25th International Conference on Types for Proofs and Programs

TYPES 2019, June 11–14, 2019, Oslo, Norway

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Preface

This volume constitutes the post-proceedings of the *25th International Conference on Types for Proofs and Programs, TYPES 2019*, held in Oslo, Norway, 11–14 June 2019.

The TYPES meetings are a forum to present new and on-going work in all aspects of type theory and its applications, especially in formalised and computer assisted reasoning and computer programming. The meetings from 1990 to 2008 were annual workshops of a sequence of five EU-funded networking projects. Since 2009, TYPES has been run as an independent conference series. Previous TYPES meetings were held in 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), and Braga (2018).

The TYPES areas of interest include, but are not limited to: foundations of type theory and constructive mathematics; 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.

The TYPES conferences are of open and informal character. Selection of contributed talks is based on short abstracts; reporting work in progress and work presented or published elsewhere is welcome. A formal post-proceedings volume is prepared after the conference; papers submitted to that volume must represent unpublished work and are subjected to a full peer-review process.

TYPES 2019 was held in parallel with HoTT-UF, the workshop on Homotopy Type Theory and Univalent Foundations, 12–14 June 2019, in Oslo. Wednesday 12 June the two events had a joint programme. Both events were part of the Special Year 2018/19 on Homotopy Type Theory and Univalent Foundations at the Centre for Advanced Study (CAS) at the Norwegian Academy of Science and Letters.

The program of the conference consisted of 50 contributed short presentations and four invited lectures of one hour. The invited lecturers were: Adam Chlipala, Conor McBride, Assia Mahboubi and Stephanie Weirich. The combined events TYPES 2019 and HoTT-UF gathered 115 participants from around 20 countries.

There were 12 submissions to this open post-proceedings volume, the large majority related to presentations at the conference. After a thorough peer-review procedure of two rounds, 10 submissions could be accepted for publication. We thank all authors, reviewers, and members of the program committee for their contribution to this volume.

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Marc Bezem and Assia Mahboubi, July 2020

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