2015

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

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

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

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

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Compilation Tool Chains and Intermediate Representations

Compiler Feedback using Continuous Dynamic Compilation during Development

Criticality: static profiling for real-time programs

Decimal Engine for Energy-Efficient Multicore Processors
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Design and Implementation of Energy Harvesting Powered Wireless Sensor Networks

DySectAPI: Scalable Prescriptive Debugging

Editorial: Thematic series on best articles from IFIPTM and PST


ELB-trees - Efficient Lock-free B-trees

Enabling short fragments for uncoordinated spread spectrum communication
Energy Efficient FPGA based Hardware Accelerators for Financial Applications
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

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