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Jan M. Baetens · Martin Kutrib (Eds.)

Cellular Automata and Discrete Complex Systems

24th IFIP WG 1.5 International Workshop, AUTOMATA 2018
Ghent, Belgium, June 20–22, 2018
Proceedings

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Preface

The 24th International Workshop on Cellular Automata and Discrete Complex Systems (AUTOMATA 2018) was held in Ghent, Belgium, during June 20–22, 2018. It was organized by the Research Unit Knowledge-Based Systems of the Department of Data Analysis and Mathematical Modelling of Ghent University. The event was an IFIP Working Conference and it hosted the annual meeting of the IFIP Working Group 1.5.

AUTOMATA 2018 continued an annual series of events established in 1995. In particular, the aims of the workshops are:

- To establish and maintain a permanent, international, multidisciplinary forum for the collaboration of researchers in the field of cellular automata (CA) and discrete complex systems (DCS)
- To provide a platform for presenting and discussing new ideas and results
- To support the development of theory and applications of CA and DCS (for example, parallel computing, physics, biology, social sciences, and others) as far as fundamental aspects and their relations are concerned
- To identify and study within an inter- and multidisciplinary context, the important fundamental aspects, concepts, notions, and problems concerning CA and DCS

This volume contains the full papers accepted for AUTOMATA 2018. We would like to thank the following invited speakers for accepting the invitations and presenting several diverse perspectives on CA.

- Henryk Fukś (Brock University, St. Catharines, Canada)
- Andrew Adamatzky (University of the West of England, Bristol, UK)
- Michael Schreckenberg (Universität Duisburg-Essen, Duisburg, Germany)

There were 16 full papers submitted to AUTOMATA 2018 by a total of 31 authors from eight different countries, from all over the world. Each submission was evaluated by three or four Program Committee members. Based on the reviews and discussions, the committee decided to accept ten full papers to be presented at the conference and to be included in the proceedings. We would like to thank all authors for their contributions and work, without which this event would not have been possible. The conference program also involved short presentations of exploratory papers that are not included in these proceedings, and we wish to extend our thanks also to the authors of the exploratory submissions.

We warmly thank the members of the Program Committee for their excellent work in making this selection. We also thank the additional external reviewers for their careful evaluation. All these efforts were the basis for the success of the workshop. The collaboration with Springer for preparing this volume was very efficient and pleasant. We are also grateful to the remaining members of the local Organizing Committee, Aisling Daly, Bernard De Baets, Jan Roels, Renaud Lambiotte, Ruth Vandendriessche, and Tim Depraetere. Finally, we are indebted to all participants for attending the

workshop. We hope that this workshop will be a successful and fruitful meeting, will bear new ideas for investigations, and will bring together people for new scientific collaborations.

July 2018

Jan M. Baetens
Martin Kutrib

Organization

AUTOMATA 2018 was organized by the Research Unit Knowledge-Based Systems of the Department of Data Analysis and Mathematical Modelling of Ghent University. The conference took place at the Ghent University Conference Centre Het Pand.

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