Preface

The 14th Brainstorming Week on Membrane Computing (BWMC) was held in Sevilla, from February 1 to February 5, 2016, in the organization of the Research Group on Natural Computing (RGNC) from the Department of Computer Science and Artificial Intelligence of Universidad de Sevilla. The first edition of BWMC was organized at the beginning of February 2003 in Rovira i Virgili University, Tarragona, and all the next editions took place in Sevilla at the beginning of February, each year.

In the style of previous meetings in this series, the 14th edition of BWMC was conceived as a period of active interaction among the participants, with the emphasis on exchanging ideas and cooperation. Several "provocative" talks were delivered, mainly devoted to open problems, research topics, conjectures waiting for proofs, followed by an intense cooperation among the 40 participants – see the list in the end of this preface. The efficiency of this type of meetings was again proved to be very high and the present volume illustrates this assertion.

The 2016 edition of the Brainstorming enjoyed a special visit from a group of undergraduate Physics students, under the initiative of Prof. Ricardo Graciani-Díaz, from the University of Barcelona. Their presence and interest was a powerful catalyst for many interactions, which have given rise to a couple of papers in this volume. In addition, each student wrote a short note on his/her experience.

The papers included in this volume, arranged in the alphabetic order of the authors, were collected in the form available at a short time after the brainstorming; several of them are still under elaboration. The idea is that the proceedings are a working instrument, part of the interaction started during the stay of authors in Sevilla, meant to make possible a further cooperation, this time having a written support.

A selection of papers from this volume will be considered for publication in special issues of *Theoretical Computer Science*, which will also contain a selection of papers from ACMC 2016 (the Asian Conference on Membrane Computing, to be held at Universiti Kebangsaan, in November 14th-16th).

After each BWMC, one or two special issues of various international journals were published. Here is their list:

- BWMC 2003: *Natural Computing* – volume 2, number 3, 2003, and *New Generation Computing* – volume 22, number 4, 2004;
- BWMC 2004: *Journal of Universal Computer Science* – volume 10, number 5, 2004, and *Soft Computing* – volume 9, number 5, 2005;
- BWMC 2005: *International Journal of Foundations of Computer Science* – volume 17, number 1, 2006);
- BWMC 2006: *Theoretical Computer Science* – volume 372, numbers 2-3, 2007;
- BWMC 2007: *International Journal of Unconventional Computing* – volume 5, number 5, 2009;
- BWMC 2008: *Fundamenta Informaticae* – volume 87, number 1, 2008;
- BWMC 2009: *International Journal of Computers, Control and Communication* – volume 4, number 3, 2009;
- BWMC 2010: *Romanian Journal of Information Science and Technology* – volume 13, number 2, 2010;
- BWMC 2011: *International Journal of Natural Computing Research* – volume 2, numbers 2-3, 2011;
- BWMC 2012: *International Journal of Computer Mathematics* – volume 99, number 4, 2013;
- BWMC 2013: *Romanian Journal of Information Science and Technology*, vol. 17, nr. 1, 2014;
- BWMC 2014: *Fundamenta Informaticae*, volume 134, numbers 1-2, 2014;
- BWMC 2015: *Natural Computing* – 2016.

Other papers elaborated during the fourteenth BWMC will be submitted to other journals or to suitable conferences. The reader interested in the final version of these papers is advised to check the current bibliography of membrane computing available in the domain website `http://ppage.psystems.eu`.

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The list of participants as well as their email addresses are given below, with the aim of facilitating the further communication and interaction:

1. María Arazo-Sánchez, University of Barcelona (Spain)
   `maria.arazo@gmail.com`
2. Fernando Arroyo-Montoro, Universidad Politécnica de Madrid (Spain)
   `farroyo@eui.upm.es`
3. Marc Barroso-Mancha, University of Barcelona (Spain)
   `marc.barroso4@gmail.com`
4. Diego R. Cabrera-Mendieta, Univ. Politécnica Salesiana (Ecuador)
   `dcabrera@ups.edu.ec`
5. Juan B. Castellanos-Peñuelas, Universidad Politécnica de Madrid (Spain)
   `jcastellanos@fi.upm.es`

6. Rodica Ceterchi, University of Bucharest (Romania)
   `rceterchi@gmail.com`
7. Erzsébet Csuhaj-Varjú, Eötvös Loránd University (Hungary)
   `csuhaj@inf.elte.hu`
8. Rudolf Freund, TU Wien (Austria)
   `rudi@emcc.at`
9. Zsolt Gazdag, Eötvös Loránd University (Hungary)
   `gazdagzs@inf.elte.hu`
10. Marian Gheorghe, University of Bradford (UK)
    `m.gheorghe@bradford.ac.uk`
11. Carmen Graciani, Universidad de Sevilla (Spain)
    `cgdiaz@us.es`
12. Ricardo Graciani-Díaz, University of Barcelona (Spain)
    `graciani@icc.ub.edu`
13. José Luis Guisado-Lizar, Universidad de Sevilla (Spain)
    `jlguisado@us.es`
14. Miguel Ángel Gutiérrez-Naranjo, Universidad de Sevilla (Spain)
    `magutier@us.es`
15. Sergiu Ivanov, Université Paris Est (France)
    `sergiu.ivanov@u-pec.fr`
16. Kristóf Kántor, University of Debrecen (Hungary)
    `kantor.kristof@inf.unideb.hu`
17. Gábor Kolonits, Eötvös Loránd University (Hungary)
    `kolomax@inf.elte.hu`
18. Alberto Leporati, Università degli Studi di Milano-Bicocca (Italy)
    `leporati@disco.unimib.it`
19. Luis Felipe Macías-Ramos, Universidad de Sevilla (Spain)
    `lfmaciasr@us.es`
20. Luca Manzoni, Università degli Studi di Milano-Bicocca (Italy)
    `luca.manzoni@disco.unimib.it`
21. Giancarlo Mauri, Università degli Studi di Milano-Bicocca (Italy)
    `mauri@disco.unimib.it`
22. Víctor Méndez-Muñoz, Autonomous University of Barcelona (Spain)
    `vmendez@caos.uab.cat`
23. Alejandro Millán-Calderón, Universidad de Sevilla (Spain)
    `amillan@us.es`
24. Laura Moreno-Valero, University of Barcelona (Spain)
    `95morenolaura@gmail.com`
25. David Orellana-Martín, Universidad de Sevilla (Spain)
    `dorellana@us.es`
26. Gheorghe Păun, Universidad de Sevilla (Spain) and Institute of Mathematics
    of the Romanian Academy (Romania)
    `gpaun@us.es`

27. Mario de Jesús Pérez-Jiménez, Universidad de Sevilla (Spain)
    `marper@us.es`
28. Antonio E. Porreca, Università degli Studi di Milano-Bicocca (Italy)
    `porreca@disco.unimib.it`
29. Ariadna Ribes-Metidieri, University of Barcelona (Spain)
    `aribesmetidieri@gmail.com`
30. Patricia Ribes-Metidieri,University of Barcelona (Spain)
    `ribesmetidieri@gmail.com`
31. Agustín Riscos-Núñez, Universidad de Sevilla (Spain)
    `ariscosn@us.es`
32. Gábor Román, Eötvös Loránd University (Hungary)
    `romangabor@caesar.elte.hu`
33. Álvaro Romero-Jiménez, Universidad de Sevilla (Spain)
    `romero.alvaro@us.es`
34. José María Sempere-Luna, Polytechnic University of Valencia (Spain)
    `jsempere@dsic.upv.es`
35. Petr Sosík, University of Opava (Czech Republic)
    `petr.sosik@fpf.slu.cz`
36. Óscar de la Torre Pérez, University of Barcelona (Spain)
    `oscar.delatorre.perez@gmail.com`
37. Luis Valencia-Cabrera, Universidad de Sevilla (Spain)
    `lvalencia@us.es`
38. György Vaszil, University of Debrecen (Hungary)
    `vaszil.gyorgy@inf.unideb.hu`
39. Ana Ventura-Barroso, University of Barcelona (Spain)
    `a.venturabarroso@gmail.com`
40. Julián Viejo-Cortés, Universidad de Sevilla (Spain)
    `julian@dte.us.es`

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Mario J. Pérez-Jiménez
Agustín Riscos-Núñez
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