28th International Conference on Types for Proofs and Programs

TYPES 2022, June 20–25, 2022, LS2N, University of Nantes, France

Edited by

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LIPIcs – Vol. 269 – TYPES 2022 www.dagstuhl.de/lipics

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ACM Classification 2012
Theory of computation → Type theory; Theory of computation → Type structures; Computing methodologies → Representation of mathematical objects; Theory of computation → Interactive proof systems; Theory of computation → Logic; Theory of computation → Logic and verification; Theory of computation → Proof theory; Theory of computation → Constructive mathematics; Theory of computation → Linear logic; Theory of computation → Process calculi; Software and its engineering → Formal software verification; Security and privacy → Systems security

ISBN 978-3-95977-285-3

Published online and open access by
Schloss Dagstuhl – Leibniz-Zentrum für Informatik GmbH, Dagstuhl Publishing, Saarbrücken/Wadern, Germany. Online available at https://www.dagstuhl.de/dagpub/978-3-95977-285-3.

Publication date
August, 2023

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 https://portal.dnb.de.

Digital Object Identifier: 10.4230/LIPIcs.TYPES.2022.0

ISBN 978-3-95977-285-3 **ISSN 1868-8969** **https://www.dagstuhl.de/lipics**

LIPIcs – Leibniz International Proceedings in Informatics

LIPIcs is a series of high-quality conference proceedings across all fields in informatics. LIPIcs volumes are published according to the principle of Open Access, i.e., they are available online and free of charge.

ISSN 1868-8969

https://www.dagstuhl.de/lipics

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Leibniz International Proceedings in Informatics
LIPICS Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany

Preface

The TYPES meetings are a forum to present new and ongoing work in all aspects of type theory and its applications, especially in formalised and computer assisted reasoning and computer programming. This volume constitutes the post-proceedings of the 28th International Conference on Types for Proofs and Programs, TYPES 2022, that was held in LS2N, University of Nantes, from 20 to 25 June 2022.

The meetings from 1990 to 2008 were annual workshops corresponding to five consecutive EU-funded networking projects. Since 2009, TYPES has been run as an independent conference series. Previous TYPES meetings were organised by Antibes (1990), Edinburgh (1991), Båstad (1992), Nijmegen (1993), Båstad (1994), Torino (1995), Aussois (1996), Kloster Irsee (1998), Lökeberg (1999), Durham (2000), Berg en Dal near Nijmegen (2002), Torino (2003), Jouy-en-Josas near Paris (2004), Nottingham (2006), Cividale del Friuli (2007), Torino (2008), Aussois (2009), Warsaw (2010), Bergen (2011), Toulouse (2013), Paris (2014), Tallinn (2015), Novi Sad (2016), Budapest (2017), Braga (2018), Oslo (2019), Turin (2020), Leiden (2021). The two last meetings were virtual, because of the SARSCoV-2 pandemics.

The TYPES areas of interest include, but are not limited to: Foundations of type theory and constructive mathematics; Homotopy type theory; Applications of type theory; Dependently typed programming; Industrial uses of type theory technology; Meta-theoretic studies of type systems; Proof assistants and proof technology; Automation in computer-assisted reasoning; Links between type theory and functional programming; Formalizing mathematics using type theory; Type theory in linguistics.

The TYPES conferences are all based on contributed talks based on short abstracts; reporting work in progress and work presented or published elsewhere. A post-proceedings volume is prepared after the conference, whose papers must represent unpublished work. Submitted papers to the post-proceedings are subject to a full peer-review process.

The conference programme of TYPES 22 consisted of 14 long contributed talks (20 minutes), 57 short contributed talks (10 min), and four invited talks (one hour) by Youyou Cong (Tokyo Institute of Technology), Ekaterina Komendantskaya (Heriot-Watt University), Sam Lindley (University of Edinburgh) and Leonardo de Moura (Microsoft Research). The conference was a successful event with 138 registered participants. All the details of the conference can be found at `https://types22.inria.fr`.

Concerning the post-proceedings, 18 papers were initially submitted, out of which 15 were accepted. We thank all the authors and reviewers for their hard work to make this possible! Finally, we would like to thank CNRS, Inria, and the COST Action CA20111 for sponsoring the conference, and Nantes Université and LS2N for kindly covering the costs of the post-proceedings.

Delia Kesner and Pierre-Marie Pédrot, June 2023.

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