

# IJCAR 2016 Conference Program

## Monday, June 27, 2016

**09:15–09:30** Opening Remarks

**09:30–10:30** Invited Talk: Sumit Gulwani. *Programming by Examples: Applications, Algorithms, and Ambiguity Resolution*

**10:30–11:00** Break

### 11:00–12:00 Session Satisfiability of Boolean Formulas

**11:00–11:30** Benjamin Kiesl, Martina Seidl, Hans Tompits and Armin Biere. *Super-Blocked Clauses*

**11:30–12:00** Jasmin Christian Blanchette, Mathias Fleury and Christoph Weidenbach. *A Verified SAT Solver Framework with Learn, Forget, Restart, and Incrementality*

**12:00–14:00** Lunch

### 14:00–15:40 Session First-Order Theorem Proving

**14:00–14:30** Giles Reger, Martin Suda, Andrei Voronkov and Krystof Hoder. *Selecting the Selection*

**14:30–15:00** Stephan Schulz and Martin Mohrmann. *Performance of Clause Selection Heuristics for Saturation-Based Theorem Proving*

**15:00–15:20** [SD] Gabriel Ebner, Stefan Hetzl, Giselle Reis, Martin Riener, Simon Wolfsteiner and Sebastian Zivota. *System Description: GAPT 2.0*

**15:20–15:40** [SD] Jens Otten. *NanoCoP: A Non-clausal Connection Prover*

**15:40–16:10** Break

### 16:10–17:30 Session Verification I

**16:10–16:40** Taolue Chen, Xincai Gu and Zhilin Wu. *A complete decision procedure for linearly compositional separation logic with data constraints*

**16:40–17:10** Florian Frohn, Matthias Naaf, Jera Hensel, Marc Brockschmidt and Juergen Giesl. *Lower Runtime Bounds for Integer Programs*

**17:10–17:30** [SD] Francisco Duran, Steven Eker, Santiago Escobar, Narciso Marti-Oliet, Jose Meseguer and Carolyn Talcott. *Built-in Variant Generation and Unification, and their Applications in Maude 2.7*

**17:30–17:45** Break

**17:45–18:45** Awards (Herbrand Award and Best Paper Award)

**19:00–** Welcome reception

## Tuesday, June 28, 2016

**09:00–10:00** Invited Talk: Gilles Barthe. *Verification of differential private computations*

**10:00–10:30** Joseph Boudou. *Optimal Decision Procedure for a Propositional Dynamic Logic with Parallel Composition*

### 10:30–11:00 Break

### 11:00–12:30 Session Non-classical Logics

**11:00–11:30** Diana Costa and Manuel A. Martins. *A Tableau System for Quasi-Hybrid Logic*

**11:30–12:00** Simon Docherty and David Pym. *Intuitionistic layered graph logic*

**12:00–12:30** Laura Bozzelli, Alberto Molinari, Angelo Montanari, Adriano Peron and Pietro Sala. *Interval Temporal Logic Model Checking: the Border Between Good and Bad HS Fragments*

### 12:30–14:00 Lunch

### 14:00–15:40 Session Modal Logics

**14:00–14:30** Jeremy Dawson, James Brotherston and Rajeev Gore. *Machine-checked Interpolation Theorems for Substructural Logics using Display Calculi*

**14:30–15:00** Revantha Ramanayake. *Inducing syntactic cut-elimination for indexed nested sequents*

**15:00–15:20** [SD] Yoni Zohar and Anna Zamansky. *Gen2sat: An Automated Tool for Deciding Derivability in Analytic Pure Sequent Calculi*

**15:20–15:40** [SD] Claudia Nalon, Ullrich Hustadt and Clare Dixon. *KSP: A resolution-based prover for multimodal K*

### 15:40–16:10 Break

### 16:10–17:30 Session Proof Theory, Interpolation, and Rewriting

**16:10–16:40** David Cerna and Alexander Leitsch. *Schematic Cut elimination and the Ordered Pigeonhole Principle*

**16:40–17:10** Viorica Sofronie-Stokkermans. *On Interpolation and Symbol Elimination in Theory Extensions*

**17:10–17:30** [SD] Takahito Aoto and Kentaro Kikuchi. *Nominal Confluence Tool*

## Wednesday, June 29, 2016

**09:00–10:00** Invited Talk: Arnon Avron. *A logical framework for developing and mechanizing set theories*

**10:00–10:30** Takuya Matsuzaki, Hidenao Iwane, Munehiro Kobayashi, Yiyang Zhan, Ryoya Fukasaku, Jumma Kudo, Hirokazu Anai and Noriko Arai. *Race against the Teens – Benchmarking Mechanized Math on Pre-university Problems*

**10:30–11:00** Break

**11:00–12:30** Session Verification II

**11:00–11:30** Francesco Alberti, Silvio Ghilardi and Elena Pagani. *Counting Constraints in Flat Array Fragments*

**11:30–12:00** Benjamin Aminof and Sasha Rubin. *Model Checking Parameterised Multi-Token Systems via the Composition Method*

**12:00–12:30** Konstantinos Athanasiou, Peizun Liu and Thomas Wahl. *Unbounded-Thread Program Verification using Thread-State Equations*

**12:30–14:00** Lunch

**14:00–15:45** Business Meetings

**16:00–** Social Program

# Thursday, June 30, 2016

**09:00–10:00** Invited Talk: Andre Platzer. *Logic and proofs for cyber-physical systems*

**10:00–10:30** Ting Gan, Liyun Dai, Bican Xia, Naijun Zhan, Deepak Kapur and Mingshuai Chen. *Interpolation synthesis for quadratic polynomial inequalities and combination with EUF*

## 10:30–11:00 Break

### 11:00–12:30 Session Satisfiability-Module Theories

**11:00–11:30** Leonardo de Moura and Daniel Selsam. *Congruence Closure in Intensional Type Theory*

**11:30–12:00** Roberto Sebastiani. *Colors Make Theories Hard*

**12:00–12:30** Andrew Reynolds, Jasmin Christian Blanchette, Simon Cruanes and Cesare Tinelli. *Model Finding for Recursive Functions in SMT*

## 12:30–14:00 Lunch

### 14:00–15:50 Session Satisfiability Modulo Theories

**14:00–14:30** Martin Bromberger and Christoph Weidenbach. *Fast Cube Tests for LIA Constraint Solving*

**14:30–15:00** Kshitij Bansal, Clark Barrett, Andrew Reynolds and Cesare Tinelli. *A new decision procedure for finite sets and cardinality in SMT*

**15:00–15:20** [SD] Vu Xuan Tung, To Van Khanh and Mizuhito Ogawa. *raSAT : SMT Solver for Polynomial Constraints*

**15:20–15:50** Hans De Nivelle. *Subsumption Algorithms for Three-Valued Geometric Resolution*

## 15:50–16:10 Break

### 16:10–17:20 Session Higher-order logic

**16:10–16:40** Michael Farber and Chad Brown. *Internal guidance for Satallax*

**16:40–17:00** [SD] Max Wisniewski, Alexander Steen, Kim Kern and Christoph Benzmueller. *Effective Normalization Techniques for HOL*

**17:00–17:20** [SD] Lars Hupel and Viktor Kuncak. *Translating Scala Programs to Isabelle/HOL*