2015 International Conference on Embedded Software
(EMSOFT 2015)

Amsterdam, Netherlands
4 – 9 October 2015
1.1 - The Federated Scheduling of Systems of Conditional Sporadic DAG Tasks
Sanjoy Baruah

1.2 - Adaptive Runtime Shaping for Mixed-Criticality Systems
Biao Hu, Kai Huang, Gang Chen, Long Cheng, Alois Knoll

1.3 - Can Real-Time Systems be Chaotic?
Lothar Thiele, Pratyush Kumar

2.1 - Requirements Driven Falsification with Coverage Metrics
Georgios Fainekos, Adel Dokhanchi, Aditya Zutshi, Rahul Sriniva, Sriram Sankaranarayanan

2.2 - Reachability of Hybrid Systems in Space-Time
Goran Frehse

2.3 - Unbounded-Time Reachability Analysis of Hybrid Systems by Abstract Acceleration
Peter Schrammel

3.1 - Numerical Static Analysis of Interrupt-driven Programs via Sequentialization
Xueguang Wu, Liqian Chen, Antoine Miné, Wei Dong, Ji Wang

3.2 - Towards an Industrial Use of Sound Static Analysis for the Verification of Concurrent Embedded Avionics Software
Antoine Miné, David Delmas

3.3 - A Scalable Algebraic Method to Infer Quadratic Invariants of Switched Systems
Nikolas Stott, Xavier Allamigeon, Stephane Gaubert, Eric Goubault, Sylvie Putot

4.1 - Loosely Time-Triggered Architectures: Improvements and Comparisons
Guillaume Baudart, Albert Benveniste, Timothy Bourke

4.2 - Parametrized Dataflow Scenarios
Mladen Skelin, Marc Geilen, Francky Catthoor, Sverre Hendseth

4.3 - Executing Dataflow Actors as Kahn Processes
Andreas Tretter, Jani Boutellier, James Guthrie, Lars Schor, Lothar Thiele

5.1 - Modeling and Simulating Cyber-Physical Systems using CyPhySim
Edward Lee, Mehrdad Niknami, Thierry Nouidui, Michael Wetter

5.2 - Building a Hybrid Systems Modeler from Synchronous Language Principles
Marc Pouzet
5.3 - Formal Verification of ACAS X, an Industrial Airborne Collision Avoidance System
Jean-Baptiste Jeannin, Khalil Ghorbal, Yanni Kouskoulas, Ryan Gardner, Aurora Schmidt, Erik Zawadzki, André Platzer

6.1 - Scalable Scheduling of Energy Control Systems
Truong Nghiem, Rahul Mangharam

6.2 - Distributed Power Management of Real-time Applications on a GALS Multiprocessor SOC
Andrew Nelson, Kees Goossens

6.3 - Exp-HE: A Family of Fast Exponentiation Algorithms Resistant to SPA, Fault, and Combined Attacks
Carlos Moreno, M. Anwar Hasan, Sebastian Fischmeister

7.1 - Data Mining Approach to Temporal Debugging of Embedded Streaming Applications
Oleg Iegorov, Alexandre Termier, Vincent Leroy, Jean-François Méhaut, Miguel Santana

7.2 - A Framework for Mining Hybrid Automata from Input/Output Traces
Ramy Medhat, Ramesh S., Borzoo Bonakdarpour, Sebastian Fischmeister

8.1 - Static Memory Management for Efficient Mobile Sensing Applications
Octav Chipara, Farley Lai, Daniel Schmidt

8.2 - Nonvolatile Main Memory Aware Garbage Collection in High-Level Language Virtual Machine
Jingtong Hu, Chen Pan, Mimi Xie, Chengmo Yang, Zili Shao

8.3 - Managing GPU Buffers for Caching More Apps in Mobile Systems
Sejun Kwon, Sang-Hoon Kim, Jin-Soo Kim, Jinkyu Jeong

9A.1 - Automatic Verification of Linear Controller Software
Miroslav Pajic, Junkil Park, Insup Lee, George J. Pappas, Oleg Sokolsky

9A.2 - Forward Invariant Cuts to Simplify Proofs for Safety
Nikos Aréchiga, James Kapinski, Jyotirmoy Deshmukh, André Platzer, Bruce Krogh

9A.3 - Bounded Error Flowpipe Computation of Parameterized Linear Systems
Ratan Lal, Pavithra Prabhakar

9B.1 - Verifying Network Performance of Cyber-Physical Systems with Multiple Runtime Configurations
Martin Manderscheid, Gereon Weiss, Rudi Knorr

9B.2 - Using Traffic Phase Shifting to Improve AFDX Link Utilization
Renato Mancuso, Andrew Louis, Marco Caccamo