

# **18th International Workshop on Types for Proofs and Programs**

**TYPES 2011, September 8–11, 2011, Bergen, Norway**

Edited by  
**Nils Anders Danielsson**  
**Bengt Nordström**



*Editors*

Nils Anders Danielsson, Bengt Nordström  
Department of Computer Science and Engineering  
Chalmers University of Technology and University of Gothenburg  
[nad@chalmers.se](mailto:nad@chalmers.se), [bengt@chalmers.se](mailto:bengt@chalmers.se)

*ACM Classification 1998*

D.1.1 Applicative (Functional) Programming, D.2.4 Software/Program Verification, F.3.1 Specifying and Verifying and Reasoning about Programs, F.4.1 Mathematical Logic

**ISBN 978-3-939897-49-1**

*Published online and open access by*

Schloss Dagstuhl – Leibniz-Zentrum für Informatik GmbH, Dagstuhl Publishing, Saarbrücken/Wadern, Germany. Online available at <http://www.dagstuhl.de/dagpub/978-3-939897-49-1>.

*Publication date*

January, 2013

*Bibliographic information published by the Deutsche Nationalbibliothek*

The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available in the Internet at .

*License*

This work is licensed under a Creative Commons Attribution-NoDerivs 3.0 Unported license:



<http://creativecommons.org/licenses/by-nd/3.0/legalcode>.

In brief, this license authorizes each and everybody to share (to copy, distribute and transmit) the work under the following conditions, without impairing or restricting the authors' moral rights:

- Attribution: The work must be attributed to its authors.
- No derivation: It is not allowed to alter or transform this work.

The copyright is retained by the corresponding authors.

Digital Object Identifier: 10.4230/LIPIcs.TYPES.2011.i

**ISBN 978-3-939897-49-1**

**ISSN 1868-8969**

**[www.dagstuhl.de/lipics](http://www.dagstuhl.de/lipics)**

## **Contents**

Preface	vii
List of Authors	ix
Non-constructive complex analysis in Coq <i>Aloïs Brunel</i> .....	1
Infinitary Rewriting Coinductively <i>Jörg Endrullis and Andrew Polonsky</i> .....	16
A new approach to the semantics of model diagrams <i>Johan G. Granström</i> .....	28
Testing versus proving in climate impact research <i>Cezar Ionescu and Patrik Jansson</i> .....	41
Verification of redecoration for infinite triangular matrices using coinduction <i>Ralph Matthes and Celia Picard</i> .....	55