

Preface

This volume contains a selection of papers presented at the 15th International Conference on Membrane Computing (CMC 15), held in Prague, Czech Republic, during August 20–22, 2014 (<http://cmc15.slu.cz>).

The CMC series was initiated by Gheorghe Păun as the Workshop on Multiset Processing in the year 2000. Then two workshops on Membrane Computing were organized in Curtea de Argeș, Romania, in 2001 and 2002. A selection of papers from each of these three meetings was published as volume 2235 of the Lecture Notes in Computer Science series, as a special issue of *Fundamenta Informaticae* (volume 49, numbers 1–3, 2002), and as volume 2597 of *Lecture Notes in Computer Science*, respectively. The next six workshops took place in Tarragona, Spain (in July 2003), Milan, Italy (in June 2004), Vienna, Austria (in July 2005), Leiden, The Netherlands (in July 2006), Thessaloniki, Greece (in June 2007), and Edinburgh, UK (in July 2008), with the proceedings published in *Lecture Notes in Computer Science* as volumes 2933, 3365, 3850, 4361, 4860, and 5391, respectively. The 10th workshop returned to Curtea de Argeș in August 2009 (LNCS volume 5957).

From the year 2010, the series of meetings on membrane computing continued as the Conference on Membrane Computing with the 2010, 2011, 2012, and 2013 editions held in Jena, Germany (LNCS volume 6501), Fontainebleau, France (LNCS volume 7184), Budapest, Hungary (LNCS volume 7762), and Chișinău, Republic of Moldova (LNCS volume 8340), respectively. Nowadays a Steering Committee takes care of the continuation of the CMC series which is organized under the auspices of the European Molecular Computing Consortium (EMCC). A regional version of CMC, the Asian Conference on Membrane Computing, ACMC, started with 2012 edition in Wuhan, China and continued with 2013 and 2014 editions held in Chengdu, China and Coimbatore, India.

CMC 15 was organized by the Institute of Computer Science of the Faculty of Philosophy and Science, Silesian University in Opava, in collaboration with the Action M Agency, Prague. A special session was dedicated to the memory of Prof. Yuri Rogozhin, the main organizer of the CMC 14, a world-class mathematician and computer scientist and, last but not least, a dear friend of many participants of the CMC series.

Invited lectures were given by Luděk Cienciala (Czech Republic), Erzsébet Csuhaj-Varjú (Hungary), Mario J. Pérez Jiménez (Spain), Jiří Wiedermann (Czech Republic), and Claudio Zandron (Italy). Based on the votes of the CMC 15 participants, the Best Paper Award for this year's CMC Conference was given to Alberto Leporati, Luca Manzoni, Giancarlo Mauri, Antonio E. Porreca, and Claudio Zandron for their paper "Simulating Elementary Active Membranes with an Application to the P Conjecture."

In addition to the texts of the invited talks, this volume contains 19 papers out of the 24 presented at the Conference and two papers selected from the 22 presented at the

ACMC 2014. Each paper was subject to at least two referee reports for the Conferences and of an additional one for this volume.

The editors warmly thank the Program Committee, the invited speakers, the authors of the papers, the reviewers, and all the participants for their contributions to the success of CMC 15.

November 2014

Marian Gheorghe
Grzegorz Rozenberg
Arto Salomaa
Petr Sosik
Claudio Zandron



<http://www.springer.com/978-3-319-14369-9>

Membrane Computing

15th International Conference, CMC 2014, Prague,
Czech Republic, August 20-22, 2014, Revised Selected
Papers

Gheorghe, M.; Rozenberg, G.; Salomaa, A.; Sosík, P.;
Zandron, C. (Eds.)

2014, XIX, 397 p. 72 illus., Softcover

ISBN: 978-3-319-14369-9