

7th International Conference on Formal Structures for Computation and Deduction

FSCD 2022, August 2–5, 2022, Haifa, Israel

Edited by

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■ Contents

Preface	
<i>Amy P. Felty</i>	0:ix
Committees	
.....	0:xi
External Reviewers	
.....	0:xiii
Authors	
.....	0:xv

Invited Talks

Cutting a Proof into Bite-Sized Chunks: Incrementally proving termination in higher-order term rewriting	
<i>Cynthia Kop</i>	1:1–1:17
A Methodology for Designing Proof Search Calculi for Non-Classical Logics	
<i>Alwen Tiu</i>	2:1–2:4

Regular Papers

A Fibrational Tale of Operational Logical Relations	
<i>Francesco Dagnino and Francesco Gavazzo</i>	3:1–3:21
On Quantitative Algebraic Higher-Order Theories	
<i>Ugo Dal Lago, Furio Honsell, Marina Lenisa, and Paolo Pistone</i>	4:1–4:18
Sheaf Semantics of Termination-Insensitive Noninterference	
<i>Jonathan Sterling and Robert Harper</i>	5:1–5:19
Combined Hierarchical Matching: the Regular Case	
<i>Serdar Erbatur, Andrew M. Marshall, and Christophe Ringeissen</i>	6:1–6:22
Nominal Anti-Unification with Atom-Variables	
<i>Manfred Schmidt-Schauß and Daniele Nantes-Sobrinho</i>	7:1–7:22
A Certified Algorithm for AC-Unification	
<i>Mauricio Ayala-Rincón, Maribel Fernández, Gabriel Ferreira Silva, and Daniele Nantes Sobrinho</i>	8:1–8:21
An Analysis of Tennenbaum’s Theorem in Constructive Type Theory	
<i>Marc Hermes and Dominik Kirst</i>	9:1–9:19
Constructing Unprejudiced Extensional Type Theories with Choices via Modalities	
<i>Liron Cohen and Vincent Rahli</i>	10:1–10:23
Division by Two, in Homotopy Type Theory	
<i>Samuel Mimram and Émile Öleón</i>	11:1–11:17

7th International Conference on Formal Structures for Computation and Deduction (FSCD 2022).

Editor: Amy P. Felty



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Type-Based Termination for Futures <i>Siva Somayyajula and Frank Pfenning</i>	12:1–12:21
Addition and Differentiation of ZX-Diagrams <i>Emmanuel Jeandel, Simon Perdrix, and Margarita Veshchezerova</i>	13:1–13:19
Restricting Tree Grammars with Term Rewriting <i>Jan Bessai, Lukasz Czajka, Felix Laarmann, and Jakob Rehof</i>	14:1–14:19
On Lookaheads in Regular Expressions with Backreferences <i>Nariyoshi Chida and Tachio Terauchi</i>	15:1–15:18
Certified Decision Procedures for Two-Counter Machines <i>Andrej Dudenhefner</i>	16:1–16:18
Strategies for Asymptotic Normalization <i>Claudia Faggian and Giulio Guerrieri</i>	17:1–17:24
Solvability for Generalized Applications <i>Delia Kesner and Loïc Peyrot</i>	18:1–18:22
Normalization Without Syntax <i>Willem B. Heijltjes, Dominic J. D. Hughes, and Lutz Straßburger</i>	19:1–19:19
Decision Problems for Linear Logic with Least and Greatest Fixed Points <i>Anupam Das, Abhishek De, and Alexis Saurin</i>	20:1–20:20
Linear Lambda-Calculus is Linear <i>Alejandro Díaz-Caro and Gilles Dowek</i>	21:1–21:17
A Graphical Proof Theory of Logical Time <i>Matteo Acclavio, Ross Horne, Sjouke Mauw, and Lutz Straßburger</i>	22:1–22:25
A Stratified Approach to Löb Induction <i>Daniel Gratzer and Lars Birkedal</i>	23:1–23:22
Encoding Type Universes Without Using Matching Modulo Associativity and Commutativity <i>Frédéric Blanqui</i>	24:1–24:14
Adequate and Computational Encodings in the Logical Framework Dedukti <i>Thiago Felicissimo</i>	25:1–25:18
mwp-Analysis Improvement and Implementation: Realizing Implicit Computational Complexity <i>Clément Aubert, Thomas Rubiano, Neea Rusch, and Thomas Seiller</i>	26:1–26:23
Polynomial Termination Over \mathbb{N} Is Undecidable <i>Fabian Mitterwallner and Aart Middeldorp</i>	27:1–27:17
Compositional Confluence Criteria <i>Kiraku Shintani and Nao Hirokawa</i>	28:1–28:19
Rewriting for Monoidal Closed Categories <i>Mario Alvarez-Picallo, Dan Ghica, David Sprunger, and Fabio Zanasi</i>	29:1–29:20

Stateful Structural Operational Semantics <i>Sergey Goncharov, Stefan Milius, Lutz Schröder, Stelios Tsampas, and Henning Urbat</i>	30:1–30:19
A Combinatorial Approach to Higher-Order Structure for Polynomial Functors <i>Marcelo Fiore, Zeinab Galal, and Hugo Paquet</i>	31:1–31:19
Galois Connecting Call-by-Value and Call-by-Name <i>Dylan McDermott and Alan Mycroft</i>	32:1–32:19

■ Preface

This volume contains the proceedings of the 7th International Conference on Formal Structures for Computation and Deduction (FSCD 2022), which was held August 2–5, 2022 in Haifa, Israel, as part of the Federated Logic Conference (FLoC).

The conference (<https://fscd-conference.org/>) covers all aspects of formal structures for computation and deduction, from theoretical foundations to applications. Building on two communities, RTA (Rewriting Techniques and Applications) and TLCA (Typed Lambda Calculi and Applications), FSCD embraces their core topics and broadens their scope to include closely related areas in logics and proof theory, new emerging models of computation, as well as semantics and verification in new and challenging areas.

The FSCD program featured two invited talks given by Cynthia Kop (Radboud University Nijmegen) and Alwen Tiu (The Australian National University). In addition, a FLoC Keynote talk was given by Catuscia Palamidessi (Inria Saclay and LIX) and a FLoC Plenary talk was given by Orna Kupferman (Hebrew University). Participants also had the opportunity to participate in a special session jointly organized with the Workshop on Logical Frameworks and Meta-Languages: Theory and Practice (LFMTP), celebrating Frank Pfenning’s contributions on the occasion of his (belated) 60th birthday.

The program committee consisted of 33 members from 12 countries. Each submitted paper was reviewed by at least three PC members with the help of 45 external reviewers. The reviewing process, which included a rebuttal phase, took place over eight weeks. A total of 31 regular research papers were accepted for publication and are included in these proceedings. The Program Committee awarded the FSCD 2022 Best Paper Award by Junior Researchers to Marc Hermes and Dominik Kirst for their paper “An Analysis of Tennenbaum’s Theorem in Constructive Type Theory.”

In addition to the main program, 8 FSCD-associated workshops were held before the conference:

- IFIP-WG1.6: Annual Meeting of the IFIP Working Group 1.6 on Term Rewriting
- HoTT/UF: 7th Workshop on Homotopy Type Theory/Univalent Foundations
- IWC: 11th International Workshop on Confluence
- LFMTP: International Workshop on Logical Frameworks and Meta-Languages: Theory and Practice
- Linearity-TLLA: 3rd Joint International Workshop on Linearity in Logic and Computer science and its Applications
- TERMGRAPH: 12th International Workshop on Computing with Terms and Graphs
- WiL: 6th Workshop on Women in Logic
- WPTE: 9th International Workshop on Rewriting Techniques for Program Transformations and Evaluation

This volume of FSCD 2021 is published in the LIPIcs series under a Creative Commons license: online access is free to all papers and authors retain rights over their contributions. We thank the Leibniz Center for Informatics at Schloss Dagstuhl, in particular Michael Wagner and Michael Didas for their prompt replies to any questions regarding the production of these proceedings.

Many people have contributed to the success of FSCD 2022. On behalf of the Program Committee, I thank the authors of submitted papers for considering FSCD as a venue for their work. The Program Committee and the external reviewers deserve special thanks for their careful review and evaluation of the submitted papers. We also thank all invited speakers for

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Editor: Amy P. Felty



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enriching both FSCD and FLoC with their talks. In addition, we acknowledge the important contributions of the workshop organizers who were enthusiastic about co-locating with FSCD; their efforts helped to ensure that workshops continue to be an important element of FSCD. Nachum Dershowitz, the Conference Chair for FSCD 2022, deserves a warm thanks for the organization of FSCD 2022 and for producing the web site. Carsten Fuhs, as Publicity Chair, made a significant contribution in advertising the conference. The steering committee provided excellent guidance in setting up this meeting and in ensuring that FSCD will have a bright and enduring future. Thanks also to the FLoC Organizing Committee, Program Committee, and Steering Committee for their tireless work in coordinating the overall effort of this large event. Finally, I thank all participants of the conference for creating a lively and interesting event, especially after two consecutive years of virtual-only events.

FSCD 2022 was held in-cooperation with ACM SIGLOG and ACM SIGPLAN. As part of FLoC, it was also supported by AWS, Meta, Intel, Google, Synopsis, Cadence, DLVSystem, Veridise, Technion, and The Henry and Marilyn Taub Faculty of Computer Science at Technion.

Amy Felty
Program Chair of FSCD 2022

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