

## Table of Contents

### Verification: Invited Paper

Logic Programming and Model Checking .....	1
<i>Baoqiu Cui, Yifei Dong, Xiaoqun Du, K. Narayan Kumar, C. R. Ramakrishnan, I. V. Ramakrishnan, Abhik Roychoudhury, Scott A. Smolka and David S. Warren</i>	

### Logic Programming I

CAT: The Copying Approach to Tabling .....	21
<i>Bart Demoen and Konstantinos Sagonas</i>	
SICStus MT - A Multithreaded Execution Environment for SICStus Prolog	36
<i>Jesper Eskilson and Mats Carlsson</i>	
A Framework for Bottom Up Specialisation of Logic Programs .....	54
<i>Wim Vanhoof, Danny De Schreye and Bern Martens</i>	
Termination of Logic Programs with <code>block</code> Declarations Running in Several Modes .....	73
<i>Jan-Georg Smaus, Pat Hill and Andy King</i>	

### Static Analysis

The Boolean Logic of Set Sharing Analysis .....	89
<i>Michael Codish and Harald Søndergaard</i>	
Derivation of Proof Methods by Abstract Interpretation .....	102
<i>Giorgio Levi and Paolo Volpe</i>	
Detecting Unsolvable Queries for Definite Logic Programs .....	118
<i>Maurice Bruynooghe, Henk Vandecasteele, D. Andre de Waal and Marc Denecker</i>	
Staging Static Analyses Using Abstraction-Based Program Specialization	134
<i>John Hatcliff, Matthew Dwyer and Shawn Laubach</i>	
An Experiment in Domain Refinement: Type Domains and Type Representations for Logic Programs .....	152
<i>Giorgio Levi and Fausto Spoto</i>	

### Software Methodologies: Invited Paper

Architecturing Software Using: A Methodology for Language Development	170
<i>Charles Consel and Renaud Marlet</i>	

## Object Oriented Programming

Explicit Substitutions for Objects and Functions .....	195
<i>Delia Kesner and Pablo E. Martínez López</i>	
The Complexity of Late-Binding in Dynamic Object-Oriented Languages .....	213
<i>Enrico Pontelli, Desh Ranjan and Gopal Gupta</i>	

## Term Rewriting

A Compiler for Rewrite Programs in Associative-Commutative Theories .....	230
<i>Pierre-Etienne Moreau and Hélène Kirchner</i>	
Solution to the Problem of Zantema on a Persistent Property of Term Rewriting Systems .....	250
<i>Takahito Aoto</i>	
A General Framework for <i>R</i> -Unification Problems .....	266
<i>Sébastien Limet and Frédéric Saubion</i>	

## Semantics: Tutorial

Operational Versus Denotational Methods in the Semantics of Higher Order Languages .....	282
<i>Andrew M. Pitts</i>	

## Functional Programming

Functional Implementations of Continuous Modeled Animation .....	284
<i>Conal Elliott</i>	
Compiling Erlang to Scheme .....	300
<i>Marc Feeley and Martin Larose</i>	
From (Sequential) Haskell to (Parallel) Eden: An Implementation Point of View .....	318
<i>Silvia Breitinger, Ulrike Klusik and Rita Loogen</i>	
Mobile Haskell: Compiling Lazy Functional Programs for the Java Virtual Machine .....	335
<i>David Wakeling</i>	

## Metaprogramming: Tutorial

Program Analysis in $\lambda$ Prolog .....	353
<i>John Hannan</i>	

**Logic Programming II**

A Game Semantics Foundation for Logic Programming .....	355
<i>Roberto Di Cosmo, Jean-Vincent Loddo and Stephane Nicolet</i>	
Controlling Search in Declarative Programs .....	374
<i>Michael Hanus and Frank Steiner</i>	
Encapsulating Data in Logic Programming via Categorical Constraints .	391
<i>James Lipton and Robert McGrail</i>	
Constructive Negation Using Typed Existence Properties .....	411
<i>John G. Cleary and Lunjin Lu</i>	

**Optimal Evaluation: Tutorial**

Optimal Reduction of Functional Expressions .....	427
<i>Andrea Asperti</i>	

**Integration**

Embedding Multiset Constraints into a Lazy Functional Logic Language	429
<i>P. Arenas-Sánchez, F.J. López-Fraguas, M. Rodríguez-Artalejo</i>	
A Hidden Herbrand Theorem .....	445
<i>Joseph Goguen, Grant Malcolm and Tom Kemp</i>	

**Constraint Solving**

Integrating Constraint Propagation in Complete Solving of Linear Diophantine Systems .....	463
<i>Farid Ajili and Hendrik C.R. Lock</i>	
Approaches to the Incremental Detection of Implicit Equalities with the Revised Simplex Method .....	481
<i>Philippe Refalo</i>	

<b>Author Index</b> .....	497
---------------------------	-----