



DSD 2023 Conference Program, Durres, Albania, 06-08 September 2023

Wednesday 6th Sept 2023													
DSD			Special Track 1				Special Track 2				Special Track 3		
8:30:00	08:30-09:00 Session 1 Welcome Session												
8:45:00	09:00-09:00 Session 2												
9:00:00	[Keynote] DSD 1 Philipp Mundthauk												
9:15:00	Coffee Break												
9:30:00	Coffee Break												
9:45:00	Coffee Break												
10:00:00	Coffee Break												
10:15:00	Coffee Break												
10:30:00	10:30-11:00 Session 3A FPGA HW Architectures (Session Chair: W)	10:30:00	Hans Jakob Durgand, Khaled Abdel-Orabi and Jalil Nouri	Generating CGRA Processing Element Hardware with CBRAGEN	10:30:00	Agathe Archet, Nicola Venturoli, Nicola de Franchis and François Orsiac	Energy Efficient use of an embedded heterogeneous SoC for the Inference of CNNs	10:30:00	Nikolaos Athanasiou Anagnostopoulos, Nico Meiri, Simon Bittiger, Martin Hartmann, Ali Rezaei, Sacha Hartmann, Stefan Kutzschebauch, Steffen Stawinski and Tolga Aral	A Method to Construct Efficient Carbon-Nanotube-Based Physical Unclonable Functions and True Random Number Generators	10:30:00	Chao Bi, Roger, Alexandros Bostas, Mohamed Amine Khelif, Pei Dou, Bing, Ngoc Son Vu, Julien Le Berrec, David Guyard and Olivier Roman	Radio-based Proximity Activity Acquisition, Classification and Recognition Towards Elderly Fall Prediction
10:45:00		11:00:00	Stefano Marzi, Ihsan Mustafa, Giacomo Bison, Pratyak Anand, Philipp Fabritius, Timmer Failingler and Abubakr Alin	FPGA-based real-time laser beam profiling and stabilization systems for quantum simulation applications	11:00:00	Dominika Proszkiewicz Rus and Tomasz Krzyjak	Power-of-Two Quantized FOD Networks for Predictive Detection with Dynamic Vision Sensor	11:00:00	Nico Meiri, Tolga Aral, Nikolaos Athanasiou Anagnostopoulos, Florian Frank, Simon Bittiger, Martin Hartmann, Sacha Hartmann, Stefan Kutzschebauch and Stefan Kutzschebauch	Spatial Correlation in Weak Physical Unclonable Functions: A Comprehensive Overview	11:00:00	Antonio José Rodríguez Almeida, Héctor Fabelo Gómez, Cristina Siguero Ruiz, Rosa María Sánchez Hernández, Ana María Múgica and Gustavo Manero Calicó	Novel Approach for AI-based Risk Calculator Development using Transfer Learning Targeting an Embedded System Implementation
11:00:00		11:30:00	Fuadi Dhillawarwan, Rajeev Piyankh, Souvik Vem, Sriharsha Gopu and Ahmad Hameed	Implementation of Sobel Edge Detection on DRAM and DIMM Arch Architectures	11:30:00	Owen Le Goudec, Miguel Chaves, Anup Sah, Somnath Das and Fernando Pardo	Energy Efficient Versatile Video Coding Decoder Using Lightweight Regression Models	11:30:00	Javier Soto, Sofia Vera, Yánel Fernández, Daniel Torpe, Carolina Hernández and Miguel Figueroa	A sketch-based algorithm for network flow entropy estimation on programmable switches using P4	11:30:00	Emmanuel Terzi, Marco Goussau, Bissa Marand, Raquel León, Gustavo Manero Calicó and Giovanni Danese	An Attention-based Parallel Algorithm for Hyperspectral Skin Cancer Classification on Low-Power GPUs
11:15:00		11:45:00	Hugues Ammer, Bertrand Le Gal, Christophe Jaga and Vincent Kioel	Model based design of FMCW radar processing systems on FPGA platforms	11:45:00	Martha Weiss, Dominik Dallinger, Daniel Schmitt, Matthias Bittner, Maximilian Göttinger and Axel Jantsch	Energy Profiling of DNN Accelerators	11:45:00	Abdulrah Aljifri, Muddi Sawaiz, Cesar Rodolfo Wladimir Reinhardt, Said Nawrooz and Mohammed Tawfik	A Pre-Silicon Power Leakage Assessment Based on Generative Adversarial Networks			
12:00:00	12:00-13:00 Session 4 [Keynote] DSD 2 Wolfgang Ecker												
12:15:00	13:00-14:30 Lunch Break												
12:30:00	13:00-14:30 Lunch Break												
12:45:00	13:00-14:30 Lunch Break												
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14:00:00	13:00-14:30 Lunch Break												
14:15:00	13:00-14:30 Lunch Break												
14:30:00	14:30-16:00 Session 5A Efficient Architecture for AI (Session Chair: Oscar Olturk)	14:30:00	Mayank Kabra, Shreyas V, Prashanth H, Kedar Deshpande and Madhu Rao	GGC: A graph-search approach to design custom cells for computational subsystems	14:30:00	Erling Jellum, Yaman Uzunoglu, Milica Obradovic and Martin Schoeberl	Spa-Tribble: Rapid Prototyping of FPGA Accelerators in C/HLS	14:30:00	Pablo Bellavista and Giuseppe Di Maticeo	The InTelex Methodology and Platform to Implement and Operate Digital Twins Based H.2 Applications in the Cloud Continuum	14:30:00	Ondrej Novak	Deterministic Search Strategy of Compression Codes
14:45:00		15:00:00	Tomaz Kuban, Jiri Bucek and Robert Lorenc	Single-Trace Attack on NTRU Decryption with Machine Learning and Template Profiling	15:00:00	Jana Veselá and Anton Blazek	Towards Deploying Highly Quantized Neural Networks on FPGA Using Chisel	15:00:00	Alfonso Arrieta, Gloria Sagardui, Alfonso Aguirre, Usaf Alfar and Shaikat Ali	DevOps for Cyber-Physical Systems: Objectives, Results and Lessons Learned from the Adaptive H2020 Project	15:00:00	Zaher Tabakum and Andreas Steininger	Towards Real-time Dual Delay Invariant Conditional Control Elements
15:00:00		15:15:00	David Breuss, Maximilian Göttinger, Jerry Young, Clemens Reiner and Axel Jantsch	VADAR: A Vision-based Anomaly Detection Algorithm for Railroads	15:15:00	Kasper Heese, Tjark Petersen and Jens Spehn	Asynchronous circuit design in Chisel using phase-decoupled clock elements	15:15:00	Rida Nouacker and Mahmoud Hossain	CONFEDRONES: Contributions for Enabling Safe and Autonomous Drones	15:15:00	Nuno Miralbell, Andrea Ripella, Riccardo Caracci, Michelangelo Grosso and Matteo Soria Ricarda	Targeting different defect-oriented fault models in IC testing: an experimental approach
15:15:00		15:30:00	Yannick Tuo-Diao, Nicolas Landreau Muelen, Rubén Grego-Teguer and Alejandro Valero	On Fault-Tolerant Microarchitectural Techniques for Voltage Undervoltage in On-Chip Memories of CNN Accelerators	15:30:00			15:30:00			15:30:00		
15:30:00	15:45:00	Anisabet Michael Esaliet, Daniel Omwuchire and Roman Obermaier	Optimization of the Versatile Tensor Accelerator (VTA) Load Module in a Time-Tripped Memory Access										
15:45:00	Coffee Break and Poster Session P1												
16:00:00	Coffee Break and Poster Session P1												
16:15:00	Coffee Break and Poster Session P1												
16:30:00	16:30-18:00 Session 5A FPGA & AI (Session Chair: W)	16:30:00	Chen-Hsiu Cho and Hyun Wook Oh	Disparity Refinement Processor Architecture Utilizing Horizontal and Vertical Characteristics for Stereo Vision Systems	16:30:00	Dina Heese, Malli Gay, Rita Pellen, Elfi Bija, Rocco, Owen Bellmann and Mirjalil Bartsch	A Modular Open-Source Cryptographic Coprocessor for Internet of Things	16:30:00	Marko Andjelkovic, Jianchao Chen, Rishan Tariq Syed, Fabian Vargas, Markus Oberst, Milica Obradovic, Stefan Hil, Mihai Măjareș, Lando Veljovic, Nikola Mihajlovic, Daniel Dambrosi, Goran Ristić, Ranael Duane, Nikola Vranic, Aleksandar Jakić, Alberto Palma, Antonio Lallena and Miguel Canjal	Towards a Smart Multi-Sensor Implementation for Monitoring System	16:30:00	Julliano Pimentel, Altonio A. MacLaren and Hong Qing Yu	A Novel Real-Time Framework for Embedded Systems Health Monitoring
16:45:00		17:00:00	Mihailina Vasilakou, Endri Kaja, Alper Yilmaz, Sebastian Prebeck and Wolfgang Ecker	Parallel Golomb-Rice Decoder with Bit-Layer Unary Encoding for Weight Compression in TinyML Applications	17:00:00	Vincent Dumoulin, Natacha Devroye and Wolfgang Ren	Active learning for fast and over-represented attacks on Arbiter PUFs	17:00:00	Domenico Pagano, Antonio J. Rodriguez Almeida, Stephan Nollig, Emanuele Torti, Himer Fabelo, Ingo Steyer, Alexander Gao and Gustavo M. Calicó	Acceleration of a DNN-based Heart Sound Segmentation Implementation on Different Platforms Targeting a Wearable Device	17:00:00	Clement Galin, Pierre-Marc Maselli, Olivier Petit and Jean-Marc Dourbette	Fault Injection on Embedded Frameworks: Impact of Single Instruction Skip
17:00:00		17:30:00	Ahmad Al-Zoubi, Benedikt Schödl, Gianluca Martino and Goerschaal Fey	Latency-optimized Hardware Acceleration of Multi-layer Perceptron Inference	17:30:00	François Benmal, Jean-Marc Duertre, Vincent Dupuy and Olivier Petit	Software-only Control-Flow Integrity against Fault Injection Attacks	17:30:00	Ramon Canal, Cristiano Chessa, Angelina Anzola, José María Armas, Josep Ll. Berzal, Aaron Cal, Stefano Di Carlo, Juan José Cordero, Dimitris Gionopoulos, Vasiliki Karavelou, Francesco Lubrano, Konstantinos Nikas, Yannis Nikolaidopoulos, Renato Oliveira, George Papadimitriou, Ioannis Papadimitriou, Dionisis Perampalakis, Daniel Rahn, Alvaro Rigo, Ionel-Robert Alexandru Savino, Alberto Sicari, Nikolaos Tzoumpouris and Alex Tormagou	Vitamin-V: Virtual Environment and Tooling for Trustworthy Development of RISC-V based Cloud Services	17:30:00	Daniel Omwuchire, Daniela Ioni, Kristi Sarda, Roman Obermaier and Tobias Pieper	Fault-tolerant Lightweight High-Level Architecture
17:15:00		17:45:00	Kasper Heese, Martin Schoeberl, Mels Aaga and Erik Truff	On the Feasibility of using FPGA's for Efficient Topology Optimization	17:45:00	Carmela Dimant, Louis Morganti, Laurent Lemarchand, David Egner, Frédéric Le Roy and Jérémy Boussieau	Characterizing Intrusion Detection Systems on Heterogeneous Embedded Platforms				17:45:00	Leonid Landert, Peter Klammann, Goerschaal Fey, Holger Schirba and Thomas C. Schmidt	Aging Analysis of Embedded SRAM on a Large-Scale Testbed Using Machine Learning
17:30:00	Coffee Break and Poster Session P1												
17:45:00	Coffee Break and Poster Session P1												
18:00:00	Coffee Break and Poster Session P1												

* Papers in red are "Best paper award candidates"



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Thursday 7th Sept 2023																
Time	DSD				Special Track 1				Special Track 2				Special Track 3			
	Room 1				Room 2				Room 3				Room 4			
8:30:00																
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10:30:00	09:00-10:00 Session 7 [Keynote] SEAA1															
10:45:00	10:00-10:30 Coffee Break & Session 8 Poster Session P2															
11:00:00																
11:15:00	10:30-12:00 Session 9A : Micro-architecture	10:30:00	Yakup Hüner and Ramazan Yeniçeri	ComCoS: Enhanced Cache Partitioning Technique for Integrated Modular Avionics	10:30-12:00 Session 9B NoC and Low Level Design (Session Chair : Lilla Zaourar)	10:30:00	Denis Shemonaev, Bertrand Le Gal, Christophe Jegou and Anthony Besseau	Implementation of an Assignment Algorithm for Object Tracking on a FPGA MPSoC	10:30-12:00 Session 9C EPDSD-3 (Session Chair: EMANUELE TORTI)	10:30:00	Irene Agirre, Alejandro J. Calderon, Irune Yarza, Imanol Mugarza, David Garcia, Lucas Borracci, Patrick Uven and Alvaro Jover	UP2DATE software updating framework compliance with safety and security regulations and standards	10:30-12:00 Session 9D : HSTIEC-1 Hardware, Software, and Tools for the IoT-to-Edge-to-Cloud Continuum (Session Chair : Daniel Casini)	10:30:00	Angelo Corsaro, Luca Cominardi, Olivier Hecart, Gabriele Baldoni, Julien Enoch, Pierre Avital, Julien Loudet, Carlos Guimares, Michael Ilyin and Dmitri Bannov	Zenoh: Unifying Communication, Storage and Computation from the Cloud to the Microcontroller
11:30:00		11:00:00	Marcelo Ruaro, Hadrien Barra, Matteo Bertolino, Rodrigo Cataldo, Roberto Medina, Etienne Borde and Mohamed Karaoui	The Last-Level-Cache Interference in Guest Performance: a Case-Study with Zephyr OS		11:00:00	Arman Ferdowsi, Matthias Fuegger, Josef Salzmann and Ulrich Schmid	A Hybrid Delay Model for Interconnected Multi-Input Gates		11:00:00	Yubal Barrios, Francisco Sanjuan, Geoffroy Bordot, Hella Sharif, Jerome Bernier and Sebastian Lopez	Demonstrator development of a next-generation video instrument for Earth Observation		11:00:00	Gianmarco Ottavi, Florian Zaruba, Luca Benini and Davide Rossi	Reducing Load-Use dependency-induced performance penalty in the Open-Source RISC-V CVA6 CPU
11:45:00		11:30:00	Burak Ocalan and Ozcan Ozturk	Utilizing Prefetch Buffers for Iterative Graph Applications		11:30:00	Simon Friedrich, Chai-Ying Lin, Viktor Razlov, Robert Wittig, Emil Matus and Gerhard Fettweis	Access Interval Prediction with Neural Networks for Tightly Coupled Memory Systems		11:30:00	Carlo Centofanti, Claudia Rinaldi, Andrea Marotta, Christos Verikoukis, Nikos Passas, Dionysis Xenakis, Stefano Tennina and Dajana Cassioli	OPTIMIST: OPTImised video content delivery chains over joint multi-access edge computing and 5G radio network infrastructures		11:30:00	Pietro Fara, Gabriele Serra and Federico Aromolo	Bounded transmission latency in real-time edge computing: a scheduling analysis
12:00:00		12:00-13:00 Session 10 [Keynote] DSD 3 Maciej Ciesielski														
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Friday 8th Sept 2023														
Time	DSD			Special Track 1			Special Track 2			Special Track 3			WiP	
9:00:00														
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10:00:00														
10:15:00	10:00-10:30 Coffee Break & Poster Session P3													
10:30:00	10:30-12:00 Session 11A OS & Real-Time Systems (Session Chair : Eugenio Villar)	10:30:00	Mehmet Şirin Önen and Arda Yurdaku	Container Scheduling Under ARINC 653 Scheduler Constraints	10:30:00	Gonzalo Rosa Olmeda, Cristina Sánchez Carabias, Victoria Cunha Alves, Manuel Villa Romero, Alberto Martín Pérez, Miguel Chavarrias, Alfonso Lagares, Eduardo Juarez and César Sanz	Transmittance hyperspectral capture system and methodology assessment for blood-liquid serum samples analysis	10:30:00	Richard Růžička, Václav Šmek and Jan Nevořal	Polymorphic RTL Computational Elements	10:30:00	Dominik Marchsreiter and Johanna Sepúlveda	A PQC and QKD Hybridization for Quantum-Secure Communications	
10:45:00		10:45:00	Raquel Leon, Himar Fabelo, Samuel Ortega, Juan F. Piñeiro, Adam Szolna, Jesus Morera, Bernardino Clavo and Gustavo Marrero Callico	Evaluation of Hyperspectral Imaging Fusion for In-vivo Brain Tumor Identification and Delineation	10:45:00	Beatriz Martínez-Vega, Raquel Leon, Himar Fabelo, Samuel Ortega, Eduardo Quevedo, Angeles Carroves-Molina, Francisco Rodriguez-Esparragon, Bernardino Clavo and Gustavo M. Callico	Analysis of the behavior of Ozone Therapy in Chemotherapy-induced Neuropathy using Hyperspectral Imaging Technology	10:45:00	Yuji Wada and Shigeru Yamashita	Minimizing the Impact of Unbalanced Splitting Errors on DMBs Without Any Overhead	10:45:00	Fikret Baski, Christian Seifert, Christian Steger and Robert Kofler	Secure Data Acquisition for Battery Management Systems	
11:00:00		11:00:00	Lukas Miedema and Clemens Greck	Change of plans: optimizing for power, reliability and timeliness for cost-conscious real-time systems	11:00:00	Aljandiro Martínez de Ternerro, Jaime Sancho, Alberto Martín-Pérez, Manuel Villa, Guillermo Vázquez, Pedro I. Cobrín, Gonzalo Rosa Olmeda, Pallab Sutradhar, Miguel Chavarrias, Eduardo Juarez and Cesar Sanz	Real-time hyperspectral and depth fusion calibration method for improved reflectance measures on arbitrary complex surfaces	11:00:00	Gerald Park, Florina Costamoling, Philipp Ebner and Robert Wille	Efficient Simulation of Droplet Merging in Channel-based Microfluidic Devices	11:00:00	Matthias Stammer, Matthias Hamann, Tanja Harbauer and Juergen Becker	Mitigating Masking in Automotive Communication Systems: Modeling and Hardware Generation	
11:15:00		11:15:00	Antti Nurmi, Per Lindgren and Tom Szymkowiak	An FPGA Accelerated Priority Queue Design with Constant Time Arbitrary-Element Removal	11:15:00	Daniel Fernandez, Carlos González and Daniel Mozos	Real-time Independent Components Analysis for Dimensional Reduction of Hyperspectral Images Using Reconfigurable Hardware	11:15:00	Raquel Leon, Himar Fabelo, Samuel Ortega, Juan F. Piñeiro, Adam Szolna, Jesus Morera, Bernardino Clavo and Gustavo Marrero Callico	Evaluation of Hyperspectral Imaging Fusion for In-vivo Brain Tumor Identification and Delineation	11:15:00			
11:30:00		11:30:00	Vinay Rayapati, Mahati Basavaraju and Madhav Rao	High Performance and Energy Efficient AMD and BWAD Pooling Schemes Characterised for CNN Accelerators	11:30:00			11:30:00			11:30:00			
11:45:00		11:45:00	Peter Hobden, Saket Srivastava and Edmond Nurellari	FPGA based 77GHz RADAR processing with novel linearisation	11:45:00			11:45:00			11:45:00			
12:00:00	12:00-13:30 Lunch Break													
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13:30:00	13:30-15:00 Session 12A DSD & Applications-1	13:30:00	Fabian Kreß, Alexey Serdyuk, Micha Hiegle, Dionebio Waldmann, Tim Hoffbiter, Julian Höfer, Tim Humann, Jens Barth, Peter Kämpf, Tanja Harbaum and Juergen Becker	ATLAS: An Approximate Time-Series LSTM Accelerator for Low-Power IoT Applications	13:30:00	Gabriele Serra, Pietro Fara and Daniel Casini	Enhancing the Availability of Web Services in the IoT-to-Edge-to-Cloud Compute Continuum: A WordPress Case Study	13:30:00	Mojtaba Mahdavi	A Novel Memristive-Based Data Reordering Scheme	13:30:00	Mehrdad Poorhosseini and Kim Gruettner	A RISC-V based platform supporting mixed timing-critical and high performance workloads	
13:45:00		14:00:00	Veronica Iskandar, Mohamed A. Abd El Ghany and Diana Goehring	Auto-DOK: Compiler-Assisted Automatic Detection of Offload Kernels for FPGA-HBM Architectures	14:00:00	Jose Antonio De La Torre Las Heras, Fernando Rincón, Marco Zenmaro, Julian Gaba, Jesús Barba and Juan Carlos López	SimIoT: A simulator for verification and profiling of complex IoT deployments	14:00:00	Muhammad Sa Siddiqi, Jan Andrés Galvan Hernández, Antwan Gebregiorgis, Rajendra Bishnoi, Christos Strydis, Said Haridoui and Mottajjalah Tanouli	Memristor-Based Lightweight Encryption	14:00:00	Hyun Woo Oh, Cheol-Ho Choi, Jeong Woo Cha, Hyunmin Choi, Joon Hean Han and Jung-Ho Shin	An SoC-FPGA-based Integrated Real-time Image Processor for Uncooled Infrared Focal Plane Array	
14:15:00		14:30:00	Najdet Charaf, Julian Haase, Adrian Kullisch, Christian von Elm, Nico Volkens and Diana Goehring	RTASS: a RunTime Adaptable and Scalable System for Network-on-Chip-Based Architectures	14:30:00	Florian Schade, Tobias Dörr, Alexander Ahlbrecht, Vincent Janson, Umur Durak and Juergen Becker	Automatic Deployment of Embedded Real-time Software Systems to Hypervisor-managed Platforms	14:30:00	Orégane Desrentes, Benok Dupont De Dinechin and Julien Le Maître	Exact Dot-Product Accumulate Operators for 8-bit Floating-Point Deep Learning	14:30:00	Viktor Teren, Jordi Cortadella and Tiziano Villa	Seto: a framework for the decomposition of Petri nets and transition systems.	
14:30:00		14:45:00	Guillaume Ollier, Morzyo Adefjuum, Simos Gerassimou and Chokri Mraidha	An Ontological Approach for Dependability Analysis of Automated Systems	14:45:00			14:45:00			14:45:00	Raphael Schermann, Rainer Urian and Christian Steger	Integration of the TPM in the AACKA protocol	
15:00:00	Caffe Break													
15:15:00	WIP (Works in Progress Poster Session) WIP1-WIP9			WIP (Works in Progress Oral Session) WIP1-WIP9			Reserve Session			SMART4ALL Dissemination Workshop/Session				
15:30:00														
15:45:00														
16:00:00														
16:15:00	16:00-16:30 Closing Session													
16:30:00														

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POSTERS			
Poster Sessions P1 AAMTM, AHSA		Wednesday 6th Sept 16:00-16:15	
8655	Weiyang Zhang, Mehran Goli, Muhammad Hassan and Rolf Drechsler	Approach across Different Microarchitectures for RISC-V Processors	Poster
9066	Daniel Schnoell, Matthias Wess, Matthias Bittner, Maximilian Göttinger and Axel Jantsch	Fast, Quantization Aware DNN Training for Efficient HW Implementation	Poster
6078	Marcin Aftowicz, Ievgen Kabin, Zoya Dyka and Peter Langendoerfer	Non-profiled semi-supervised horizontal attack against Elliptic Curve Scalar Multiplication using Support Vector Machines	Poster
9234	Marios Papadopoulos and Paris Kitsos	FPGA-based Encryption System for Cloud Security	Poster
3593	Isabella Piacentini, Alessandro Barengi and Gerardo Pelosi	A Computation Interleaving Countermeasure against Profiled Side Channel Attacks	Poster
Poster Session P2 DSD		Thursday 07th Sept 10:00-10:30	
9101	Cornelia Wulf, Julian Haase, Matthias Nickel and Diana Goehringer	Virtualization of Hardware Accelerators in a Network-on-Chip	Poster
7292	Meinhard Kissich and Marcel Baunach	of Functional Flaws in Digital Designs: A Designer's Guide	Poster
7554	Vibhor Jain, Sajid Mohamed, Dip Goswami and Sander Stuijk	Vision-based multi-size object positioning	Poster
8698	Ensieh Aliagha, Veronia Iskandar, Stephan Enseleit and Diana Göhringer	Investigating the Impact of Non-Volatile Memories on Energy-Efficiency of Coarse-Grained Reconfigurable Architectures	Poster
5797	Lilia Zaourar, Alice Chillet and Jean-Marc Philippe	A-DECA : an Automated Design space Exploration approach for Computing Architectures to develop efficient high-	Poster
Poster Session 3 HIAA, FTET, DDVC		Friday 08th Sept 11:00-11:30	
1067	Mario Guanche-Hernández, Pedro P. Carballo and Raquel Leon	MPSoC FPGA Implementation of Algorithms of Machine Learning for Clinical Applications Using High-Level Design Methodology	Poster
3081	Philipp Ebner and Robert Wille	CFD for Microfluidics: A Workflow for Setting Up the Simulation of Microfluidic Devices	Poster
4304	Anna Bernasconi, Valentina Ciriani, Asma Taheri Monfared and Stefano Zanoni	Compact Quantum Circuits for Dimension Reducible Functions	Poster
7048	Kasper Hesse	Implementation and Verification of the Argo Network-on-Chip in Chisel	Poster
7472	Muhammad Sohail Ibrahim, Muhammad Usman, Malik Zohaib Nisar and Jeong-A Lee	DSLOT-NN: Digit-Serial Left-to-Right Neural Network Accelerator	Poster
Poster Session 4 WIP		Friday 08th Sept 15:00-16:00	
WIP1	Keiichiro Masuda, Goragod Pongthanosorn and Genci Capi	Development of an intelligent compact crawler robot for house foundation inspection	Poster
WIP2	Yuhō Takahashi, Goragod Pongthanosorn, Genci Capi	RECYCLING OF CIRCUIT BOARDS BY ROBOT MANIPULATOR USING STEREO VISION AND DEEP LEARNING	Poster
WIP3	Zenepe Satka, Saad Mubeen, John Lundbäck	Towards Modelling 5G Communication in Software Architectures of Vehicular CPS	Poster
WIP4	Clemente Izurieta, Nate Woods, Ann Marie Reinhold	A Brief of Distributed Data Processing	Poster
WIP5	Fauzia Khan, Laima Dalbina, Hina Anwar, Dietmar Pfahl	How Can Simulation-based Safety Testing Help Understand the Real-World Safety of Autonomous Driving Systems?	Poster
WIP6	Yvette D. Hastings, Ann Marie Reinhold	Applying Software Quality in Use Standards to Improve Scientific Software Selection	Poster
WIP7	Sousuke Amasaki, Tomoyuki Yokogawa, Hirohisa Aman	An Evaluation of Word Embeddings on Vulnerability Prediction with Software Metrics	Poster
WIP8	Radovan Stojanovic, Jovan Djurkovic and Budimir Lutovac,	SYNTROFOS: Wearable Vital Signs Monitoring Device	Poster
WIP9	Danko Milic and Radovan Stojanovic	Low-end embedded system for solar tracking	Poster



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#	Authors	Title	Decision	Track
AAMTM				
5231	Owen Le Gonidec, Miguel Chavarrias, Anup Saha, Gonzalo Rosa and Fernando Pescador	Energy Efficient Versatile Video Coding Decoder Using Lightweight Regression Models	Short Presentation	AAMTM
8108	Matthias Wess, Dominik Dallinger, Daniel Schnöll, Matthias Bittner, Maximilian Götzinger and Axel Jantsch	Energy Profiling of DNN Accelerators	Short Presentation	AAMTM
8323	Dominika Przewlocka-Rus and Tomasz Kryjak	Power-of-Two Quantized YOLO Network for Pedestrian Detection with Dynamic Vision Sensor	Long Presentation	AAMTM
7472	Muhammad Sohail Ibrahim, Muhammad Usman, Malik Zohaib Nisar and Jeong-A Lee	DSLOT-NN: Digit-Serial Left-to-Right Neural Network Accelerator	Poster	AAMTM
8655	Weiyang Zhang, Mehran Goli, Muhammad Hassan and Rolf Drechsler	Efficient ML-Based Performance Estimation Approach across Different Microarchitectures for RISC-V Processors	Poster	AAMTM
9066	Daniel Schnoell, Matthias Wess, Matthias Bittner, Maximilian Götzinger and Axel Jantsch	Fast, Quantization Aware DNN Training for Efficient HW Implementation	Poster	AAMTM
AHSA				
3648	Nico Mexis, Tolga Arul, Nikolaos Athanasios Anagnostopoulos, Florian Frank, Simon Böttger, Martin Hartmann, Sascha Hermann, Elif Bilge Kavun and Stefan Katzenbeisser	Spatial Correlation in Weak Physical Unclonable Functions: A Comprehensive Overview	Long Presentation	AHSA
3743	Dina Hesse, Maël Gay, Ilija Polian, Elif Bilge Kavun, Owen Millwood and Witali Bartsch	A Modular Open-Source Cryptographic Co-Processor for Internet of Things	Long Presentation	AHSA
8669	Nikolaos Athanasios Anagnostopoulos, Nico Mexis, Simon Böttger, Martin Hartmann, Ali Mohamed, Sascha Hermann, Stefan Katzenbeisser, Stavros Stavrinides and Tolga Arul	A Method to Construct Efficient Carbon-Nanotube-Based Physical Unclonable Functions and True Random Number Generators	Long Presentation	AHSA
9747	Clément Gaine, Pierre-Alain Moellic, Olivier Potin and Jean-Max Dutertre	Fault Injection on Embedded Neural Networks: Impact of a Single Instruction Skip	Long Presentation	AHSA
6078	Marcin Aftowicz, Ievgen Kabin, Zoya Dyka and Peter Langendoerfer	Non-profiled semi-supervised horizontal attack against Elliptic Curve Scalar Multiplication using Support Vector Machines	Poster	AHSA
9234	Marios Papadopoulos and Paris Kitsos	FPGA-based Encryption System for Cloud Security	Poster	AHSA
3593	Isabella Piacentini , Alessandro Barenghi and Gerardo Pelosi	A Computation Interleaving Countermeasure against Profiled Side Channel Attacks	Poster	AHSA
ASHWPA				
919	Emanuele Torti, Marco Gazzoni, Elisa Marenzi, Raquel Leon, Gustavo Marrero Callico and Giovanni Danese	An Attention-Based Parallel Algorithm for Hyperspectral Skin Cancer Classification on Low-Power GPU	Short Presentation	ASHWPA
4151	Claire Béranger, Alexandre Bordat, Mohamed Amine Khelif, Petr Dobiáš, Ngoc-Son Vu, Julien Le Kerneç, David Guyard and Olivier Romain	Radar-based Human Activity Acquisition, Classification and Recognition towards Elderly Fall Prediction	Long Presentation	ASHWPA
5514	Antonio José Rodríguez Almeida, Himar Fabelo Gómez, Cristina Soguero Ruiz, Rosa María Sánchez Hernández, Ana María Wägner and Gustavo Marrero Callicó	Novel Approach for AI-based Risk Calculator Development using Transfer Learning Targeting an Embedded System Implementation	Long Presentation	ASHWPA
DDVC				
1009	Erling Jellum, Yaman Umuruglu, Milica Orlandic and Martin Schoeberl	fpga-tidbits: Rapid Prototyping of FPGA Accelerators in Chisel	Long Presentation	DDVC
1840	Hans Jakob Damsgaard, Aleksandr Ometov and Jari Nurmi	Generating CGRA Processing Element Hardware with CGRAgen	Long Presentation	DDVC
3533	Kasper Hesse, Tjark Petersen and Jens Sparsø	Asynchronous circuit design in Chisel using phase-decoupled Click Elements	Long Presentation	DDVC
8532	Jure Vreča and Anton Biasizzo	Towards Deploying Highly Quantized Neural Networks on FPGA Using Chisel	Long Presentation	DDVC
7048	Kasper Hesse	Implementation and Verification of the Argo Network-on-Chip in Chisel	Poster	DDVC
DSD main track				
3119	Cheol-Ho Choi and Hyun Woo Oh	Disparity Refinement Processor Architecture utilizing Horizontal and Vertical Characteristics for Stereo Vision Systems	Long Presentation	DSD'2023
538	Fabian Krefß, Alexey Serdyuk, Micha Hiegle, Disnebio Waldmann, Tim Hotfilter, Julian Höfer, Tim Hamann, Jens Barth, Peter Kämpf, Tanja Harbaum and Juergen Becker	ATLAS: An Approximate Time-Series LSTM Accelerator for Low-Power IoT Applications	Long Presentation	DSD'2023
3452	Mounika Vaddeboina, Endri Kaja, Alper Yilmazer, Sebastian Prebeck and Wolfgang Ecker	Parallel Golomb-Rice Decoder with 8-bit Unary decoding for Weight Compression in TinyML Applications	Long Presentation	DSD'2023
2762	Hyun Woo Oh, Cheol-Ho Choi, Jeong Woo Cha, Hyunmin Choi, Joon Hwan Han and Jung-Ho Shin	An SoC FPGA-based Integrated Real-time Image Processor for Uncooled Infrared Focal Plane Array	Long Presentation	DSD'2023
5469	Veronia Iskandar, Mohamed A. Abd El Ghany and Diana Goehringer	Auto-DOK: Compiler-Assisted Automatic Detection of Offload Kernels for FPGA-HBM Architectures	Long Presentation	DSD'2023
1536	Agathe Archet, Nicolas Ventroux, Nicolas Gac and François Orieux	Energy-efficient use of an embedded heterogeneous SoC for the inference of CNNs	Long Presentation	DSD'2023
5832	Marcelo Ruaro, Hadrien Barral, Matteo Bertolino, Rodrigo Cataldo, Roberto Medina, Etienne Borde and Mohamed Karaoui	The Last-Level-Cache Interference in Guest Performance: a Case-Study with Zephyr OS	Long Presentation	DSD'2023

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6480	Yakup Hüner and Ramazan Yeniçeri	ComCoS: Enhanced Cache Partitioning Technique for Integrated Modular Avionics	Long Presentation	DSD'2023
6786	Simon Friedrich, Chia-Ying Lin, Viktor Razilov, Robert Wittig, Emil Matus and Gerhard Fettweis	Access Interval Prediction with Neural Networks for Tightly Coupled Memory Systems	Long Presentation	DSD'2023
5904	Arman Ferdowsi, Matthias Fuegger, Josef Salzman and Ulrich Schmid	A Hybrid Delay Model for Interconnected Multi-Input Gates	Long Presentation	DSD'2023
5162	Mayank Kabra, Shreyas Vs, Prashanth Hc, Kedar Deshpande and Madhav Rao	GCCells: A graph-search approach to design custom cells for computational subsystems	Long Presentation	DSD'2023
9130	Denis Shemonaev, Bertrand Le Gal, Christophe Jego and Anthony Besseau	Implementation of an Assignment Algorithm for Object Tracking on a FPGA MPSoC	Long Presentation	DSD'2023
7239	Najdet Charaf, Julian Haase, Adrian Kulisch, Christian von Elm, Nico Volkens and Diana Goehringer	RTASS: a RunTime Adaptable and Scalable System for Network-on-Chip-Based Architectures	Long Presentation	DSD'2023
6888	Stefano Marti, Enis Mustafa, Giacomo Bisson, Pratyush Anand, Philipp Fabritius, Tilman Esslinger and Abdulkadir Akin	FPGA-based real-time laser beam profiling and stabilization system for quantum simulation applications	Long Presentation	DSD'2023
2553	Muhammad Ali Siddiqi, Jan Andrés Galvan Hernández, Anteneh Gebregiorgis, Rajendra Bishnoi, Christos Strydis, Said Hamdioui and Mottaqiallah Taouil	Memristor-Based Lightweight Encryption	Long Presentation	DSD'2023
2384	Florian Schade, Tobias Dörr, Alexander Ahlbrecht, Vincent Janson, Umut Durak and Juergen Becker	Automatic Deployment of Embedded Real-time Software Systems to Hypervisor-managed Platforms	Long Presentation	DSD'2023
2758	Mehmet Şirin Önen and Arda Yurdakul	Container Scheduling Under ARINC 653 Scheduler Constraints	Long Presentation	DSD'2023
6594	Maciej Ciesielski	Formal Methods in Arithmetic Circuit Verification: a Brief History and Challenges	Long Presentation	DSD'2023
1591	Vincent Dumoulin, Natasha Devroye and Wenjing Rao	Active learning for fast and slow modeling attacks on Arbiter PUFs	Long Presentation	DSD'2023
9101	Cornelia Wulf, Julian Haase, Matthias Nickel and Diana Goehringer	Virtualization of Hardware Accelerators in a Network-on-Chip	Poster	DSD'2023
7292	Meinhard Kissich and Marcel Baunach	Formal Property Verification for Early Discovery of Functional Flaws in Digital Designs: A Designer's Guide	Poster	DSD'2023
7554	Vibhor Jain, Sajid Mohamed, Dip Goswami and Sander Stuijk	Vision-based multi-size object positioning	Poster	DSD'2023
8698	Ensieh Aliagha, Veronia Iskandar, Stephan Enseleit and Diana Göhringer	Investigating the Impact of Non-Volatile Memories on Energy-Efficiency of Coarse-Grained Reconfigurable Architectures	Poster	DSD'2023
5797	Lilia Zaourar, Alice Chillet and Jean-Marc Philippe	A-DECA : an Automated Design space Exploration approach for Computing Architectures to develop efficient high-performance many core processors	Poster	DSD'2023
9639	Javier Soto, Sofia Vera, Yaimé Fernández, Daniel Yunge, Cecilia Hernández and Miguel Figueroa	A sketch-based algorithm for network-flow entropy estimation on programmable switches using P4	Short Presentation	DSD'2023
8491	Orégane Desrentes, Benoit Dupont De Dinechin and Julien Le Maire	Exact Dot-Product Accumulate Operators for 8-bit Floating-Point Deep Learning	Short Presentation	DSD'2023
3224	Pudi Dhilleswararao, Rajeev Ryansh, Goudu Vamsi, Srinivas Boppu and Ahmed Hemani	Implementation of Sobel Edge Detection on DRRA and DIMArch Architectures	Short Presentation	DSD'2023
8480	David Breuss, Maximilian Götzinger, Jenny Vuong, Clemens Reisner and Axel Jantsch	VADAR: A Vision-based Anomaly Detection Algorithm for Railroads	Short Presentation	DSD'2023
7966	Vinay Rayapati, Mahati Basavaraju and Madhav Rao	High Performance and Energy Efficient AMD and BWAD Pooling Schemes Characterised for CNN Accelerators	Short Presentation	DSD'2023
501	Kasper Hesse, Martin Schoeberl, Niels Aage and Erik Träff	On the Feasibility of using FPGA's for Efficient Topology Optimization	Short Presentation	DSD'2023
2376	Peter Hobden, Saket Srivastava and Edmond Nurellari	FPGA based 77GHz RADAR processing with novel linearisation	Short Presentation	DSD'2023
9297	Hugues Almorin, Bertrand Le Gal, Christophe Jego and Vincent Kissel	Model based design of FMCW radar processing systems on FPGA platforms	Short Presentation	DSD'2023
932	Yamilka Toca-Díaz, Nicolás Landeros Muñoz, Rubén Gran-Tejero and Alejandro Valero	On Fault-Tolerant Microarchitectural Techniques for Voltage Underscaling in On-Chip Memories of CNN Accelerators	Short Presentation	DSD'2023
5519	Ahmad Al-Zoubi, Benedikt Schaible, Gianluca Martino and Goerschwin Fey	Latency-optimized Hardware Acceleration of Multilayer Perceptron Inference	Short Presentation	DSD'2023
6215	Aniebiet Micheal Ezekiel, Daniel Onwuchekwa and Roman Obermaisser	Optimization of the Versatile Tensor Accelerator (VTA) Load Module in a Time-Triggered Memory Access	Short Presentation	DSD'2023
3211	Antti Nurmi, Per Lindgren and Tom Szymkowiak	AnTIQ: A Hardware-Accelerated Priority Queue Design with Constant Time Arbitrary-Element Removal	Short Presentation	DSD'2023



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6606	Burak Ocalan and Ozcan Ozturk	Utilizing Prefetch Buffers for Iterative Graph Applications	Short Presentation	DSD'2023
3202	Lukas Miedema and Clemens Greck	Change of plans: optimizing for power, reliability and timeliness for cost-conscious real-time systems	Short Presentation	DSD'2023
2138	Xabier Arauzo, Irune Yarza, Leonidas Kosmidis, Alejandro Calderón and Marcos Rodriguez	Unraveling the Mystery of NVIDIA's UM for SafetyCritical GPU systems	Short Presentation	DSD'2023
3217	Viktor Teren, Jordi Cortadella and Tiziano Villa	Seto: a framework for the decomposition of Petri nets and transition systems	Short Presentation	DSD'2023
3288	François Bonnal, Jean-Max Dutertre, Vincent Dupaquis and Olivier Potin	Software-only Control-Flow Integrity against Fault Injection Attacks	Short Presentation	DSD'2023
3967	Guillaume Ollier, Morayo Adedjouma, Simos Gerasimou and Chokri Mraidha	An Ontological Approach for Dependability Analysis of Automated Systems	Short Presentation	DSD'2023
3525	Daniel Onwuchekwa, Devika Joshi, Krishi Savla, Roman Obermaisser and Tobias Pieper	Fault-tolerant Lightweight High Level Architecture	Short Presentation	DSD'2023
320	Camelia Slimani, Louis Morge-Rollet, Laurent Lemarchand, David Espes, Frédéric Le Roy and Jalil Boukhobza	Characterizing Intrusion Detection Systems On Heterogeneous Embedded Platforms	Short Presentation	DSD'2023
4620	Tomas Rabas, Jiri Bucek and Róbert Lórencz	Single-Trace Attack on NTRU Decryption with Machine Learning and Template Profiling	Short Presentation	DSD'2023
7591	Abdullah Aljuffri, Mudit Saxena, Cezar Rodolfo Wedig Reinbrecht, Said Hamdioui and Mottaqiallah Taouil	A Pre-Silicon Power Leakage Assessment Based on Generative Adversarial Networks	Short Presentation	DSD'2023
DTFT				
516	Ondrej Novak	Deterministic Search Strategy of Compression Codes	Long Presentation	DTFT
3541	Zaheer Tabassam and Andreas Steininger	Towards Resilient Quasi Delay Insensitive Conditional Control Elements	Long Presentation	DTFT
4196	Nunzio Mirabella, Andrea Florida, Riccardo Cantoro, Michelangelo Grosso and Matteo Sonza Reorda	Targeting different defect-oriented fault models in IC testing: an experimental approach	Long Presentation	DTFT
4488	Juliano Pimentel, Alistair A. McEwan and Hong Qing Yu	A Novel Real-Time Framework for Embedded Systems Health Monitoring	Long Presentation	DTFT
9001	Leandro Lanzieri, Peter Kietzmann, Goerschwin Fey, Holger Schlarb and Thomas C. Schmidt	Ageing Analysis of Embedded SRAM on a Large-Scale Testbed Using Machine Learning	Short Presentation	DTFT
EPDSD				
4229	Paolo Bellavista and Giuseppe Di Modica	The IoTwins Methodology and Platform to Implement and Operate Digital Twins-based I4.0 Applications in the Cloud Continuum	INVITED	EPDSD
4636	Aitor Arrieta, Goiuria Sagardui, Aitor Agirre, Wasif Afzal and Shaukat Ali	DevOps for Cyber-Physical Systems: Objectives, Results and Lessons Learned from the Adeptness H2020 Project	INVITED	EPDSD
5481	Réda Nouacer and Mahmoud Hussein	COMP4DRONES Contributions for Enabling Safe and Autonomous Drones	INVITED	EPDSD
6468	Marko Andjelkovic, Junchao Chen, Rizwan Tariq Syed, Fabian Vargas, Markus Ulbricht, Milos Krstic, Stefan Ilic, Milos Marjanovic, Sandra Veljkovic, Nikola Mitrovic, Danijel Dankovic, Goran Ristic, Russell Duane, Nikola Vasovic, Aleksandar Jaksic, Alberto Palma, Antonio Lallena and Miguel Carvajal	Towards a Smart Multi-Sensor Ionizing Radiation Monitoring System	INVITED	EPDSD
6916	Domenico Ragusa, Antonio J. Rodriguez Almeida, Stephan Nolting, Emanuele Torti, Himar Fabelo, Ingo Hoyer, Alexander Utz and Gustavo M. Callico	Acceleration of a CNN-based Heart Sound Segmenter: Implementation on Different Platforms Targeting a Wearable Device	INVITED	EPDSD
7268	Ramon Canal, Cristiano Chenet, Angelos Arelakis, José-Maria Arnau, Josep Ll. Berral, Aaron Call, Stefano Di Carlo, Juan José Costa, Dimitris Gizopoulos, Vasileios Karakostas, Francesco Lubrano, Konstantinos Nikas, Yiannis Nikolakopoulos, Beatriz Otero, George Papadimitriou, Ioannis Papaefstathiou, Dionisios Pnevmatikatos, Daniel Raho, Alvise Rigo, Eva Rodríguez, Alessandro Savino, Alberto Scionti, Nikolaos Tampouratzis and Alex Torregrosa	Vitamin-V: Virtual Environment and Tool-boxing for Trustworthy Development of RISC-V based Cloud Services	INVITED	EPDSD
8656	Irune Agirre, Alejandro J. Calderon, Irune Yarza, Imanol Mugarza, David Garcia, Lucas Borracci, Patrick Uven and Alvaro Jover	UP2DATE software updating framework compliance with safety and security regulations and standards	INVITED	EPDSD
8939	Yubal Barrios, Francisco Sanjuán, Geoffroy Bordot, Helia Sharif, Jerome Bernier and Sebastian Lopez	Demonstrator development of a next-generation video instrument for Earth Observation	INVITED	EPDSD
9055	Carlo Centofanti, Claudia Rinaldi, Andrea Marotta, Christos Verikoukis, Nikos Passas, Dionysis Xenakis, Stefano Tennina and Dajana Cassioli	OPTIMIST: OPTImised video content delivery chains over joint multi-access edge computing and 5G radio network infrastructures	INVITED	EPDSD
FTET				
3346	Richard Růžička, Václav Šimek and Jan Nevoral	Polymorphic RTL Computational Elements	Long Presentation	FTET



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5108	Yuji Wada and Shigeru Yamashita	Minimizing the Impact of Unbalanced Splitting Errors on DMFBs Without Any Overhead	Long Presentation	FTET
5711	Gerold Fink, Florina Costamoling, Philipp Ebner and Robert Wille	Efficient Simulation of Droplet Merging in Channel-based Microfluidic Devices	Long Presentation	FTET
6277	Mojtaba Mahdavi	A Novel Memristive-Based Data Reordering Scheme	Long Presentation	FTET
3081	Philipp Ebner and Robert Wille	CFD for Microfluidics: A Workflow for Setting Up the Simulation of Microfluidic Devices	Poster	FTET
4304	Anna Bernasconi, Valentina Ciriani, Asma Taheri Monfared and Stefano Zanoni	Compact Quantum Circuits for Dimension Reducible Functions	Poster	FTET
HIAAA				
1644	Beatriz Martínez-Vega, Raquel Leon, Himar Fabelo, Samuel Ortega, Eduardo Quevedo, Angeles Canovas-Molina, Francisco Rodríguez-Esparragon, Bernardino Clavo and Gustavo M. Callico	Analysis of the behavior of Ozone Therapy in Chemotherapy-induced Neuropathy using Hyperspectral Imaging Technology	Long Presentation	HIAAA
2160	Alejandro Martínez de Ternerero, Jaime Sancho, Alberto Martín-Pérez, Manuel Villa, Guillermo Vázquez, Pedro L. Cebrián, Gonzalo Rosa Olmeda, Pallab Sutradhar, Miguel Chavarrias, Eduardo Juarez and Cesar Sanz	Real-time hyperspectral and depth fusion calibration method for improved reflectance measures on arbitrary complex surfaces	Long Presentation	HIAAA
6947	Gonzalo Rosa Olmeda, Cristina Sánchez Carabias, Victoria Cunha Alves, Manuel Villa Romero, Alberto Martín-Pérez, Miguel Chavarrias, Alfonso Lagares, Eduardo Juarez and César Sanz	Transmittance hyperspectral capture system and methodology assessment for blood-liquid serum samples analysis	Long Presentation	HIAAA
7722	Raquel Leon, Himar Fabelo, Samuel Ortega, Juan F. Piñeiro, Adam Szolna, Jesus Morera, Bernardino Clavo and Gustavo Marrero Callico	Evaluation of Hyperspectral Imaging Fusion for in-vivo Brain Tumor Identification and Delineation	Long Presentation	HIAAA
9318	Daniel Fernandez, Carlos González and Daniel Mozos	Real-time Independent Components Analysis for Dimensional Reduction of Hyperspectral Images Using Reconfigurable Hardware	Long Presentation	HIAAA
1067	Mario Guanche-Hernández, Pedro P. Carballo and Raquel Leon	MPSoC FPGA Implementation of Algorithms of Machine Learning for Clinical Applications Using High-Level Design Methodology	Poster	HIAAA
1261	Roger Perelló Gumbau, Christian Díaz De Arcos and Fahima Chowdhury	Exploration of a Methodology for Hyperspectral Band Selection using XGBoost and PCA	Poster	HIAAA
HDTIEC				
1039	Gabriele Serra, Pietro Fara and Daniel Casini	Enhancing the Availability of Web Services in the IoT-to-Edge-to-Cloud Compute Continuum: A WordPress Case Study	Long Presentation	HSTIEC
5298	Jose Antonio De La Torre Las Heras, Fernando Rincón, Marco Zennaro, Julian Caba, Jesús Barba and Juan Carlos López	SimIoT: A simulator for verification and profiling of complex IoT deployments	Long Presentation	HSTIEC
6475	Pietro Fara, Gabriele Serra and Federico Aromolo	Bounded transmission latency in real-time edge computing: a scheduling analysis	Long Presentation	HSTIEC
1766	Angelo Corsaro, Luca Cominardi, Olivier Hecart, Gabriele Baldoni, Julien Enoch, Pierre Avital, Julien Loudet, Carlos Guimares, Michael Ilyin and Dmitrii Bannov	Zenoh: Unifying Communication, Storage and Computation from the Cloud to the Microcontroller	INVITED	HSTIEC
8062	Gianmarco Ottavi, Florian Zaruba, Luca Benini and Davide Rossi	Reducing Load-Use dependency-induced performance penalty in the Open-Source RISC-V CVA6 CPU	INVITED	HSTIEC
SPCPS				
1170	Dominik Marchsreiter and Johanna Sepúlveda	A PQC and QKD Hybridization for Quantum-Secure Communications	Long Presentation	SPCPS
1623	Fikret Basic, Christian Seifert, Christian Steger and Robert Kofler	Secure Data Acquisition for Battery Management Systems	Long Presentation	SPCPS
5286	Raphael Schermann, Rainer Urian and Christian Steger	Integration of the TPM in the AACKA protocol	Short Presentation	SPCPS
6848	Matthias Stammler, Matthias Hamann, Tanja Harbaum and Juergen Becker	Mitigating Masking in Automotive Communication Systems: Modeling and Hardware Generation	Long Presentation	SPCPS
7611	Mehrdad Poorhosseini and Kim Gruettner	A RISC-V based platform supporting mixed timing-critical and high performance workloads	Long Presentation	DCPS
WiP				
WiP1	Keiichiro Masuda, Goragod Pongthanisor and Genci Capi	Development of an intelligent compact crawler robot for house foundation inspection	Poster	WiP
WiP2	Yuhō Takahashi, Goragod Pongthanisor, Genci Capi	RECYCLING OF CIRCUIT BOARDS BY ROBOT MANIPULATOR USING STEREO VISION AND DEEP LEARNING	Poster	WiP
WiP3	Zenepe Satka, Saad Mubeen, John Lundbäck	Towards Modelling 5G Communication in Software Architectures of Vehicular CPS	Poster	WiP
WiP4	Clemente Izurieta, Nate Woods, Ann Marie Reinhold	A Brief of Distributed Data Processing	Poster	WiP
WiP5	Fauzia Khan, Laima Dalbina, Hina Anwar, Dietmar Pfahl	How Can Simulation-based Safety Testing Help Understand the Real-World Safety of Autonomous Driving Systems?	Poster	WiP
WiP6	Yvette D. Hastings, Ann Marie Reinhold	Applying Software Quality in Use Standards to Improve Scientific Software Selection	Poster	WiP
WiP7	Sousuke Amasaki, Tomoyuki Yokogawa, Hirohisa Aman	An Evaluation of Word Embeddings on Vulnerability Prediction with Software Metrics	Poster	WiP
WiP8	Radovan Stojanovic, Jovan Djurkovic and Budimir Lutovac,	SYNTROFOS: Wearable Vital Signs Monitoring Device	Poster	WiP
WiP9	Danko Milic and Radovan Stojanovic	Low-end embedded system for solar tracking	Poster	WiP



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#	Authors	Title	LONG/SHORT Presentation
320	Camelia Slimani, Louis Morge-Rollet, Laurent Lemarchand, David Espes, Frédéric Le Roy and Jaill Boukhobza	Characterizing Intrusion Detection Systems On Heterogeneous Embedded Platforms	SHORT
501	Kasper Hesse, Martin Schoeberl, Niels Aage and Erik Tråff	On the Feasibility of using FPGA's for Efficient Topology Optimization	SHORT
516	Ondrej Novak	Deterministic Search Strategy of Compression Codes	LONG
538	Fabian Kreß, Alexey Serdyuk, Micha Hiegle, Disnebio Waldmann, Tim Hoffilter, Julian Höfer, Tim Hamann, Jens Barth, Peter Kämpf, Tanja Harbaum and Juergen Becker	ATLAS: An Approximate Time-Series LSTM Accelerator for Low-Power IoT Applications	LONG
919	Emanuele Torti, Marco Gazzoni, Elisa Marenzi, Raquel Leon, Gustavo Marrero Callico and Giovanni Danese	An Attention-Based Parallel Algorithm for Hyperspectral Skin Cancer Classification on Low-Power GPUs	SHORT
932	Yamilka Toca-Díaz, Nicolás Landeros Muñoz, Rubén Gran-Tejero and Aleiandro Valero	On Fault-Tolerant Microarchitectural Techniques for Voltage Underscaling in On-Chip Memories of CNN Accelerators	SHORT
1009	Erling Jellum, Yaman Umuruglu, Milica Orlandic and Martin Schoeberl	fpga-tdbits: Rapid Prototyping of FPGA Accelerators in Chisel	LONG
1039	Gabriele Serra, Pietro Fara and Daniel Casini	Enhancing the Availability of Web Services in the IoT-to-Edge-to-Cloud Compute Continuum: A WordPress Case Study	LONG
1170	Dominik Marchsreiter and Johanna Sepúlveda	A PQC and QKD Hybridization for Quantum-Secure Communications	LONG
1536	Agathe Archet, Nicolas Ventroux, Nicolas Gac and François Orieux	Energy-efficient use of an embedded heterogeneous SoC for the inference of CNNs	LONG
1591	Vincent Dumoulin, Natasha Devroye and Wenjing Rao	Active learning for fast and slow modeling attacks on Arbiter PUFs	LONG
1623	Fikret Basic, Christian Seifert, Christian Steger and Robert Kofler	Secure Data Acquisition for Battery Management Systems	LONG
1644	Beatriz Martínez-Vega, Raquel Leon, Himar Fabelo, Samuel Ortega, Eduardo Quevedo, Angeles Canovas-Molina, Francisco Rodriguez-Esparragon, Bernardino Clavo and Gustavo M. Callico	Analysis of the behavior of Ozone Therapy in Chemotherapy-induced Neuropathy using Hyperspectral Imaging Technology	LONG
1766	Angelo Corsaro, Luca Cominardi, Olivier Hecart, Gabriele Baldoni, Julien Enoch, Pierre Avital, Julien Loudet, Carlos Guimares, Michael Ilyin and Dmitrii Bannov	Zenoh: Unifying Communication, Storage and Computation from the Cloud to the Microcontroller	INVITED
1840	Hans Jakob Damsgaard, Aleksandr Ometov and Jari Nurmi	Generating CGRA Processing Element Hardware with CGRAgen	LONG
2138	Xabier Arauzo, Irune Yarza, Leonidas Kosmidis, Alejandro Calderón and Marcos Rodriguez	Unraveling the Mystery of NVIDIA's UM for SafetyCritical GPU systems	SHORT
2160	Alejandro Martinez de Ternerero, Jaime Sancho, Alberto Martín-Pérez, Manuel Villa, Guillermo Vázquez, Pedro L. Cebrián, Gonzalo Rosa Olmeda, Pallab Sutradhar, Miguel Chavarrías, Eduardo Juarez and Cesar Sanz	Real-time hyperspectral and depth fusion calibration method for improved reflectance measures on arbitrary complex surfaces	LONG
2376	Peter Hobden, Saket Srivastava and Edmond Nurellari	FPGA based 77GHz RADAR processing with novel linearisation	SHORT
2384	Florian Schade, Tobias Dörr, Alexander Ahlbrecht, Vincent Janson, Umut Durak and Juergen Becker	Automatic Deployment of Embedded Real-time Software Systems to Hypervisor-managed Platforms	LONG
2553	Muhammad Ali Siddiqi, Jan Andrés Galvan Hernández, Anteneh Gebregiorgis, Rajendra Bishnoi, Christos Strydis, Said Hamdioui and Mottaqiallah Taouil	Memristor-Based Lightweight Encryption	LONG
2758	Mehmet Şirin Önen and Xxxx Xxxx	Container Scheduling Under ARINC 653 Scheduler Constraints	LONG
2762	Hyun Woo Oh, Cheol-Ho Choi, Jeong Woo Cha, Hyunmin Choi, Joon Hwan Han and Jung-Ho Shin	An SoC FPGA-based Integrated Real-time Image Processor for Uncooled Infrared Focal Plane Array	LONG
3119	Cheol-Ho Choi and Hyun Woo Oh	Disparity Refinement Processor Architecture utilizing Horizontal and Vertical Characteristics for Stereo Vision Systems	LONG
3202	Lukas Miedema and Clemens Grellck	Change of plans: optimizing for power, reliability and timeliness for cost-conscious real-time systems	SHORT
3211	Antti Nurmi, Per Lindgren and Tom Szymkowiak	AnTiQ: A Hardware-Accelerated Priority Queue Design with Constant Time Arbitrary-Element Removal	SHORT
3217	Viktor Teren, Jordi Cortadella and Tiziano Villa	Seto: a framework for the decomposition of Petri nets and transition systems	SHORT
3224	Pudi Dhilleswararao, Rajeev Ryansh, Goudu Vamsi, Srinivas Boppu and Ahmed Hemani	Implementation of Sobel Edge Detection on DRRA and DIMArch Architectures	SHORT
3288	François Bonnal, Jean-Max Dutertre, Vincent Dupaquis and Olivier Potin	Software-only Control-Flow Integrity against Fault Injection Attacks	SHORT
3346	Richard Růžička, Václav Šimek and Jan Nevorál	Polymorphic RTL Computational Elements	LONG
3452	Mounika Vaddeboina, Endri Kaja, Alper Yilmazer, Sebastian Prebeck and Wolfgang Ecker	Parallel Golomb-Rice Decoder with 8-bit Unary decoding for Weight Compression in TinyML Applications	LONG
3525	Daniel Onwuchekwa, Devika Joshi, Krishi Savla, Roman Obermaisser and Tobias Pieper	Fault-tolerant Lightweight High Level Architecture	SHORT
3533	Kasper Hesse, Tjark Petersen and Jens Sparsø	Asynchronous circuit design in Chisel using phase-decoupled Click Elements	LONG
3541	Zaheer Tabassam and Andreas Steiner	Towards Resilient Quasi Delay Insensitive Conditional Control Elements	LONG
3648	Nico Mexis, Tolga Arul, Nikolaos Athanasios Anagnostopoulos, Florian Frank, Simon Böttger, Martin Hartmann, Sascha Hermann, Elif Bilge Kavun and Stefan Katzenbeisser	Spatial Correlation in Weak Physical Unclonable Functions: A Comprehensive Overview	LONG
3743	Dina Hesse, Maël Gay, Ilija Poljan, Elif Bilge Kavun, Owen Millwood and Witali Bartsch	A Modular Open-Source Cryptographic Co-Processor for Internet of Things	LONG
3967	Guillaume Ollier, Morayo Adedjouma, Simos Gerasimou and Chokri Mraidha	An Ontological Approach for Dependability Analysis of Automated Systems	SHORT
4151	Claire Béranger, Alexandre Bordat, Mohamed Amine Khelif, Petr Dobiáš, Ngoc-Son Vu, Julien Le Kernec, David Guyard and Olivier Romain	Radar-based Human Activity Acquisition, Classification and Recognition towards Elderly Fall Prediction	LONG
4196	Nunzio Mirabella, Andrea Florida, Riccardo Cantoro, Michelangelo Grosso and Matteo Sonza Reorda	Targeting different defect-oriented fault models in IC testing: an experimental approach	LONG
4229	Paolo Bellavista and Giuseppe Di Modica	The IoTwins Methodology and Platform to Implement and Operate Digital Twins-based I4.0 Applications in the Cloud Continuum	INVITED
4488	Juliano Pimentel, Alistair A. McEwan and Hong Qing Yu	A Novel Real-Time Framework for Embedded Systems Health Monitoring	LONG
4620	Tomas Rabas, Jiri Bucek and Róbert Lórencz	Single-Trace Attack on NTRU Decryption with Machine Learning and Template Profiling	SHORT
4636	Aitor Arrieta, Goiuria Sagardui, Aitor Agirre, Wasif Afzal and Shaukat Ali	DevOps for Cyber-Physical Systems: Objectives, Results and Lessons Learned from the Adeptness H2020 Project	INVITED
5108	Yuji Wada and Shigeru Yamashita	Minimizing the Impact of Unbalanced Splitting Errors on DMFBs Without Any Overhead	LONG
5162	Mayank Kabra, Shreyas Vs, Prashanth Hc, Kedar Deshpande and Madhav Rao	GCells: A graph-search approach to design custom cells for computational subsystems	LONG
5231	Owen Le Gonidec, Miguel Chavarrías, Anup Saha, Gonzalo Rosa and Fernando Pescador	Energy Efficient Versatile Video Coding Decoder Using Lightweight Regression Models	SHORT
5286	Raphael Schermann, Rainer Urian and Christian Steger	Integration of the TPM in the AACKA protocol	SHORT

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5298	Jose Antonio De La Torre Las Heras, Fernando Rincón, Marco Zennaro, Julian Caba, Jesús Barba and Juan Carlos López	SimloT: A simulator for verification and profiling of complex IoT deployments	LONG
5469	Veronia Iskandar, Mohamed A. Abd El Ghany and Diana Goehringer	Auto-DOK: Compiler-Assisted Automatic Detection of Offload Kernels for FPGA-HBM Architectures	LONG
5481	Réda Nouacer and Mahmoud Hussein	COMP4DRONES Contributions for Enabling Safe and Autonomous Drones	INVITED
5514	Antonio José Rodríguez Almeida, Himar Fabelo Gómez, Cristina Soguero Ruiz, Rosa María Sánchez Hernández, Ana María Wägner and Gustavo Marrero Callicó	Novel Approach for AI-based Risk Calculator Development using Transfer Learning Targeting an Embedded System Implementation	LONG
5519	Ahmad Al-Zoubi, Benedikt Schaible, Gianluca Martino and Goerschwin Fey	Latency-optimized Hardware Acceleration of Multilayer Perceptron Inference	SHORT
5711	Gerold Fink, Florina Costamoling, Philipp Ebner and Robert Wille	Efficient Simulation of Droplet Merging in Channel-based Microfluidic Devices	LONG
5832	Marcelo Ruaro, Hadrien Barral, Matteo Bertolino, Rodrigo Cataldo, Roberto Medina, Etienne Borde and Mohamed Karaoui	The Last-Level-Cache Interference in Guest Performance: a Case-Study with Zephyr OS	LONG
5904	Arman Ferdowsi, Matthias Fuegger, Josef Salzmann and Ulrich Schmid	A Hybrid Delay Model for Interconnected Multi-Input Gates	LONG
6215	Aniebiet Micheal Ezekiel, Daniel Onwuchekwa and Roman Obermaisser	Optimization of the Versatile Tensor Accelerator (VTA) Load Module in a Time-Triggered Memory Access	SHORT
6277	Mojtaba Mahdavi	A Novel Memristive-Based Data Reordering Scheme	LONG
6468	Marko Andjelkovic, Junchao Chen, Rizwan Tariq Syed, Fabian Vargas, Markus Ulbricht, Milos Krstic, Stefan Ilic, Milos Marjanovic, Sandra Veljkovic, Nikola Mitrovic, Danijel Dankovic, Goran Ristic, Russell Duane, Nikola Vasovic, Aleksandar Jaksic, Alberto Palma, Antonio Lallena and Miquel Carvajal	Towards a Smart Multi-Sensor Ionizing Radiation Monitoring System	INVITED
6475	Pietro Fara, Gabriele Serra and Federico Aromolo	Bounded transmission latency in real-time edge computing: a scheduling analysis	LONG
6480	Yakup Hüner and Ramazan Yeniçeri	ComCoS: Enhanced Cache Partitioning Technique for Integrated Modular Avionics	LONG
6594	Maciej Ciesielski	Formal Methods in Arithmetic Circuit Verification: a Brief History and Challenges	LONG
6606	Burak Ocalan and Ozcan Ozturk	Utilizing Prefetch Buffers for Iterative Graph Applications	SHORT
6786	Simon Friedrich, Chia-Ying Lin, Viktor Razilov, Robert Wittig, Emil Matus and Gerhard Fettweis	Access Interval Prediction with Neural Networks for Tightly Coupled Memory Systems	LONG
6848	Matthias Stammeler, Matthias Hamann, Tanja Harbaum and Juergen Becker	Mitigating Masking in Automotive Communication Systems: Modeling and Hardware Generation	LONG
6888	Stefano Marti, Enis Mustafa, Giacomo Bisson, Pratyush Anand, Philipp Fabritius, Tilman Esslinger and Abdulkadir Akin	FPGA-based real-time laser beam profiling and stabilization system for quantum simulation applications	LONG
6916	Domenico Ragusa, Antonio J. Rodríguez Almeida, Stephan Nolting, Emanuele Torti, Himar Fabelo, Ingo Hoyer, Alexander Utz and Gustavo M. Callico	Acceleration of a CNN-based Heart Sound Segmenter: Implementation on Different Platforms Targeting a Wearable Device	INVITED
6947	Gonzalo Rosa Olmeda, Cristina Sánchez Carabias, Victoria Cunha Alves, Manuel Villa Romero, Alberto Martín-Pérez, Miguel Chavarrias, Alfonso Laçares, Eduardo Juárez and César Sanz	Transmittance hyperspectral capture system and methodology assessment for blood-liquid serum samples analysis	LONG
7239	Najdet Charaf, Julian Haase, Adrian Kulisch, Christian von Elm, Nico Volkens and Diana Goehringer	RTASS: a RunTime Adaptable and Scalable System for Network-on-Chip-Based Architectures	SHORT
7268	Ramon Canal, Cristiano Chenet, Angelos Arelakis, José-Maria Arnau, Josep Ll. Berral, Aaron Call, Stefano Di Carlo, Juan José Costa, Dimitris Gizopoulos, Vasileios Karakostas, Francesco Lubrano, Konstantinos Nikas, Yiannis Nikolakopoulos, Beatriz Otero, George Papadimitriou, Ioannis Papaefstathiou, Dionisios Pnevmatikatos, Daniel Raho, Alvise Rigo, Eva Rodríguez, Alessandro Savino, Alberto Scionti, Nikolaos Tampouratzis and Alex Torregrosa	Vitamin-V: Virtual Environment and Tool-boxing for Trustworthy Development of RISC-V based Cloud Services	INVITED
7591	Abdullah Aljuffri, Mudit Saxena, Cezar Rodolfo Wedig Reinbrecht, Said Hamdioui and Mottagjallah Taouil	A Pre-Silicon Power Leakage Assessment Based on Generative Adversarial Networks	SHORT
7611	Mehrdad Poorhosseini and Kim Gruettner	A RISC-V based platform supporting mixed timing-critical and high performance workloads	LONG
7722	Raquel Leon, Himar Fabelo, Samuel Ortega, Juan F. Piñeiro, Adam Szolna, Jesus Morera, Bernardino Clavo and Gustavo Marrero Callico	Evaluation of Hyperspectral Imaging Fusion for in-vivo Brain Tumor Identification and Delineation	LONG
7966	Vinay Rayapati, Mahati Basavaraju and Madhav Rao	High Performance and Energy Efficient AMD and BWAD Pooling Schemes Characterised for CNN Accelerators	SHORT
8062	Gianmarco Ottavi, Florian Zaruba, Luca Benini and Davide Rossi	Reducing Load-Use dependency-induced performance penalty in the Open-Source RISC-V CVA6 CPU	INVITED
8108	Matthias Wess, Dominik Dallinger, Daniel Schnöll, Matthias Bittner, Maximilian Götzinger and Axel Jantsch	Energy Profiling of DNN Accelerators	SHORT
8323	Dominika Przewlocka-Rus and Tomasz Kryjak	Power-of-Two Quantized YOLO Network for Pedestrian Detection with Dynamic Vision Sensor	LONG
8480	David Breuss, Maximilian Götzinger, Jenny Vuong, Clemens Reisner and Axel Jantsch	VADAR: A Vision-based Anomaly Detection Algorithm for Railroads	SHORT
8491	Orégane Desrentes, Benoit Dupont De Dinechin and Julien Le Maire	Exact Dot-Product Accumulate Operators for 8-bit Floating-Point Deep Learning	SHORT
8532	Jure Vreča and Anton Biasizzo	Towards Deploying Highly Quantized Neural Networks on FPGA Using Chisel	LONG
8656	Irene Agirre, Alejandro J. Calderon, Irune Yarza, Imanol Mugarza, David Garcia, Lucas Borracci, Patrick Uven and Alvaro Jover	UP2DATE software updating framework compliance with safety and security regulations and standards	INVITED
8669	Nikolaos Athanasios Anagnostopoulos, Nico Mexis, Simon Böttger, Martin Hartmann, Ali Mohamed, Sascha Hermann, Stefan Katzenbeisser, Stavros Stavriniades and Tolga Arul	A Method to Construct Efficient Carbon-Nanotube-Based Physical Unclonable Functions and True Random Number Generators	LONG
8939	Yubal Barrios, Francisco Sanjuán, Geoffroy Bordot, Helia Sharif, Jerome Bernier and Sebastian Lopez	Demonstrator development of a next-generation video instrument for Earth Observation	INVITED
9001	Leandro Lanzieri, Peter Kietzmann, Goerschwin Fey, Holger Schlarb and Thomas C. Schmidt	Ageing Analysis of Embedded SRAM on a Large-Scale Testbed Using Machine Learning	SHORT
9055	Carlo Centofanti, Claudia Rinaldi, Andrea Marotta, Christos Verikoukis, Nikos Passas, Dionysis Xenakis, Stefano Tennina and Dajana Cassioli	OPTIMIST: OPTIMised video content delivery chains over joint multi-access edge computing and 5G radio network infrastructures	INVITED
9130	Denis Shemonaev, Bertrand Le Gal, Christophe Jégo and Anthony Besseau	Implementation of an Assignment Algorithm for Object Tracking on a FPGA MPSoC	LONG
9297	Hugues Almorin, Bertrand Le Gal, Christophe Jégo and Vincent Kissel	Model based design of FMCW radar processing systems on FPGA platforms	SHORT
9318	Daniel Fernandez, Carlos González and Daniel Mozos	Real-time Independent Components Analysis for Dimensional Reduction of Hyperspectral Images Using Reconfigurable Hardware	LONG
9639	Javier Soto, Sofia Vera, Yaimé Fernández, Daniel Yunge, Cecilia Hernández and Miquel Figuerola	A sketch-based algorithm for network-flow entropy estimation on programmable switches using P4	SHORT
9747	Clément Gaine, Pierre-Alain Moellie, Olivier Potin and Jean-Max Dutertre	Fault Injection on Embedded Neural Networks: Impact of a Single Instruction Skip	LONG



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Best Paper Awards Candidats		
Authors	Title	Track
Mounika Vaddeboina, Endri Kaja, Alper Yilmazer, Sebastian Prebeck and Wolfgang Ecker	Parallel Golomb-Rice Decoder with 8-bit Unary decoding for Weight Compression in TinyML Applications	DSD
Juliano Pimentel, Alistair A. McEwan and Hong Qing Yu	A Novel Real-Time Framework for Embedded Systems Health Monitoring	DTFT
Arman Ferdowsi, Matthias Fuegger, Josef Salzmann and Ulrich Schmid	A Hybrid Delay Model for Interconnected Multi-Input Gates	DSD
Pietro Fara, Gabriele Serra and Federico Aromolo	Bounded transmission latency in real-time edge computing: a scheduling analysis	HSTIEC
Raquel Leon, Himar Fabelo, Samuel Ortega, Juan F. Piñeiro, Adam Szolna, Jesus Morera, Bernardino Clavo and Gustavo Marrero Callico	Evaluation of Hyperspectral Imaging Fusion for in-vivo Brain Tumor Identification and Delineation	HIAAA
Dominik Marchsreiter and Johanna Sepúlveda	A PQC and QKD Hybridization for Quantum-Secure Communications	SPCPS
Erling Jellum, Yaman Umuruglu, Milica Orlandic and Martin Schoeberl	fpga-tidbits: Rapid Prototyping of FPGA Accelerators in Chisel	DDVC