Jan Madsen - DTU Orbit (25/12/2017)

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Copenhagen Center for Health Technology
Department of Applied Mathematics and Computer Science - Professor, Section Head, Deputy Director
Embedded Systems Engineering

Publications:

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

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

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

Helbredstjek af dansk sundhedsteknologi: Sektorudviklingsrapport
Publication: Commissioned › Report – 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

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

Scheduling and Fluid Routing for Flow-Based Microfluidic Laboratories-on-a-Chip
Publication: Research - peer-review › Journal article – Annual report year: 2017
Simulation Approach for Timing Analysis of Genetic Logic Circuits
PUBLICATION: Research - peer-review › Journal article – Annual report year: 2017

Synthesis of on-chip control circuits for mVLSI biochips
PUBLICATION: Research - peer-review › Article in proceedings – Annual report year: 2017

System-Level Sensitivity Analysis of SiNW-bioFET-Based Biosensing Using Lockin Amplification
PUBLICATION: Research - peer-review › Journal article – Annual report year: 2017

Taming Living Logic using Formal Methods
PUBLICATION: Research - peer-review › Article in proceedings – Annual report year: 2017

Test-Driven, Model-Based Systems Engineering.
PUBLICATION: Research › Ph.D. thesis – 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 Pin-Count Reduction Algorithm for Flow-Based Microfluidic Biochips
PUBLICATION: Research - peer-review › Article in proceedings – Annual report year: 2016

D-VASim: An Interactive Virtual Laboratory Environment for the Simulation and Analysis of Genetic Circuits
PUBLICATION: Research - peer-review › Journal article – Annual report year: 2016

D-VASim: A Software Tool to Simulate and Analyze Genetic Logic Circuits
Baig, H. & Madsen, J. 2016 Case study.
PUBLICATION: Research › Internet publication – Annual report year: 2016

Evolvable Smartphone-Based Platforms for Point-Of-Care In-Vitro Diagnostics Applications
PUBLICATION: Research - peer-review › Journal article – Annual report year: 2016

Evolvable Smartphone-Based Point-of-Care Systems For In-Vitro Diagnostics
PUBLICATION: Research - peer-review › Ph.D. thesis – Annual report year: 2016

FMI for Co-Simulation of Embedded Control Software
Medium Access Control in Energy Harvesting - Wireless Sensor Networks
Publication: Research › Ph.D. thesis – Annual report year: 2014

Performance Aspects of Synthesizable Computing Systems
Publication: Research › Ph.D. thesis – Annual report year: 2014

Programming language and tools for Multipurpose Lab-on-a-Chip Platforms
Publication: Research - peer-review › Poster – Annual report year: 2014

Tradeoff analysis for Dependable Real-Time Embedded Systems during the Early Design Phases
Publication: Research › Ph.D. thesis – Annual report year: 2014

Application-specific fault-tolerant architecture synthesis for digital microfluidic biochips
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

ASAM: Automatic architecture synthesis and application mapping
Publication: Research - peer-review › Journal article – Annual report year: 2014

Biochemical Application Compilation and Architecture Synthesis for Fault-Tolerant Digital Microfluidic Biochips
Alistar, M., Pop, P. & Madsen, J. 2013
Publication: Research - peer-review › Poster – Annual report year: 2014

Control Synthesis for the Flow-Based Microfluidic Large-Scale Integration Biochips
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Formal methods for design and simulation of embedded systems
Publication: Research › Ph.D. thesis – Annual report year: 2014

Hierarchical DSE for multi-ASIP platforms
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Modeling and Simulation Framework for Flow-Based Microfluidic Biochips
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Module-Based Synthesis of Digital Microfluidic Biochips with Droplet-Aware Operation Execution
Multi-ASIP Platform Synthesis for Event-Triggered Applications with Cost/Performance Trade-offs
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Multi-ASIP Platform Synthesis for Real-Time Applications
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Operation placement for application-specific digital microfluidic biochips
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Quality-Driven Model-Based Design of MultiProcessor Embedded Systems for Highlydemanding Applications
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Architectural Synthesis of Flow-Based Microfluidic Large-Scale Integration Biochips
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

ASAM: Automatic Architecture Synthesis and Application Mapping
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Biochips: The Integrated Circuit of Biology
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2012

Droplet-Aware Module-Based Synthesis for Fault-Tolerant Digital Microfluidic Biochips
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Energy-Harvesting Wireless Sensor Networks
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

MDM: A Mode Diagram Modeling Framework
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2012

Online Synthesis for Error Recovery in Digital Microfluidic Biochips with Operation Variability
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012
Optimal Register Allocation by Augmented Left-Edge Algorithm on Arbitrary Control-Flow Structures
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Robust and flexible mapping for real-time distributed applications during the early design phases
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2012

Routing-based synthesis of digital microfluidic biochips
Publication: Research - peer-review › Journal article – Annual report year: 2012

Synthesis of Biochemical Applications on Flow-Based Microfluidic Biochips using Constraint Programming
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

System-Level Modeling and Synthesis Techniques for Flow-Based Microfluidic Very Large Scale Integration Biochips
Publication: Research › Ph.D. thesis – Annual report year: 2013

System level modelling with open source tools
Publication: Research - peer-review › Paper – Annual report year: 2012

A Bio-Inspired Self-Healing Reconfigurable Hardware Architecture: Concept, design, prototype, and evaluation
Publication: Research › Ph.D. thesis – Annual report year: 2011

Application-Aware Optimization of Redundant Resources for the Reconfigurable Self-Healing eDNA Hardware Architecture
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

Autonomous distributed self-organizing and self-healing hardware architecture - The eDNA concept
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

Biologically inspired hardware cell architecture
Boesen, M. R. & Madsen, J. 2011
Publication: Research › Patent – Annual report year: 2011

Biologically inspired hardware cell architecture
Boesen, M. R. & Madsen, J. 2011
Publication: Research › Patent – Annual report year: 2011

Cell Culture Microfluidic Biochips: Experimental Throughput Maximization
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011
Energy/Reliability Trade-offs in Fault-Tolerant Event-Triggered Distributed Embedded Systems
IEEE
Publication: Research - peer-review › Article in proceedings – Annual report year: 2010

Expressing Coarse-Grain Dependencies Among Tasks in Shared Memory Programs
Publication: Research - peer-review › Journal article – Annual report year: 2011

Feedback Driven Annotation and Refactoring of Parallel Programs
Publication: Research › Ph.D. thesis – Annual report year: 2011

Integration of the Reconfigurable Self-Healing eDNA Architecture in an Embedded System
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

Integration of the Self-Healing eDNA Architecture in a Liquid Crystal Waveguide-based Fourier Transform Spectrometer
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

Modelling of Energy Harvesting Aware Wireless Sensor Networks
Publication: Research - peer-review › Book chapter – Annual report year: 2011

Recent Research and Emerging Challenges in the System-Level Design of Digital Microfluidic Biochips
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

Sows' activity classification device using acceleration data – A resource constrained approach
Publication: Research - peer-review › Journal article – Annual report year: 2011

Synthesis of Digital Microfluidic Biochips with Reconfigurable Operation Execution
Publication: Research › Ph.D. thesis – Annual report year: 2011

System-Level Modeling and Synthesis of Flow-Based Microfluidic Biochips
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

System Level Modelling and Performance Estimation of Embedded Systems
Publication: Research › Ph.D. thesis – Annual report year: 2011
Models and formal verification of multiprocessor system-on-chips
Publication: Research - peer-review › Journal article – Annual report year: 2008

MT-ADRES: multi-threading on coarse-grained reconfigurable architecture
Publication: Research - peer-review › Journal article – Annual report year: 2008

Network Traffic Generator Model for Fast Network-on-Chip Simulation
Publication: Research - peer-review › Book chapter – Annual report year: 2008

NORCHIP
Publication: Research - peer-review › Journal article – Annual report year: 2008

Publication: Research - peer-review › Conference contribution – Annual report year: 2008

System-level verification of multi-core embedded systems using timed automata
Publication: Research - peer-review › Conference contribution – Annual report year: 2008

Towards Traceability in Descriptive Software Models
Publication: Research - peer-review › Conference contribution – Annual report year: 2008

Towards Understanding and Managing the Dynamic Behavior of Run-Time Reconfigurable Architectures
Publication: Research - peer-review › Conference contribution – Annual report year: 2008

Three Dimensional Measurements in Medical Data
Publication: Research › Ph.D. thesis – Annual report year: 2007

ARTS: A SystemC-based framework for multiprocessor Systems-on-Chip modelling
Publication: Research - peer-review › Journal article – Annual report year: 2007

A Traffic injection methodology with support for system-level synchronization
Publication: Research - peer-review › Book chapter – Annual report year: 2007

COSMOS: A System-Level Modelling and Simulation Framework for Coprocessor-Coupled Reconfigurable Systems
Publication: Research - peer-review › Conference contribution – Annual report year: 2007
Morphware - Fremtidens Embedded System Platform
Madsen, J. 2006 Elektronik-06.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2006

Multicore Processing and ARTEMIS - An incentive to develop the European Multiprocessor research
Publication: Research - peer-review › Article in proceedings – Annual report year: 2006

Multi-Objective Design Space Exploration of Embedded System Platforms
Publication: Research - peer-review › Article in proceedings – Annual report year: 2006

Multi-Objective Design Space Exploration of Embedded System Platforms
Madsen, J., Stidsen, T. K., Kjærulff, P. & Mahadevan, S. 2006 Informatics and Mathematical Modelling, Technical University of Denmark, DTU.
Publication: Research - peer-review › Report – Annual report year: 2006

Multi-Objective Design Space Exploration of Embedded System Platforms
Publication: Research - peer-review › Book chapter – Annual report year: 2007

A Network Traffic Generator Model for Fast Network-on-Chip Simulation
Publication: Research - peer-review › Article in proceedings – Annual report year: 2005

ARTS: A System-Level Framework for Modeling MPSoC Components and Analysis of their Causality
Publication: Research - peer-review › Article in proceedings – Annual report year: 2005

Behavioral synthesis of asynchronous circuits
Publication: Research › Ph.D. thesis – Annual report year: 2005

Cross-layer Modelling for Heterogeneous MPSoCs
Publication: Research - peer-review › Article in proceedings – Annual report year: 2005

Design of A Development Platform for HW/SW Codesign of Wireless IOntegrated Sensor Nodes
Publication: Research - peer-review › Article in proceedings – Annual report year: 2005

Design Space Exploration for Heterogeneous, Networked MPSoC Design (Invited talk)
Madsen, J. 2005 ARTIST Workshop on Distributed Embedded Systems.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2005
Modular SoC-Design using the MANGO clockless NoC (Invited talk)
Publication: Research - peer-review › Article in proceedings – Annual report year: 2005

Multiprocessor Systems - Modelling and Simulation
Publication: Research - peer-review › Book chapter – Annual report year: 2005

Realistically Rendering SoC Traffic Patterns with Interrupt Awareness
Angiolini, F., Mahadevan, S., Madsen, J., Benini, L. & Sparsø, J. 2005 *IFIP International Conference on Very Large Scale Integration (VLSI-SoC)*.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2005

Run-time Dynamic Reconfiguration: A Reality Check Based on FPGA Architectures from Xilinx
Publication: Research - peer-review › Article in proceedings – Annual report year: 2005

Sensor Networks: Towards Ambient Intelligence
Madsen, J. 2005 *DIAG Conference*.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2005

System-level Modelling of Wireless Integrated Sensor Networks
Publication: Research - peer-review › Article in proceedings – Annual report year: 2005

System-Level Modelling and Simulation of MEMS-Based Sensors
Publication: Research - peer-review › Article in proceedings – Annual report year: 2005

The SoC-Mobinet Model in System-on-Chip Education
Publication: Research - peer-review › Article in proceedings – Annual report year: 2005

Abstract System-on-Chip modelling in SystemC
Publication: Research › Article in proceedings – Annual report year: 2004

A SystemC-Based Abstract Real-Time Operating System Model for Multiprocessor System-on-Chip
Publication: Research - peer-review › Book chapter – Annual report year: 2004

A system-level multiprocessor system-on-chip modeling framework
Publication: Research - peer-review › Article in proceedings – Annual report year: 2004

A system-level multiprocessor system-on-chip modelling framework
Publication: Research - peer-review › Article in proceedings – Annual report year: 2004

Design of a multi-mode channel-select and resampling-processor (ASIP)
Publication: Research - peer-review › Article in proceedings – Annual report year: 2004
Network-Centric System-Level Model for Multiprocessor System-on-Chip Simulation
Madsen, J., Mahadevan, S. & Virk, K. M. 2004 Interconnect-Centric Design for Advanced SoC and NoC. Springer
Publication: Research - peer-review › Book chapter – Annual report year: 2004

SoC-Mobinet, R&D and Education in System-on-Chip
Publication: Research - peer-review › Article in proceedings – Annual report year: 2004

System-level modeling for Wireless Sensor Networks (Invited talk)
Publication: Research - peer-review › Article in proceedings – Annual report year: 2004

System-on-Chip Design Challenges for Future Embedded Systems (Invited talk)
Publication: Research - peer-review › Article in proceedings – Annual report year: 2004

Towards behavioral synthesis of asynchronous circuits - an implementation template targeting syntax directed compilation
Publication: Research - peer-review › Article in proceedings – Annual report year: 2004

Wireless Sensor Networks for Sow Monitoring (Invited talk)
Publication: Research - peer-review › Article in proceedings – Annual report year: 2004

Abstract RTOS Modelling for Multiprocessor System-on-Chip
Publication: Research - peer-review › Article in proceedings – Annual report year: 2003

Network-on-Chip Modeling for System-Level Multiprocessor Simulation
Publication: Research - peer-review › Article in proceedings – Annual report year: 2003

Power Constrained High-Level Synthesis of Battery Powered Digital Systems
Publication: Research - peer-review › Article in proceedings – Annual report year: 2003

Resource Allocation Model for Modelling Abstract RTOS on Multiprocessor System-on-Chip
Publication: Research - peer-review › Article in proceedings – Annual report year: 2003

Using SystemC to Model Asynchronous Communication at Different Levels of Abstraction
Publication: Research › Article in proceedings – Annual report year: 2003

Design for scalability in 3D computer graphics architectures
Publication: Research › Ph.D. thesis – Annual report year: 2002

Abstract RTOS modelling in SystemC
Publication: Research - peer-review › Article in proceedings – Annual report year: 2002
Abstract RTOS modelling in SystemC
Madsen, J., Gonzalez, M. J. & Blaickner et al., A. (ed.) 2002 2nd Workshop on SoC and SystemC.
Publication: Research › Article in proceedings – Annual report year: 2002

A Sophomore Course in Codesign
Publication: Research - peer-review › Journal article – Annual report year: 2002

High-level synthesis of asynchronous circuits from control data flow graph representations
Publication: Research › Article in proceedings – Annual report year: 2002

SoC-Mobinet - A project for Collaborative System-on-Chip Curricula Development with Industrial Support
Publication: Research - peer-review › Article in proceedings – Annual report year: 2002

Power-over-Time Estimation for Processor Design
Publication: Research - peer-review › Article in proceedings – Annual report year: 2001

Embedded System Education for the Future
Publication: Research - peer-review › Journal article – Annual report year: 2000

Memory architecture for efficient utilization of SDRAM: a case study of the computation/memory access trade-off
Publication: Research - peer-review › Article in proceedings – Annual report year: 2000

VRML Visualization in a Surgery Planning and Diagnostics Application
Publication: Research - peer-review › Article in proceedings – Annual report year: 2000

Acetabular dysplasia: PC assisteret anatomiske målinger i 3D på basis af CT data
Pedersen, S., Madsen, J., Holten-Lund, H. & Hvidtfeldt, M. 1999
Publication: Research - peer-review › Report – Annual report year: 1999

Embedded System Synthesis under Memory Constraints
Publication: Research - peer-review › Article in proceedings – Annual report year: 1999

Graph based communication analysis for hardware/software codesign
Publication: Research - peer-review › Article in proceedings – Annual report year: 1999

Integrating communication protocol selection with hardware/software codesign
Publication: Research - peer-review › Journal article – Annual report year: 1999
The Importance of Interfaces: A HW/SW Codesign Case Study
Publication: Research - peer-review › Article in proceedings – Annual report year: 1997

Aspects of system modelling in Hardware/Software partitioning
Publication: Research - peer-review › Article in proceedings – Annual report year: 1996

Codesign Analysis of a Computer Graphics Application
Publication: Research - peer-review › Journal article – Annual report year: 1996

PACE: A dynamic programming algorithm for hardware/software partitioning
Publication: Research - peer-review › Article in proceedings – Annual report year: 1996

An Approach to Interface Synthesis
Publication: Research - peer-review › Article in proceedings – Annual report year: 1995

Real-Time Semantics for Data Flow Graphs
Publication: Research › Poster – Annual report year: 1995

Resource Considerations during Parallel Scheduling of Large Control Flow Dominated Applications
Publication: Research - peer-review › Article in proceedings – Annual report year: 1995

A Codesign Case Study in Computer Graphics
Publication: Research - peer-review › Article in proceedings – Annual report year: 1994

A Flexible Architecture Representation for High Level Synthesis
Publication: Research - peer-review › Article in proceedings – Annual report year: 1994

Modeling Shared Variables in VHDL
Publication: Research - peer-review › Article in proceedings – Annual report year: 1994

Controller Synthesis and Verification
Publication: Research - peer-review › Book chapter – Annual report year: 1993

Deferral Based List Scheduling
Publication: Research - peer-review › Article in proceedings – Annual report year: 1993
Performance Aspects of Gate Matrix Layout
Publication: Research - peer-review » Conference article – Annual report year: 1993

A New Layout Model For Automatic Gate Matrix Layout Generation
Publication: Research - peer-review » Article in proceedings – Annual report year: 1992

Controller Synthesis Using Compiled Cells
Publication: Research - peer-review » Article in proceedings – Annual report year: 1992

Layout Synthesis using Compiled Cells
Madsen, J. 1992
Publication: Research » Ph.D. thesis – Annual report year: 1992

Controller Synthesis in GAIA, A VHDL RT-Level Framework
Publication: Research - peer-review » Article in proceedings – Annual report year: 1991

Delay estimation for CMOS functional cells
Publication: Research - peer-review » Article in proceedings – Annual report year: 1991

Single-Level Wiring for CMOS Functional Cells
Publication: Research - peer-review » Article in proceedings – Annual report year: 1991

Flow Graph Modelling Using VHDL Bus Resolution Functions
Madsen, J. & Brage, J. P. 1990
Publication: Research » Poster – Annual report year: 1990

Flow Graph Modelling Using VHDL Bus Resolution Functions
Publication: Research - peer-review » Article in proceedings – Annual report year: 1990

Novel Architecture Design Methodologies and Synthesis Strategies for Future ASIC Design
Publication: Research - peer-review » Article in proceedings – Annual report year: 1990

The Impact of Novel Algorithms, Architectural design Methodologies and Synthesis Strategies on Future ASIC Design
Publication: Research - peer-review » Article in proceedings – Annual report year: 1990

A New Approach to Optimal Cell Synthesis
Publication: Research - peer-review » Article in proceedings – Annual report year: 1989

Automatic Synthesis of Multilevel Combinational Logic
Publication: Research - peer-review » Article in proceedings – Annual report year: 1989

Automatic Synthesis of Multilevel Combinational Logic
A Dynamic Environment for VLSI Design Tools

Digital Design Using Module Generators

Projects:

**Fog Computing Security**
Kavaja, J., Dragoni, N. & Madsen, J.
01/11/2017 → 31/10/2020
Project: PhD

**Resource Management in Fog Computing for Industrial Applications**
Raagaard, M. L., Pop, P. & Madsen, J.
01/08/2017 → 30/09/2017
Project: PhD

**Portable Diagnostic Laboratory to Diagnose Thyroid Gland Related Disorders**
01/07/2017 → 30/06/2020
Project: PhD

**Analysis and Optimization of safety-Critical Embedded Systems**
Laursen, S. M., Pop, P. & Madsen, J.
01/07/2015 → 30/06/2016
Project: PhD

**Compilation Techniques for Flow-based Microfluidic Biochips**
Schneider, A. R., Pop, P. & Madsen, J.
15/06/2015 → 14/06/2018
Project: PhD

**COMPUTE Software Group**
Störrle, H., Madsen, J., Ersbøll, B. K. & Kristensen, K.
01/01/2015 → 31/12/2015
Project

**A top-down approach to genetic circuit synthesis**
Baig, H., Madsen, J., Hansen, M. R., Bhatia, S. & Myers, C. J.
15/08/2014 → 15/11/2017
Project: PhD

**Simulation of distributed system with thermodynamic models**
Pedersen, N. & Madsen, J.
01/04/2014 → 01/10/2017
Project: PhD
Test-driven model-based development of complex embedded systems
Munck, A., Madsen, J., Lindqvist, L., Mortensen, R., Pop, P., Karlsson, S., Larsen, P. G. & Nielsen, P. Ø.
01/08/2013 → 16/08/2017
Project: PhD

Evolvable Smartphone-based Point-of-Care Systems for In-Vitro Diagnostics
01/02/2013 → 02/11/2016
Project: PhD

Portable and predictable Performance Heterogeneous Embedded Manycores - Low Level System Stack
Brock-Nannestad, L., Karlsson, S., Probst, C. W., Madsen, J., Brorsson, M. & Själander, M.
15/01/2013 → 01/12/2016
Project: PhD

Modelling and analysis for Cyber-Physical Systems
01/11/2011 → 30/09/2015
Project: PhD

Optimized Networking for Energy Harvesting Wireless Sensor Network
Vuckovic, D., Madsen, J., Sørensen, T., Dragoni, N., Ellervee, P. & Nielsen, P. Ø.
01/03/2011 → 30/09/2014
Project: PhD

Optimized Networking for Energy Harvesting Wireless Sensor Networks
Fafoutis, X., Dragoni, N., Madsen, J., Nannarelli, A., Plosila, J. P. & Vain, J.
01/12/2010 → 26/05/2014
Project: PhD

Multi-objective Design Space Exploration for (re)-configurable heterogeneous Multi-ASIP SoC platforms
01/11/2010 → 23/01/2015
Project: PhD

Design Space Exploration for Application Mapping onto Heterogeneous Multiprocessor ASIPs
Iordache, G. V., Pop, P. & Madsen, J.
15/10/2010 → 15/05/2011
Project: PhD

Synthesis of Mixed-Criticality Applications on Multi-Core Systems to Reduce Certification Costs
Tamas-Selicean, D., Pop, P., Madsen, J., Schoeberl, M., Ademaj, A. & Chakraborty, S.
01/09/2010 → 20/03/2014
Project: PhD

Architecture concepts for improving programmability of multi-core architectures
Schleuniger, P., Karlsson, S., Madsen, J., Pop, P., Grahn, H. & Ramirez, A.
15/06/2010 → 26/05/2014
Project: PhD

Design Methods for Droplet-Based Microfluidic Biochips with Operation Variability
Alistar, M., Pop, P., Madsen, J., Bille, P., Brisk, P. & Ho, T.
01/01/2010 → 24/06/2014
Project: PhD
System-Level Design to Support Early Design Stages and Evolvable Development of Embedded Systems
Gan, J., Pop, P., Madsen, J., Nannarelli, A., Curescu, C. & Popentiu, F.
15/12/2009 → 26/05/2014
Project: PhD

Adaptable communication middleware for network on a chip based multi core architectures
Passas, S., Karlsson, S. & Madsen, J.
01/10/2009 → 09/04/2013
Project: PhD

System-Level Design of Continuous Flow Microfluidic Biochips
15/09/2009 → 07/03/2013
Project: PhD

Adaptable autonomic middleware for context-aware network on chip based multi core architectures
Hansen, M. R., Pop, P., Madsen, J.
01/06/2009 → 28/09/2011
Project: PhD

Adaptable autonomic middleware for context-aware network on chip based multi core architectures
Hansen, M. R., Pop, P., Madsen, J.
01/06/2009 → 28/09/2011
Project: PhD

A Flexible Audio SoC Design Methodology
Tranberg-Hansen, A. S., Madsen, J., Pop, P., Eles, P. & Lindwer, M.
01/12/2007 → 31/08/2011
Project: PhD

Power and Thermal Management of System-on-chips
Liu, W., Nannarelli, A., Madsen, J., Pop, P., Alonso, D. A. & Tisserand, A.
15/10/2007 → 01/06/2011
Project: PhD

Qualitative and Quantitative Security Analyses for ZigBee Wireless Sensor Networks
Yuksel, E., Nielson, H. R., Nielsen, F., Madsen, J., Gilmore, S. & Martinelli, F.
01/09/2007 → 30/03/2011
Project: PhD
Models and Analyses for Embedded Systems Design
Breklig, A. W., Hansen, M. R., Madsen, J., Sparsø, J., Ravn, A. P. & Vain, J.
01/04/2007 → 02/02/2011
Project: PhD

Tools for model-based software descriptions
Larsen, P., Karlsson, S., Madsen, J., Probst, C. W., Cohen, A. & Stenström, P.
01/02/2007 → 31/08/2011
Project: PhD

Systemarkitekturer baseret på Network-on-Chip
Rasmussen, M. S., Sparsø, J., Karlsson, S., Madsen, J., Probst, C. W., Grahn, H. & Nurmi, J. A.
01/10/2006 → 29/09/2010
Project: PhD

Physical Models and Robust Estimation in Sensor Network Security
Rasmussen, K. B. & Madsen, J.
01/05/2006 → 31/08/2006
Project: PhD

Programming Models and Tools for intelligent Embedded Systems
Sørensen, P. V. B., Madsen, J., Jensen, C. D., Jerraya, A. A. & Svensson, B.
01/03/2006 → 29/09/2010
Project: PhD

System-Level Design Methodologies for Platform-based Multiprocessor SoC Designs
Virk, K. M., Madsen, J., Nannarelli, A., Jerraya, A. A. & Nurmi, J. A.
01/06/2004 → 05/11/2008
Project: PhD

Adaptive Computing Architectures
Wu, K., Madsen, J., Kuchcinski, K. & Teich, J.
01/03/2004 → 17/01/2008
Project: PhD

Visualisering, opmåling & editering af 3D-medicinske data
Jakobsen, B., Christensen, N. J., Madsen, J., Pedersen, S., Carstensen, J. M., Henriksen, K. & Sramek, M.
15/04/2003 → 28/09/2007
Project: PhD

Statisk program analyse af VHDL
Tolstrup, T. K., Nielson, H. R., Nielson, F., Madsen, J., Banerjee, A. & Sabelfeld, A.
01/04/2003 → 18/04/2007
Project: PhD

Chip Area Interconnection Networks
01/09/2002 → 18/04/2006
Project: PhD

High-Level Synthesis of Asynchronous
Nielsen, S. F., Sparse, J., Madsen, J., Nannarelli, A., Lavagno, L. & Peeters, A.
01/08/2001 → 06/06/2005
Project: PhD
SoCLab, Proposal for a Danish System-on-Chip Initiative  
Madsen, J.  
01/05/2000 → …  
Project

Low Power Digital Signal Processing  
Paker, O., Sparsø, J., Madsen, J. & Piguet, C.  
01/09/1998 → 21/01/2003  
Project: PhD

Teknikker til 3D visualisering, billedbehandling og simulering  
Holten-Lund, H. E., Pedersen, S., Madsen, J., Christensen, N. J., Ernst, R. & Slusallek, P.  
01/07/1998 → 03/05/2002  
Project: PhD

Optimizing system level design of mobile phones  
Bjørn-Jørgensen, P. & Madsen, J.  
01/05/1998 → 01/10/2003  
Project: PhD

Optimizing System Level Design of Mobile Phones  
Madsen, J., Knudsen, P. V. & Bjørn-Jørgensen, P.  
01/01/1998 → 30/04/2001  
Project

PATMOS'98 workshop  
Sparsø, J., Madsen, J. & Stassen, F.  
01/01/1998 → 30/10/1998  
Project

Thomas B. Thrige Center for Microinstruments  
01/04/1997 → 31/12/2003  
Project

Graduate School in Microelectronics  
01/01/1997 → 31/12/2001  
Project

3D-Med  
Pedersen, S., Holten-Lund, H. E. & Madsen, J.  
01/01/1996 → …  
Project

Teknikker til Co-syntese  
Knudsen, P. V., Sharp, R., Madsen, J. & Ernst, R.  
01/01/1996 → …  
Project: PhD

Integreteret hardware/software kode-generering i Co-design  
01/08/1995 → 07/02/2000
LYCOS: Embedded System Synthesis
Madsen, J., Grode, J. N. R., Knudsen, P. V., Petersen, M. E. & Bjørn-Jørgensen, P.
01/01/1994 → …

Project

Syntese af parallele systemarkitekturer til robotstyringsformål
Hald, B., Olesen, O. & Madsen, J.
01/08/1992 → 21/03/1997

Project: PhD

Specifikation, syntese og verifikation af komplekse ASIC’s eksemplificeret inden for det synkrone digitale hierarki
Lindqvist, L., Olesen, O. & Madsen, J.
01/03/1992 → …

Project: PhD

Asynchronous Circuit Design
Sparsø, J., Nielsen, S. F., Mahadevan, S., Bjerregaard, T. & Madsen, J.
01/01/1992 → 01/01/9999

Project

Formel syntese udfra høj-niveau syntese
Bojsen, P., Olesen, O. & Madsen, J.
01/09/1990 → 21/03/1995

Project: PhD