

Preface

This volume contains the papers presented at the 20th International Conference on Implementation and Application of Automata (CIAA 2015), which was organized by the Department of Computing Science at Umeå University, Sweden, and took place at Umeå Folkets hus during August 18–21, 2015.

The CIAA conference series is the major international venue for the dissemination of new results in the implementation, application, and theory of automata. The previous 19 conferences were held in various locations all around the globe: Blois (2011), Giessen (2014), Halifax (2013), Kingston (2004), London Ontario (WIA 1997, WIA 1996, and 2000), Nice (2005), Porto (2012), Potsdam (WIA 1999), Prague (2007), Pretoria (2001), Rouen (WIA 1998), San Francisco (2008), Santa Barbara (2003), Sydney (2009), Taipei (2006), Tours (2002), and Winnipeg (2010).

The topics of this volume include cover automata, counter automata, decision algorithms on automata, descriptive complexity, expressive power of automata, homing sequences, jumping finite automata, multidimensional languages, parsing and pattern matching, quantum automata, realtime pushdown automata, random generation of automata, regular expressions, security issues, sensors in automata, transducers, transformation of automata, and weighted automata.

In total, 49 papers were submitted by authors in 20 different countries: Brazil, Canada, Czech Republic, Finland, France, Germany, Hungary, India, Israel, Italy, Japan, South Korea, Norway, Poland, Portugal, Russia, South Africa, Sweden, the UK, and the USA. Each of these papers was reviewed by at least three reviewers and thoroughly discussed by the Program Committee, which resulted in the selection of 22 papers for presentation at the conference and publication in this volume. Four invited talks were given by Benedikt Bollig, Christof Löding, Andreas Maletti, and Bruce Watson. In addition to these contributions, the volume contains two short papers about tool demonstrations that were given at the conference.

I am very thankful to all invited speakers, authors of submitted papers, system demonstrators, Program Committee members, and external reviewers for their valuable contributions and help. Without them, CIAA 2015 could not have been realized. The entire process from the original submissions to collecting the final versions of papers was greatly simplified by the use of the EasyChair conference management system.

I would furthermore like to thank the editorial staff at Springer, and in particular Alfred Hofmann and Anna Kramer, for their guidance and help during the process of publishing this volume, and Camilla Andersson at the conference site Umeå Folkets hus for her help with all the practical preparations.

CIAA 2015 was financially supported by (a) the Department of Computing Science at Umeå University, (b) the conference fund of Umeå Municipality, the County Council of Västerbotten and Umeå University, (c) the Faculty of Science and Technology at Umeå University, and (d) the Swedish Research Council, who provided generous funding for invited speakers.

Last but by no means least, I wish to thank the local Organizing Committee consisting of the members of the research group Foundations of Language Processing, namely, Suna Bensch, Henrik and Johanna Björklund, Loek Cleophas, Petter Ericson, Yonas Woldemariam, and Niklas Zechner for their help.

We are now looking forward to CIAA 2016 at Yonsei University, Seoul, in South Korea.

August 2015

Frank Drewes

Implementation and Application of Automata
20th International Conference, CIAA 2015, Umeå,
Sweden, August 18-21, 2015, Proceedings
Drewes, F. (Ed.)
2015, XXIII, 317 p. 60 illus., Softcover
ISBN: 978-3-319-22359-9