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Implementation and Application of Automata

17th International Conference, CIAA 2012
Porto, Portugal, July 17-20, 2012
Proceedings



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Preface

The 17th International Conference on Implementation and Application of Automata (CIAA 2012) was held at the Faculdade de Ciências da Universidade do Porto, in Porto, Portugal during July 17–20, 2012.

The CIAA conference series is one of the major annual conferences for researchers, application developers, and users of automata-based systems. The topics of the conference include automata applications in, for example, formal verification methods, natural language processing, pattern matching, data storage and retrieval, and bioinformatics, as well as theoretical work on automata theory. Sixteen previous CIAA conferences took place in: Blois (2011), Winnipeg (2010), Sydney (2009), San Francisco (2008), Prague (2007), Taipei (2006), Nice (2005), Kingston (2004), Santa Barbara (2003), Tours (2002), Pretoria (2001), London Ontario (2000), Potsdam (WIA 1999), Rouen (WIA 1998), London Ontario (WIA 1997), London Ontario (WIA 1996).

For the editors, the CIAA was always synonymous with Sheng Yu's presence, commitment, and enthusiasm. He was in great part responsible for the idea of having the conference in Porto, and when he unexpectedly passed away, this year, it was naturally a great shock. The CIAA community will miss his profound knowledge, and his invaluable and innovative contribution to the area. We will miss also his friendship and immense kindness.

This volume of *Lecture Notes in Computer Science* contains the invited contributions and the accepted papers presented at CIAA 2012. The submission and refereeing process was supported by the EasyChair conference management system. The 53 papers submitted to CIAA 2012 were from 21 countries all over the world, including Algeria, Canada, China, Czech Republic, France, Germany, Greece, Iran, Italy, Japan, The Netherlands, Poland, Portugal, Russian Federation, Slovakia, South Africa, Spain, Thailand, Turkey, UK, and USA. Each submission was reviewed by at least three referees and discussed by the members of the Program Committee. A total of 21 regular papers and seven short papers were selected for presentation at the conference. There were five invited talks presented by Janusz Brzozowski, Paul Gastin, José Nuno Oliveira, Grzegorz Rozenberg, and Kai Salomaa. We warmly thank the invited speakers and all the authors of the submitted papers. Their efforts were the basis for the success of the conference.

We would like to thank all the members of the Program Committee and the external referees, for their work in evaluating the papers and their valuable comments that led to the selection of the contributed papers.

We thank Alfred Hofmann and Elke Werner from Springer for their help in making this volume available before the conference.

We are grateful to all the members of the Organizing Committee for their efforts in the preparation of the scientific sessions and social events. A special

thank goes to José Pedro Rodrigues for his help in the graphic design for all the conference materials. Thanks also go to the staff, our colleagues, and the students Ivone Amorim, Rizó Isrfov, Eva Maia, Davide Nabais, and David Pereira, among others, of the Department of Computer Science of FCUP.

We want to thank the European Association for Theoretical Computer Science (EATCS) for the scientific sponsorship, and Universidade do Porto (UP), Universidade da Beira Interior (UBI), Centro de Matemática da Universidade do Porto (CMUP), Laboratório de Inteligência Artificial e Ciência de Computadores (LIACC), Câmara Municipal do Porto, Multicert, and iTech-ON for their kind financial support. Finally, we would like to thank all the participants of CIAA 2012. Looking forward to CIAA 2013 in Halifax, Nova Scotia, Canada.

July 2012

Nelma Moreira
Rogério Reis

Organization

CIAA 2012 was organized by Faculdade de Ciências da Universidade do Porto with the support of Universidade da Beira Interior.

Invited Speakers

Janusz Brzozowski	University of Waterloo, Canada
Paul Gastin	ENS de Cachan, France
José Nuno Oliveira	Universidade do Minho, Portugal
Grzegorz Rozenberg	Leiden Center for Natural Computing, The Netherlands
Kai Salomaa	Queen's University, Kingston, Canada

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Kai Salomaa	Queen's University, Kingston, Canada

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Hsu-Chun Yen	National Taiwan University, Taiwan
Sheng Yu	University of Western Ontario, Canada

Additional Referees

Cyril Allauzen	Szymon Grabowski	Damien Nouvel
Rajeev Alur	Hermann Gruber	Scott Owens
Ivone Amorim	Peter Habermehl	Beatrice Palano
Nathalie Aubrun	Brent Heeringa	Xiaoxue Piao
Franziska Biegler	Lucian Ilie	Elena Pribavkina
Fabienne Braune	Christina Jansen	Daniel Quernheim
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Jeong-Won Cha	Derrick Kourie	Pierre Rety
Alessandra Cherubini	Yoshiyuki Kunimochi	Michael Riley
Salimur Choudhury	Giuseppe Lami	Abiel Roche-Lima
Loek Cleophas	António Machiavelo	Emanuele Rodaro
Flavio D'Alessandro	Kalpana Mahalingam	Mathieu Sablik
Manfred Droste	Eva Maia	Shinnosuke Seki
Krystian Dudzinski	Katja Meckel	Tinus Strauss
Szilard Zsolt Fazekas	Ludovic Mignot	Jean-Marc Talbot
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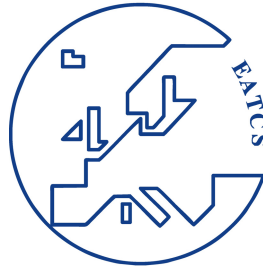
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