

Table of Contents

Static Program Analysis via 3-Valued Logic	1
<i>Thomas Reps</i>	
Open Modeling in Multi-stakeholder Distributed Systems: Research and Tool Challenges	2
<i>Robert J. Hall</i>	
An Algebraic Approach to the Static Analysis of Concurrent Software	3
<i>Javier Esparza</i>	
Polynomial Constants Are Decidable	4
<i>Markus Müller-Olm, Helmut Seidl</i>	
Normalizable Horn Clauses, Strongly Recognizable Relations, and Spi	20
<i>Flemming Nielson, Hanne Riis Nielson, Helmut Seidl</i>	
Nonuniform Alias Analysis of Recursive Data Structures and Arrays	36
<i>Arnaud Venet</i>	
Representing and Approximating Transfer Functions in Abstract Interpretation of Heterogeneous Datatypes	52
<i>B. Jeannet</i>	
Automated Verification of Concurrent Linked Lists with Counters	69
<i>Tuba Yavuz-Kahveci, Tevfik Bultan</i>	
Backward Type Inference Generalises Type Checking	85
<i>Lunjin Lu, Andy King</i>	
More Precise Yet Efficient Type Inference for Logic Programs	102
<i>Claudio Vaucheret, Francisco Bueno</i>	
A Few Graph-Based Relational Numerical Abstract Domains	117
<i>Antoine Miné</i>	
Static Analysis of the Numerical Stability of Loops	133
<i>Mathieu Martel</i>	
On Termination of Logic Programs with Floating Point Computations	151
<i>Alexander Serebrenik, Danny De Schreye</i>	

Modular Control Flow Analysis for Libraries	165
<i>Christian W. Probst</i>	
An Efficient Inclusion-Based Points-To Analysis for Strictly-Typed Languages	180
<i>John Whaley, Monica S. Lam</i>	
Compactly Representing First-Order Structures for Static Analysis	196
<i>R. Manevich, G. Ramalingam, J. Field, D. Goyal, M. Sagiv</i>	
Possibly Not Closed Convex Polyhedra and the Parma Polyhedra Library	213
<i>Roberto Bagnara, Elisa Ricci, Enea Zaffanella, Patricia M. Hill</i>	
Speeding Up Dataflow Analysis Using Flow-Insensitive Pointer Analysis	230
<i>Stephen Adams, Thomas Ball, Manuvir Das, Sorin Lerner, Sriram K. Rajamani, Mark Seigle, Westley Weimer</i>	
Improving the Precision of Equality-Based Dataflow Analyses	247
<i>Erik Ruf</i>	
Guaranteed Optimization: Proving Nullspace Properties of Compilers	263
<i>Todd L. Veldhuizen, Andrew Lumsdaine</i>	
Representation Analysis for Coercion Placement	278
<i>Karl-Filip Faxén</i>	
Pipeline Modeling for Timing Analysis	294
<i>Marc Langenbach, Stephan Thesing, Reinhold Heckmann</i>	
Analysing Approximate Confinement under Uniform Attacks	310
<i>Alessandra Di Pierro, Chris Hankin, Herbert Wiklicky</i>	
An Improved Constraint-Based System for the Verification of Security Protocols	326
<i>Ricardo Corin, Sandro Etalle</i>	
From Secrecy to Authenticity in Security Protocols	342
<i>Bruno Blanchet</i>	
Security Typings by Abstract Interpretation	360
<i>Mirko Zanotti</i>	
Static Confidentiality Enforcement for Distributed Programs	376
<i>Andrei Sabelfeld, Heiko Mantel</i>	
Refinement of LTL Formulas for Abstract Model Checking	395
<i>María del Mar Gallardo, Pedro Merino, Ernesto Pimentel</i>	

Making Abstract Model Checking Strongly Preserving	411
<i>Francesco Ranzato, Francesco Tapparo</i>	
Semantics for Abstract Interpretation-Based Static Analyzes of Temporal Properties	428
<i>Damien Massé</i>	
Checking Safety Properties of Behavioral VHDL Descriptions by Abstract Interpretation	444
<i>Charles Hymans</i>	
States vs. Traces in Model Checking by Abstract Interpretation	461
<i>Roberto Giacobazzi, Francesco Ranzato</i>	
Reuse of Results in Termination Analysis of Typed Logic Programs	477
<i>Maurice Bruynooghe, Michael Codish, Samir Genaim, Wim Vanhoof</i>	
Finiteness Analysis in Polynomial Time	493
<i>Chin Soon Lee</i>	
Detecting Optimal Termination Conditions of Logic Programs	509
<i>Fred Mesnard, Etienne Payet, Ulrich Neumerkel</i>	
Author Index	527