# 13th International Conference on
# Logic for Programming
# Artificial Intelligence and Reasoning
# (LPAR 2006)

Phnom Penh, Cambodia

(12) 13-17 November 2006

# Sunday, 12 November

| 9:00 – 17:00 | Workshops |
|---|---|
| 17:00 – 19:00 | Registration |
| 19:00 – 21:00 | LPARty |

# 6th International Workshop on the Implementation of Logics

## (IWIL-6), Sunday, 12 November

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| 9:00 – 10:00 | **Invited Talk:** Algorithms and Data Structures for First-Order Equational Deduction *Stephan Schulz* |
| 10:00 – 10:30 | Coffee Break |
| 10:30 – 11:00 | Term Indexing for the LEO-II Prover *Frank Theiss and Christoph Benzmüller* |
| 11:00 – 11:30 | Integrating External Deduction Tools with ACL2 *Matt Kaufmann, J Strother Moore, Sandip Ray, and Erik Reeber* |
| 11:30 – 12:00 | Efficiently Checking Propositional Resolution Proofs in Isabelle/HOL *Tjark Weber* |
| 12:00 – 14:00 | Lunch |
| 14:00 – 15:00 | **Invited Talk:** Implementing an Instantiation-based Theorem Prover for First-order Logic *Konstantin Korovin* |
| 15:00 – 15:30 | Coffee Break |
| 15:30 – 16:00 | Tableau Decision Procedure for Propositional Intuitionistic Logic *Guido Fiorino, Alessandro Avellone, and Ugo Moscato* |
| 16:00 – 16:30 | Combining First-Order State Abstraction with Heuristic Search in a Logic-Based Planning System *Olga Skvortsova, Steffen Hölldobler, and Eldar Karabaev* |
| 16:30 – 17:00 | Multiple Preprocessing for Systematic SAT Solvers *Anbulagan A. and John Slaney* |
| 17:00 – 18:00 | **Panel Interrogation** A panel of experts on the implementation of logics will answer questions collected from the workshop attendees. |

## 2nd International Workshop on Analytic Proof Systems

9:00 – 10:00    **Invited Talk:** Proof Search Tree and Cut Elimination
*Grigori Mints*

10:00 – 10:30    Coffee Break

10:30 – 11:00    An Introduction to the Calculus of Structures
*Alwen Tiu*

11:00 – 11:30    The Epsilon Theorems and Herbrand Complexity
*Georg Moser and Richard Zach*

11:30 – 12:00    Fast Cut-Elimination for Intuitionistic Logic With Disjunction-Free Prenex Cuts
*Matthias Baaz*

12:00 – 14:00    Lunch

14:00 – 15:00    **Invited Talk:** Justification Logic
*Sergei Artemov*

15:00 – 15:30    Coffee Break

15:30 – 16:00    A Logic for Constructivity
*Michel Parigot*

16:00 – 16:30    Quantifier Elimination for Quantified Propositional Gödel Logic
*Norbert Preining*

16:30 – 17:30    **Invited Talk:** Proof Theory of Fuzzy Logics Based on T-Norms - An Overview
*Agata Ciabattoni*

# Monday, 13 November

9:00 – 10:00   Registration

10:00 – 10:15   Opening

10:15 – 11:15   **Invited Lecture:** Higher-Order Termination
*Jean-Pierre Jouannaud*

11:15 – 11:30   Coffee Break

11:30 – 12:00   Deciding Satisfiability of Positive Second Order Joinability Formulae
*Sébastien Limet and Pierre Pillot*

12:00 – 12:30   SAT Solving for Argument Filterings
*Michael Codish, Peter Schneider-Kamp, Vitaly Lagoon, René Thiemann, and Jürgen Giesl*

12:30 – 14:00   Lunch

14:00 – 14:30   Inductive Decidability using Implicit Induction
*Stephan Falke and Deepak Kapur*

14:30 – 15:00   Matching Modulo Superdevelopments. Application to Second-Order Matching
*Germain Faure*

15:00 – 15:30   Derivational Complexity of Knuth-Bendix Orders Revisited
*Georg Moser*

15:30 – 16:00   Coffee Break

16:00 – 16:30   Characterization of ALogtIme by First Order Functional Programs
*Guillaume Bonfante, Jean-Yves Marion, and Romain Péchoux*

16:30 – 17:00   Combining Typing and Size Constraints for Checking the Termination of Higher-Order Conditional Rewrite Systems
*Frédéric Blanqui and Colin Riba*

17:00 – 18:00   Presentation of short papers

# Tuesday, 14 November

9:00 – 10:00     **Invited Lecture:**
Disjunctive Logic Programming for Knowledge Representation and Reasoning
*Nicola Leone*

10:00 – 10:30     On a Local-Step Cut-Elimination Procedure for the Intuitionistic Sequent Calculus
*Kentaro Kikuchi*

10:30 – 11:00     Coffee Break

11:00 – 11:30     Modular Cut-Elimination: Finding Proofs or Counterexamples
*Agata Ciabattoni and Kazushige Terui*

11:30 – 12:00     A Semantic Completeness Proof for Tableaux Modulo
*Richard Bonichon and Olivier Hermant*

12:00 – 12:30     Saturation up to Redundancy for Tableau and Sequent Calculi
*Martin Giese*

12:30 – 14:00     Lunch

14:00 – 14:30     Branching Time Temporal Logic Extended with Presburger Constraints
*Régis Gascon and Laura Bozzelli*

14:30 – 15:00     Combining Supervaluation and Degree Based Reasoning under Vagueness
*Christian Fermüller and Robert Kosik*

15:00 – 15:30     A Comparison of Techniques for Querying Large Description Logic ABoxes
*Boris Motik and Ulrike Sattler*

15:30 – 16:00     A Local System for Intuitionistic Logic
*Alwen Tiu*

16:00 – 16:30     Coffee Break

16:30 – 17:00     Reducing Nondeterminism in the Calculus of Structures
*Ozan Kahramanogullari*

17:00 – 17:30     A Relaxed Approach to Integrity and Inconsistency in Databases
*Hendrik Decker and Davide Martinenghi*

17:30 – 18:00     Automata for Positive Core XPath Queries on Compressed Documents
*Barbara Fila and Siva Anantharaman*

18:00 – 18:30     Presentation of short papers

# Wednesday, 15 November

9:00 – 18:00   Excursion

19:00 – 22:00   Conference Banquet

# Thursday, 16 November

9:00 – 9:30     On Locally Checkable Properties
*Orna Kupferman, Yoad Lustig, and Moshe Vardi*

9:30 – 10:00     Deciding Key Cycles for Security Protocols
*Véronique Cortier and Eugen Zalinescu*

10:00 – 10:30     Automating Verification of Loops by Parallelization
*Tobias Gedell and Reiner Hähnle*

10:30 – 11:00     Coffee Break

11:00 – 11:30     On Computing Fixpoints in Well-Structured Regular Model Checking, with Applications to Lossy Channel Systems
*Christel Baier, Nathalie Bertrand, and Philippe Schnoebelen*

11:30 – 12:00     Verification Condition Generation via Theorem Proving
*John Matthews, J Moore, Sandip Ray, and Daron Vroon*

12:00 – 12:30     An Incremental Approach to Abstraction-Carrying Code
*Elvira Albert, Puri Arenas and German Puebla*

12:30 – 14:00     Lunch

14:00 – 14:30     Context-Sensitive Multivariant Assertion Checking in Modular Programs
*Pawel Pietrzak, Jesús Correas, German Puebla, and Manuel Hermenegildo*

14:30 – 15:00     Representation of Partial Knowledge and Query Answering in Locally Complete Databases
*Álvaro Cortés-Calabuig, Marc Denecker, Ofer Arieli, and Maurice Bruynooghe*

15:00 – 15:30     Sequential, Parallel and Quantified Updates of First-Order Structures
*Philipp Rümmer*

15:30 – 16:00     Coffee Break

16:00 – 16:30     Representing Defaults and Negative Information without Negation-as-Failure
*Pablo Fillottrani and Guillermo Simari*

16:30 – 17:00     Constructing Camin-Sokal Phylogenies Via Answer Set Programming
*Jonathan Kavanagh, David Mitchell, Eugenia Ternovska, Ján Maňuch, Xiaohong Zhao, and Arvind Gupta*

17:00 – 17:30     Type-Based Termination of Recursive Definitions in the Calculus of Inductive Constructions
*Gilles Barthe, Benjamin Grégoire, and Fernando Pastawski*

17:30 – 18:00     Presentation of short papers

# Friday, 17 November

9:00 – 9:30    Boolean Rings for Intersection-Based Satisfiability
*Nachum Dershowitz, Jieh Hsiang, Guan-Shieng Huang, and Daher Kaiss*

9:30 – 10:00    Theory Instantiation
*Harald Ganzinger and Konstantin Korovin*

10:00 – 10:30    Splitting on Demand in Satisfiability Modulo Theories
*Clark Barrett, Robert Nieuwenhuis, Albert Oliveras and Cesare Tinelli*

10:30 – 11:00    Coffee Break

11:00 – 11:30    Delayed Theory Combination vs Nelson-Oppen for Satisfiability Modulo Theories: A Comparative Analysis
*Roberto Bruttomesso, Alessandro Cimatti, Anders Franzen, Alberto Griggio, and Roberto Sebastiani*

11:30 – 12:00    Automatic Combinability of Rewriting Based Satisfiability Procedures
*Hélène Kirchner, Silvio Ranise, Christophe Ringeissen, and Duc-Khanh Tran*

12:00 – 12:30    To Ackermann-ize or Not to Ackermann-ize? On Efficiently Handling Uninterpreted Function Symbols in SMT(EUF U T)
*Roberto Bruttomesso, Alessandro Cimatti, Anders Franzen, Alberto Griggio, Alessandro Santuari, and Roberto Sebastiani*

12:30 – 13:00    Lemma Learning in the Model Evolution Calculus
*Peter Baumgartner, Alexander Fuchs, and Cesare Tinelli*

13:00 – 14:30    Lunch