Qualifications
1 Jan 2018 HDR Supervision Orientation 2018-2020, HDR30
5 Dec 2017 HDR Supervision-MQ Policy/Procedures Refresher, HDR11
17 May 2016 HDR Supervision Training (Historic Record), HDR99
9 Mar 2015 HDR Supervision Training (Historic Record), HDR99

Research output
Efficient and scalable runtime monitoring for cyber–physical system

ScalaSMT: Satisfiability Modulo Theory in Scala (tool paper)

Real-time simulation support for runtime verification of cyber-physical systems

Refinement of trace abstraction for real-time programs

Skink: static analysis of programs in LLVM intermediate representation

WUPPAAL: computation of worst-case execution-time for binary programs with UPPAAL

The sbt-rats parser generator plugin for scala (tool paper)

The complexity of synchronous notions of information flow security

Timed automata for modelling caches and pipelines

Control and synthesis of non-interferent timed systems

BraceAssertion: runtime verification of cyber-physical systems
Perentie: Modular trace refinement and selective value tracking (competition contribution)

Verification of concurrent programs using trace abstraction refinement

Summary-based inter-procedural analysis via modular trace refinement

Preface

Automated technology for verification and analysis: 12th International Symposium, ATVA 2014, Sydney, NSW, Australia, November 3-7, 2014, proceedings

Braceassertion: behavior-driven development for cps application

Energy and mean-payoff timed games

The expressive power of time Petri nets

Predictability of event occurrences in timed systems

PtrTracker: Pragmatic pointer analysis

Timing analysis of binary programs with UPPAAL
High performance static analysis for industry

Controllers with minimal observation power (application to timed systems)

Synthesis of opaque systems with static and dynamic masks

The complexity of codiagnosability for discrete event and timed systems

What is a timing anomaly?

Timed modal logics for real-time systems

Computation of WCET using Program Slicing and Real-Time Model-Checking
Béchennec, J-L. & Cassez, F., 2011, CoRR.

Timed games for computing WCET for pipelined processors with caches

Comparison of expressiveness for timed automata and time Petri nets

Control of timed systems

Dynamic observers for fault diagnosis of timed systems

Fault diagnosis of timed systems

The complexity of codiagnosability for discrete event and timed systems
The complexity of synchronous notions of information flow security

A note on fault diagnosis algorithms

Automatic synthesis of robust and optimal controllers - An industrial case study

Dynamic observers for the synthesis of opaque systems

Synthesis of non-interferent timed systems

The dark side of timed opacity

When are Timed Automata weakly timed bisimilar to Time Petri Nets?

Fault diagnosis with dynamic observers

Fault diagnosis with static and dynamic observers

Lecture Notes in Computer Science: preface

Semantics of Biological Regulatory Networks
Efficient on-the-fly algorithms for partially observable timed games

Sensor Minimization Problems with Static or Dynamic Observers for Fault Diagnosis

Synthesis of non-interferent distributed systems

Synthesis of optimal-cost dynamic observers for fault diagnosis of discrete-event systems

Timed control with observation based and stuttering invariant strategies

Structural translation from Time Petri Nets to Timed Automata

Monitoring and fault-diagnosis with digital clocks

Symbolic unfoldings for networks of timed automata

Structural translation from time Petri Nets to timed automata

Synthesis of optimal strategies using HyTech

Comparison of different semantics for time Petri nets

Comparison of the expressiveness of timed automata and time Petri nets
Efficient on-the-fly algorithms for the analysis of timed games

Introduction au contrôle des systèmes temps-réel

Modal logics for timed control

When are timed automata weakly timed bisimilar to time petri nets?

A timed extension for ALTARICA

Optimal strategies in priced timed game automata

A comparison of control problems for timed and hybrid systems

Extending the translation from SDL to promela

Verification of embedded reactive fiffo systems

Application of partial-order methods to reactive programs with event memorization

Proving feature non-interaction with alternating-time temporal logic

Model-checking for hybrid systems by quotienting and constraints solving
The impressive power of stopwatches

Effective recognizability and model checking of reactive fifo automata

Hybrid verifications of reactive programs

Formal semantics for reactive Grafcet

Compilation of the ELECTRE reactive language into finite transition systems

Research Projects
Automated software verification
Automatic computation of worst-case execution time (WCET analysis)
Formal modeling and analysis of timed systems