

EDCC 2020 Program

September 7th, 2020 -- Workshops

see workshop web pages

Time zone: Central European Time (CET)

Time slots allocated for each paper type:

- Distinguished paper: 25 min – 20 min presentation + 5 min Q&A
- Regular paper (REG): 20 min – 15 min presentation + 5 min Q&A
- Practical Experience Report (PER):
20 min – 15 min presentation + 5 min Q&A
- Short paper (Short): 15 min - 10 min presentation + 5 min Q&A

September 8th, 2020

14:00 – 14:10

Welcome to EDCC 2020

Elena Troubitsyna, Karama Kanoun, Mario Trapp, Michael Paulitsch

14:10 – 15:25

Session 1. Distinguished papers

(Chair: Felicita Di Giandomenico)

Ilya Tuzov, David de Andrés and Juan Carlos Ruiz. Improving Robustness-aware Design Space Exploration for FPGA-based Systems (REG)

Mojtaba Eslahi-Kelorazi, Long Hoang Le and Fernando Pedone. Developing Complex Data Structures over Partitioned State Machine Replication (REG)

Shihao Song, Anup Das and Nagarajan Kandasamy. Improving Dependability of Neuromorphic Computing With Non-Volatile Memory (REG)

15:50 – 16:30

Invited talk: Ignacio Alvarez. Towards Universal Safety Guarantees of Decision Making in Automated Vehicles

(Chair: Michael Paulitsch)

16:45 – 17:45

Session 2. Fault-tolerant computing (chair: Marco Vieira)

Miguel Amaral, Miguel Pardal, Hugues Mercier and Miguel Matos. FaultSee: Reproducible Fault Injection in Distributed Systems (REG)

Lauri Vihman, Maarja Kruusmaa and Jaan Raik. Data-Driven Cross-Layer Fault Management Architecture for Sensor Networks (REG)

Xiaoming Du, Cong Li, Shen Zhou, Mao Ye and Jing Li. Predicting Uncorrectable Memory Errors for Proactive Replacement: An Empirical Study on Large-Scale Field Data (PER)

September 9th, 2020

14:00 – 14:40 **Invited talk: Peter Schicht. Challenges for Artificial Intelligence in Automated Driving** (chair: Elena Troubitsyna)

15:00 – 16:10 **Session 3. Safety-critical systems** (chair: Elena Lisova)

Jan Reich and Mario Trapp. SINADRA: Towards a Framework for Assurable Situation-Aware Dynamic Risk Assessment of Autonomous Vehicles (Short)

Mallory Graydon. Towards Efficacy Hypotheses for Safety Cases (REG)

John Mace, Ricardo Melo Czekster, Charles Morisset and Carsten Maple. Smart Building Risk Assessment Case Study: Challenges, Deficiencies and Recommendations (PER)

Camille Fayollas, Hugues Bonnin and Olivier Flebus. SafeOps: a Concept of Continuous Safety (Shot)

16:30 – 17:50 **Session 4. Distributed systems** (chair: Elena Troubitsyna)

Christian Herrera. Stateful Priorities for Precise Restriction of System Behavior (REG)

Vicent Cholvi, Antonio Fernandez Anta, Chryssis Georgiou, Nicolas Nicolaou and Michel Raynal. Atomic Appends in Asynchronous Byzantine Distributed Ledgers (REG)

Matheus Torquato, Charles F. Gonçalves and Marco Vieira. An Availability Model for DSS and OLTP Applications hosted in Virtualized Environments (REG)

Christopher Temple. Developing Complex Safety Systems in Complex Supply Chains (PER)

September 10th, 2020

14:00 – 14:40 **Invited talk: Martin Rothfelder. Public transport: Challenges and Opportunities for Dependability** (chair Mario Trapp)

15:00 – 16:00

Session 5. Security engineering (chair: Irum Rauf)

José D'Abruzzo Pereira and Marco Vieira. On the Use of Open-Source C/C++ Static Analysis Tools in Large Projects (PER)

Giampaolo Bella, Pietro Biondi, Gianpiero Costantino and Ilaria Matteucci. CINNAMON: A Module for AUTOSAR Secure on-board Communication (REG)

Ibéria Medeiros and Nuno Neves. Effect of Coding Styles in Detection of Web Application Vulnerabilities (REG)

16:15 – 17:30

Session 6. Modelling dependable systems

(chair: Elena Troubitsyna)

Shahid Khan, Joost-Pieter Katoen and Marc Bouissou. Explaining Boolean-logic Driven Markov Processes using GSPNs (REG)

Novarun Deb, Mandira Roy, Nabendu Chaki and Agostino Cortesi. Generation of Safety and Liveness Compliant Automata from Goal Model Specifications (REG)

Lucas Bressan, André L. de Oliveira and Fernanda Campos. An Approach to Support Variability Management on CHESS Error Models (REG)

Christian Herrera, Nancy Cruz and Ricardo Quintero. CrESTO: A Tool for Synthesizing Stateful Priorities (Short)

17:30 – 17:45

Closing. Announcement of EDCC 2021

Mario Trapp, Michael Paulitsch, Jeremie Guiochet, Karama Kanoun