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Implementation and Application of Functional Languages

22nd International Symposium, IFL 2010
Alphen aan den Rijn, The Netherlands
September 1-3, 2010
Revised Selected Papers

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Preface

This volume contains the selected peer-reviewed revised articles that were presented at the 22nd International Symposium on Implementation and Application of Functional Languages (IFL 2010). IFL 2010 was held September 1–3, 2010 at Avifauna in Alphen aan den Rijn, The Netherlands. It was hosted by the Software Technology group of Utrecht University.

The IFL symposia bring together researchers and practitioners that are actively engaged in the implementation and the use of functional and function-based programming languages. This year, IFL was attended by 65 participants from Belgium, Bolivia, Brazil, Denmark, Estonia, France, Germany, Greece, Hungary, The Netherlands, Poland, Spain, Sweden, the UK, and the USA. Every year IFL provides a venue for the presentation and discussion of new ideas and concepts, of work in progress, and of publication-ripe results. Participants are invited to submit either a draft paper or an extended abstract describing work to be presented at the symposium. These submissions are screened by the Program Committee Chair to make sure they are within the scope of IFL. The submissions accepted for presentation appear in the *draft* proceedings distributed at the symposium. IFL 2010 featured a total of 39 submitted presentations.

Submissions appearing in the draft proceedings are not peer-reviewed publications. After the symposium, authors were given the opportunity to consider the feedback received from discussions at the symposium and were invited to submit full revised articles to the formal review process. In total, 31 full papers were submitted. The revised submissions were reviewed by the Program Committee using prevailing academic standards (four reviews per paper) and after plenty of discussion, 13 submissions were chosen to appear in the formal proceedings that are contained in this volume.

Johan Nordlander was the IFL 2010 guest speaker from Luleå University. He is the main designer and developer of the Timber language. In his talk he discussed the craft of building applications with Timber, a programming language that claims to be purely functional, classically object-oriented and inherently concurrent at the same time, while also fostering a purely reactive model of interaction that naturally lets its real-time behavior be controlled by declaration.

Following the IFL tradition, IFL 2010 provided participants with an opportunity to get to know each other and to talk outside the formal setting of presentations with a social event on the second day of the symposium. Participants traveled to the city of Utrecht to visit the Dom tower and the Speelklokkenmuseum. The latter is a museum that displays a large range of old programmable musical instruments. After this visit, we returned to Alphen aan den Rijn and embarked for a boat trip over the Dutch lakes. The sun setting over the lakes was one of the high points of IFL 2010.

Shortly before the previous edition of IFL, Peter J. Landin passed away. IFL has honored Peter since 2003 by awarding each year the *Peter J. Landin Award* to the best article presented at the symposium. The recipients of the award for IFL 2010 were George Giorgidze, Torsten Grust, Tom Schreiber, and Jeroen Weijers from the Eberhard Karls Universität Tübingen in Germany for their contribution entitled “Haskell Boards the Ferry: Database-Supported Program Execution for Haskell.”

Many people contributed to the success of IFL 2010. A debt of gratitude for addressing every need that came up during the symposium is owed to Sean Leather, José Pedro Magalhães, and Jan Rochel. From the Department of Information and Computing Sciences, we are grateful for the help provided by Doaitse Swierstra, Wilke Schram, Marinus Veldhorst, Edith Stap, Frans Wiering, Geraldine Leebeek, Martijn Dekker, and Corine Jolles. We were fortunate to use the portal of the UU Summer Schools for registration; we thank in particular Marc Gebuis and Roos Nieuwenhuizen for their continuing support. The people at Avifauna, in particular Marit van der Louw, Suzanne Oldenburg, and Victor Galjé, helped us with the local planning. We thank the people at Springer for their willingness to answer questions regarding the construction of this volume. We thank all the members of the Program Committee for their advice, time, and thoughtful reviews. Finally, we thank the authors for submitting their articles and trusting that we would do our best to positively showcase their work.

IFL 2010 was made possible by the generous support provided by Microsoft Research, Cambridge, the Department of Information and Computing Sciences of Utrecht University, and the Koninklijke Nederlandse Academie van Wetenschappen (KNAW).

In closing, we hope that the readers of this volume will find its contents engaging and inspire them to start or continue their work on the implementation and the use of functional languages. Make sure to join us at a future version of IFL!

June 2011

Jurriaan Hage
Marco T. Morazán

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