



5-7 | May
2019

Crete, Greece

COINS

International Conference on
Omni-layer Intelligent Systems

COINS 2019 Program Overview

Sunday, May 5			Monday, May 6			Tuesday, May 7	
Time	Room 1	Room 2	Time	Room 1	Room 2	Time	Room1
8:30-9:00	Registration		9:00-10:30	Session 6	Session 7	9:00-10:30	Session 12
9:00-10:30	Opening Remarks & keynote 1		10:30-11:00	Coffee Break		10:30-11:00	Coffee Break
10:30-10:45	Coffee Break		11:00-12:30	Session 8	Session 9	11:00-12:30	Session 13
10:45-12:45	Session 1	Session 2	12:30-13:30	Lunch		12:30-2	Lunch
12:45-14:00	Lunch		13:30-15:00	Keynote 2			
14:00-15:30	Session 3	Session 4	15:00-15:30	Coffee Break			
15:30-16:00	Coffee Break		15:30-17:30	Session 10	Session 11		
16:00-17:30	Session 5						

- Keynote 1: Dr. Sani Nassif, Radyalis, US
- Keynote 2: Prof. Jan M. Rabaey, University of California, Berkeley, US

Session 1 | May 5, 10:45-12:45 | Room 1

Cloud Security Distributary Set (CSDS): A Policy-Based Framework to Define Multi-Level Security Structure in Clouds

Faraz Fatemi Moghaddam, Su'leyman Berk Cemberci, Philipp Wieder and Ramin Yahyapour

Employing Blockchain and Physical Unclonable Functions for Counterfeit IoT Devices Detection

Lydia Negka, Georgios Gketsios, Nikolaos Athanasios Anagnostopoulos, Georgios Spathoulas, Athanasios Kakarountas and Stefan Katzenbeisser

Securing Over-The-Air IoT Firmware Updates using Blockchain

Xinchi He, Sarra Alqahtani, Rose Gamble and Mauricio Papa

Blockchain based Smart-IoT Trust Zone Measurement Architecture

Jawad Ali, Toqeer Ali, Yazed Alsaawy, Ahmad Shahrafidz Khalid and Shahrulniza Musa

Session 2 | May 5, 10:45-12:45 | Room 2

Bitcoin Payment-Channels for Resource Limited IoT Devices

Christopher Hannon and Dong Jin

An Implemented Open Source Blockchain Market for Smart Grids and Microgrids Using Autonomous Agents

Stefan Forsström and Ulf Jennehag

Decentralized Directed acyclic graph based DLT Network

Alshihri Saad and Sooyoung Park

Defining granularity levels for supply chain traceability based on IoT and blockchain

Thomas Dasaklis, Fran Casino and Costas Patsakis

Session 3 | May 5, 14:00-15:30 | Room 1

A Design-flow for implementing, validating and evaluating Machine-learning Classifiers on FPGAs

Jan Cordes and Maher Fakh

Hardware Acceleration of Image Registration Algorithm on FPGA-based Systems on Chip

Ioannis Stratakos, Dimitrios Gourounas, Vasileios Tsoutsouras, Theodore Economopoulos, George Matsopoulos and Dimitrios Soudris

Towards Collaborative Machine Learning Driven Healthcare Internet of Things

Bahar Farahani, Mojtaba Barzegari and Fereidoon Shams Aliee

Session 4 | May 5, 14:00-15:30 | Room 2

Enhanced Data Transmission Platform in Smart Farms

Alireza Izaddoost, Efemena Ogo and Sandesh Prasai

IoT-based Urban Noise Identification Using Machine Learning: Performance of SVM, KNN, Bagging, and Random Forest

Yasser Alsouda, Sabri Pllana and Arianit Kurti

Cross-layer Enterprise Architecture Evaluation: An Approach to Improve the Evaluation of TO-BE Enterprise Architecture

Hossein Ahmadi, Bahar Farahani, Fereidoon Shams Aliee and Masoud Azizi Motlagh

Session 5 | May 5, 16:00-17:30 | Room 1

Workload-aware Management Targeting Multi-Gateway Internet-of-Things

Ioannis Galanis, Theodoros Marinakis and Iraklis Anagnostopoulos

Assessment of Model-based Methodologies to Architect Cyber-Physical Systems

Andreas Aigner and Abdelmajid Khelil

A Quality Attribute-based Evaluation of Time-series Databases for Edge-centric architectures

Varsha Raveendran, Janaki Joshi and Lakshmi Sirisha Chodisetty

Session 6 | May 6, 9:00-10:30 | Room 1

A Hybrid Agent-based Design Methodology for Dynamic Cross-layer Reliability in Heterogeneous Embedded Systems

Akash Kumar

Probabilistic-WCET Reliability: On the experimental validation of EVT hypotheses

Federico Reghenzani, Giuseppe Massari, William Fornaciari and Andrea Galimberti

Security and Safety Co-Engineering of the FlexRay Bus in Vehicular Networks

Dominik Püßen, Nikolaos Athanasios Anagnostopoulos, Tolga Arul and Stefan Katzenbeisser

Session 7 | May 6, 9:00-10:30 | Room 2

NeuroMesh: IoT Security Enabled by a Blockchain Powered Botnet Vaccine

Gregory Falco, Caleb Li, Pavel Fedorov, Carlos Caldera, Rahul Arora and Kelly Jackson

Blockchain Based MFA Solution for Information Security

Joao Antonio Aparecido Cardoso, Felipe Takeshi Ishizu and Jeferson Tadeu De Lima

Secure Blockchain-Enabled DyMonDS Design

Michelle Lauer, Marija Ilic and Rupamathi Jaddivada

Session 8 | May 6, 11:00-12:30 | Room 1

Differentiating Attacks and Faults in Energy Aware Smart Home System using Supervised Machine Learning

Georgios Tertytchny, Nicolas Nicolaou and Maria Michael

Cycle-Accurate NoC-based Convolutional Neural Network Simulator

Kun-Chih Chen, Ting-Yi Wang and Yueh-Chi Yang

A Design Flow Framework for Fully-Connected Neural Networks Rapid Prototyping

Nikolaos Zompakis, Dimitrios Anagnostos, Konstantina Koliogeorgi, Georgios Zervakis and Kostas Siozios

Session 9 | May 6, 11:00-12:30 | Room 2

Protect Your Chip Design Intellectual Property: An Overview

Johann Knechtel, Satwik Patnaik and Ozgur Sinanoglu

On automating delayed IC analysis for hardware IP protection

Esha Sarkar and Michail Maniatakos

Security Assessment of Microfluidic-based Immunoassays

Mohammed Shayan, Sukanta Bhattacharjee, Yong-Ak Song, Krishnendu Chakrabarty and Ramesh Karri

Session 10 | May 6, 15:30-17:30 | Room 1

SAFEPOWER: Application of Power Management Techniques in SoCs for Safety-Relevant Systems

Kim Gruettner, Maher Fakih, Mikel Azkarate-Askasua, Peio Onaindia and Roman Obermaisser

Experimental Evaluation of Scenario Aware Synchronous Data Flow based Power Management

Oliver Klemp, Maher Fakih, Kim Gruettner, Ralf Stemmer and Wolfgang Nebel

Towards Distributed Runtime Monitoring with C++ Contracts

Rolf Schmedes, Kim Gruettner and Philipp Ittershagen

Dynamic Constraints for Mixed-Criticality Systems

D'avid Juh'asz and Axel Jantsch

Session 11 | May 6, 15:30-17 | Room 2

Analysis of Performance and Energy Consumption of Wearable Devices and Mobile Gateways in IoT Applications

Mohammadreza Nakhkash, Tuan Nguyen Gia, Iman Azimi, Arman Anzanpour, Amir Mohammad Rahmani and Pasi Liljeberg

Metis: Optimal Task Allocation Framework for the Edge/Hub/Cloud Paradigm

Andreas Kouloumpris, Theocharis Theocharides and Maria Michael

Leveraging User Mobility and Mobile App Services Behavior for Optimal Edge Resource Utilization

John Violos, Evangelos Psomakelis, Konstantinos Tserpes, Fotis Aisopos and Theodora Varvarigou

Session 12 | May 7, 9:00-10:30 | Room 1

Under Sampling Bagging Shapelet Transformation for Hydraulic System

Yohan Joo and Jongpil Jeong

Representation learning for social networks using Homophily based Latent Space Model

Pranav Nerurkar, Madhav Chandane and Sunil Bhirud

The Evolving Enterprise Architecture: A Digital Transformation Perspective

Fereidoon Shams Aliee, Hanieh Kashfi and Bahar Farahani

Session 13 | May 7, 11:00-12:00 | Room 1

THE 51 V's OF BIG DATA: Survey, Technologies, Characteristics, Opportunities, Issues and Challenges

Nawsher Khan, Arshi Naim, Mohammad Rashid Hussain, Quadri Noorulhasan Naveed, Naim Ahmad and Shamimul Qamar

3-Dictionary: Learning Chinese with an Augmented Reality App

Octavio Salcedo