# Table of Contents

The Search for Structure in Quantum Computation (Invited Talk)  
*Prakash Panangaden*  
1

## Coalgebra and Computability

Coalgebraic Walks, in Quantum and Turing Computation  
*Bart Jacobs*  
12

Similarity Quotients as FinalCoalgebras  
*Paul Blain Levy*  
27

What Do Reversible Programs Compute?  
*Holger Bock Axelsen and Robert Glück*  
42

## Type Theory

Irrelevance in Type Theory with a Heterogeneous Equality Judgement  
*Andreas Abel*  
57

When Is a Type Refinement an Inductive Type?  
*Robert Atkey, Patricia Johann, and Neil Ghani*  
72

Complexity of Strongly Normalising λ-Terms via Non-idempotent Intersection Types  
*Alexis Bernadet and Stéphane Lengrand*  
88

Realizability and Parametricity in Pure Type Systems  
*Jean-Philippe Bernardy and Marc Lasson*  
108

## Process Calculi

Sound Bisimulations for Higher-Order Distributed Process Calculus  
*Adrien Piérard and Eijiro Sumii*  
123

Deriving Labels and Bisimilarity for Concurrent Constraint Programming  
*Andrés Aristizábal, Filippo Bonchi, Catuscia Palamidessi, Luis Pino, and Frank Valencia*  
138
Ordinal Theory for Expressiveness of Well Structured Transition Systems ................................................................. 153
Remi Bonnet, Alain Finkel, Serge Haddad, and Fernando Rosa-Velardo

Automata Theory

Alternation Elimination for Automata over Nested Words .................. 168
Christian Dax and Felix Klaedtke

Co-Büching Them All ................................................................. 184
Udi Boker and Orna Kupferman

Minimizing Deterministic Lattice Automata ..................................... 199
Shulamit Halamish and Orna Kupferman

Regularity and Context-Freeness over Word Rewriting Systems .......... 214
Didier Caucal and Trong Hieu Dinh

Quantitative Robustness Analysis of Flat Timed Automata ................ 229
Rémi Jaubert and Pierre-Alain Reynier

A Game Approach to Determinize Timed Automata ............................ 245
Nathalie Bertrand, Amélie Stainer, Thierry Jéron, and Moez Krichen

A Practical Linear Time Algorithm for Trivial Automata Model
Checking of Higher-Order Recursion Schemes ................................ 260
Naoki Kobayashi

Church Synthesis Problem for Noisy Input .................................... 275
Yaron Velner and Alexander Rabinovich

Probabilistic Modal μ-Calculus with Independent Product ................ 290
Matteo Mio

Semantics

A Step-Indexed Kripke Model of Hidden State via Recursive Properties
on Recursively Defined Metric Spaces ............................................ 305
Jan Schwinghammer, Lars Birkedal, and Kristian Støvring

A Modified GoI Interpretation for a Linear Functional Programming
Language and Its Adequacy ......................................................... 320
Naohiko Hoshino

Estimation of the Length of Interactions in Arena Game Semantics ...... 335
Pierre Clairambault
## Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synchronous Game Semantics via Round Abstraction</td>
<td>Dan R. Ghica and Mohamed N. Menaa</td>
<td>350</td>
</tr>
<tr>
<td>Binding</td>
<td>Freshness and Name-Restrication in Sets of Traces with Names</td>
<td>Murdoch J. Gabbay and Vincenzo Ciancia</td>
</tr>
<tr>
<td>Polymorphic Abstract Syntax via Grothendieck Construction</td>
<td>Makoto Hamana</td>
<td>381</td>
</tr>
<tr>
<td>Security</td>
<td>Asymptotic Information Leakage under One-Try Attacks</td>
<td>Michele Boreale, Francesca Pampaloni, and Michela Paolini</td>
</tr>
<tr>
<td>A Trace-Based View on Operating Guidelines</td>
<td>Christian Stahl and Walter Vogler</td>
<td>411</td>
</tr>
<tr>
<td>Program Analysis</td>
<td>HTML Validation of Context-Free Languages</td>
<td>Anders Møller and Mathias Schwarz</td>
</tr>
<tr>
<td>On the Power of Cliques in the Parameterized Verification of Ad Hoc Networks</td>
<td>Giorgio Delzanno, Arnaud Sangnier, and Gianluigi Zavattaro</td>
<td>441</td>
</tr>
<tr>
<td>The Reduced Product of Abstract Domains and the Combination of Decision Procedures</td>
<td>Patrick Cousot, Radhia Cousot, and Laurent Mauborgne</td>
<td>456</td>
</tr>
<tr>
<td>Author Index</td>
<td></td>
<td>473</td>
</tr>
</tbody>
</table>