EDHPC 2023 - European Data Handling & Data Processing Conference

Wednesday, 4 October 2023

DFTS: Special Session #3 - Towards AI-based cross-layer resilience: from reliability estimation at design phase to in-field error detection and on-chip sensor data processing - Salle Louis Armstrong (14:00 - 15:00)

-Conveners: Mihalis Psarakis

time	[id] title	presenter
14:00	[236] Challenges in Machine Learning Techniques to Estimate Reliability from Transistors to Circuits	KLEMME, Florian
14:20	[237] On-Chip Sensors Data Collection and Analysis for SoC Health Management	SHIBIN, Konstantin
14:40	[238] A Machine Learning-driven EDAC Method for Space-Application Memory	CHEN, Junchao

DFTS: Special Session #4 - Resilience of Brain-Inspired Applications: Test and Reliability for Modern ML and AI Hardware Implementations - Salle Louis Armstrong (15:00 - 16:00)

-Conveners: Elena-Ioana Vatajelu; Ernesto Sanchez

time	[id] title	presenter
15:00	[252] Testing and Reliability of Spiking Neural Networks: A Review of the State-of-the-Art	STRATIGOPOULOS, Haralampos
15:20	[253] On the resilience of representative and novel data formats in CNNs	SANCHEZ SANCHEZ, Edgar
15:40	[254] Fault tolerance of memristor-based neural networks: a comparative study between formal and spiking neural networks	VATAJELU, Elena-Ioana

Thursday, 5 October 2023

DFTS: Keynote 3: State of the Art of Functional Safety in 2023 - **Salle Louis Armstrong (09:00 - 10:20)**

-**Conveners: Mauro Pipponzi; Luca Cassano**

DFTS: Session 4: Radiation, Soft Errors and Security - **Salle Louis Armstrong (10:50 - 12:30)**

-**Conveners: Paolo Maistri**

time	[id] title	presenter
10:50	[239] Neutron Radiation Tests of the NEORV32 RISC-V SoC on Flash-Based FPGAs., Kevin Böhmer, Bruno Forlin, Carlo Cazzaniga, Paolo Rech, Gianluca Furano, Nikolaos Alachiotis and Marco Ottavi	FORLIN, Bruno
11:10	[240] Accurate Soft Error Rate Evaluation Using Event-Driven Dynamic Timing Analysis., Georgios-Ioannis Paliaroutis, Pelopidas Tsoumanis, Dimitrios Garyfallou, Anastasis Vagenas, Nestor Evmorfopoulos and George Stamoulis	GARYFALLOU, Dimitrios
11:30	[241] Towards a Comprehensive SET Analysis Flow for VLSI Circuits using Static Timing Analysis., Christos Georgakidis, Dimitris Valiantzas, Stavros Simoglou, Iordanis Lilitsis, Nikolaos Chatzivangelis, Marko Andjelkovic, Christos Sotiriou and Milos Krstic	GEORGAKIDIS, Christos
11:50	[242] On the Prediction of Hardware Security Properties of HLS Designs Using Graph Neural Networks., Amalia-Artemis Koufopoulou, Athanasios Papadimitriou, Aggelos Pikrakis, Mihalis Psarakis and David Hely	PAPADIMITRIOU, Athanasios
12:10	[243] QuardTropy: Detecting and Quantifying Unauthorized Information Leakage in Hardware Designs using g-entropy., Hasan Al-Shaikh, Mohammad Bin Monjil, Kimia Zamiri Azar, Farimah Farahmandi, Mark Tehranipoor and Fahim Rahman	AL-SHAIKH, Hasan

DFTS: Session 5: Applications and Security - **Salle Louis Armstrong (14:00 - 15:40)**

-**Conveners: Ernesto Sanchez**

time	[id] title	presenter
14:00	[244] SASL-JTAG: A Light-Weight Dependable JTAG., Senling Wang, Shaoqi Wei, Jun Ma, Hiroshi Kai, Yoshinobu Higami, Hiroshi Takahashi, Akihiro Shimizu, Xiaoqing Wen and Tianming Ni	WANG, Senling
14:20	[245] A Low-Cost Hardware Accelerator for CCSDS 123 Lossless Hyperspectral Image Compression., Wesley Grignani, Douglas Santos, Luigi Dilillo, Felipe Viel and Douglas Melo	DI LILLO, Luigi
14:40	[246] RC-IJTAG: A Methodology for Designing Remotely-Controlled IEEE 1687 Scan Networks., Payam Habiby, Sebastian Huhn and Rolf Drechsler	HABIBY, Payam
15:00	[247] Iterative Mitigation of Insecure Resource Sharing Produced by High-level Synthesis., Zahin Ibnat, Hadi Mardani Kamali and Farimah Farahmandi	IBNAT, Zahin
15:20	[248] Exploration of System-on-Chip Secure-Boot Vulnerability to Fault-Injection by Side-Channel Analysis., Clément Fanjas, Aboulkassimi Driss, Jessy Clédière and Simon Pontié	FANJAS, Clément

DFTS: Special Session #5 - Testing, Reliability, and Hardware Security of Computing-in Memories - **Salle Louis Armstrong (16:10 - 17:10)**

-**Conveners: Jin-Fu Li**

time	[id] title	presenter
16:10	[249] Testing of Computing-In Memories: Faults, Test Algorithms, and Design-for-Testability	LI, Jin-Fu
16:30	[250] Reliability of Computing-In-Memories: Threats, Detection Methods, and Mitigation Approaches	CHEN, Yu-Guang
16:50	[251] Hardware Trojans of Computing-In-Memories: Issues and Methods	HUANG, Shih-Hsu

DFTS: Closing Session - Salle Louis Armstrong (17:10 - 17:30)

  -Conveners: Luca Cassano; Gianluca Furano

16:10	[249] Testing of Computing-In Memories: Faults, Test Algorithms, and Design-for-Testability	LI, Jin-Fu
16:30	[250] Reliability of Computing-In-Memories: Threats, Detection Methods, and Mitigation Approaches	CHEN, Yu-Guang