

Table of Contents

Foundations of C++	1
<i>Bjarne Stroustrup</i>	
What's Decidable about Weak Memory Models?	26
<i>Mohamed Faouzi Atig, Ahmed Bouajjani, Sebastian Burckhardt, and Madanlal Musuvathi</i>	
A Formally Verified SSA-Based Middle-End: Static Single Assignment Meets CompCert.....	47
<i>Gilles Barthe, Delphine Demange, and David Pichardie</i>	
Eventually Consistent Transactions.....	67
<i>Sebastian Burckhardt, Daan Leijen, Manuel Fähndrich, and Mooly Sagiv</i>	
Concurrent Library Correctness on the TSO Memory Model.....	87
<i>Sebastian Burckhardt, Alexey Gotsman, Madanlal Musuvathi, and Hongseok Yang</i>	
Automated Verification of Equivalence Properties of Cryptographic Protocols	108
<i>Rohit Chadha, Ștefan Ciobâcă, and Steve Kremer</i>	
The Call-by-Need Lambda Calculus, Revisited	128
<i>Stephen Chang and Matthias Felleisen</i>	
A Compositional Specification Theory for Component Behaviours	148
<i>Taolue Chen, Chris Chilton, Bengt Jonsson, and Marta Kwiatkowska</i>	
Probabilistic Abstract Interpretation	169
<i>Patrick Cousot and Michael Monerau</i>	
Multiparty Session Types Meet Communicating Automata	194
<i>Pierre-Malo Deniérou and Nobuko Yoshida</i>	
Complete Monitors for Behavioral Contracts	214
<i>Christos Dimoulas, Sam Tobin-Hochstadt, and Matthias Felleisen</i>	
A Systematic Approach to Delimited Control with Multiple Prompts ...	234
<i>Paul Downen and Zena M. Ariola</i>	
Generate, Test, and Aggregate: A Calculation-Based Framework for Systematic Parallel Programming with MapReduce.....	254
<i>Kento Emoto, Sebastian Fischer, and Zhenjiang Hu</i>	

Trace Spaces: An Efficient New Technique for State-Space Reduction ...	274
<i>Lisbeth Fajstrup, Éric Goubault, Emmanuel Haucourt, Samuel Mimram, and Martin Raussen</i>	
A Process Algebra for Wireless Mesh Networks	295
<i>Ansgar Fehnker, Rob van Glabbeek, Peter Höfner, Annabelle McIver, Marius Portmann, and Wee Lum Tan</i>	
On the Correctness of the SIMT Execution Model of GPUs	316
<i>Axel Habermaier and Alexander Knapp</i>	
Reasoning about Lock Placements	336
<i>Peter Hawkins, Alex Aiken, Kathleen Fisher, Martin Rinard, and Mooly Sagiv</i>	
Reasoning about Multi-stage Programs	357
<i>Jun Inoue and Walid Taha</i>	
Fictional Separation Logic	377
<i>Jonas Braband Jensen and Lars Birkedal</i>	
Validating LR(1) Parsers	397
<i>Jacques-Henri Jourdan, François Pottier, and Xavier Leroy</i>	
Adding Equations to System F Types	417
<i>Neelakantan R. Krishnaswami and Nick Benton</i>	
GMETA: A Generic Formal Metatheory Framework for First-Order Representations	436
<i>Gyesik Lee, Bruno C.d.S. Oliveira, Sungkeun Cho, and Kwangkeun Yi</i>	
Expansion for Universal Quantifiers	456
<i>Sergueï Lenglet and Joe B. Wells</i>	
Non-monotonic Self-Adjusting Computation	476
<i>Ruy Ley-Wild, Umut A. Acar, and Guy Blelloch</i>	
Java and the Java Memory Model – A Unified, Machine-Checked Formalisation	497
<i>Andreas Lochbihler</i>	
A Type and Effect System for Determinism in Multithreaded Programs	518
<i>Yi Lu, John Potter, Chenyi Zhang, and Jingling Xue</i>	

Linear Logical Relations for Session-Based Concurrency	539
<i>Jorge A. Pérez, Luís Caires, Frank Pfenning, and Bernardo Toninho</i>	
Staged Computation with Staged Lexical Scope	559
<i>Morten Rhiger</i>	
Gradual Ownership Types	579
<i>Ilya Sergey and Dave Clarke</i>	
Author Index	601