
Preface

These proceedings, consisting in two volumes, contain the papers emerged from the Tenth Brainstorming Week on Membrane Computing (BWMC), held in Sevilla, from January 30 to February 3, 2012, in the organization of the Research Group on Natural Computing from the Department of Computer Science and Artificial Intelligence of Sevilla University. 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.

The 2012 edition of BWMC was organized in conjunction with the First International Conference on Developments in Membrane Computing (ICDMC2012).

In the style of previous meetings in this series, the tenth 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 volumes illustrate this assertion.

Slightly different from the previous meetings was the combination with the ICDMC2012, in the sense that several talks also had the style of a conference: more time dedicated to presenting achievements obtained by the research groups from where the participants came from, but also converging towards the style of the brainstorming, i.e., presenting frontier results, research topics, ongoing applications.

The papers included in these volumes, 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.

Selections of the papers from these volumes will be considered for publication in special issues of *Theoretical Computer Science* and of *International Journal of Computer Mathematics*.

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.

Other papers elaborated during the tenth 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.psyste.ms.eu>.

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

1. Artiom Alhazov, University of Milano - Bicocca, Italy, aartiom@yahoo.com
2. Ioan Ardelean, Institute of Biology of the Romanian Academy, Bucharest, Romania, ioan.ardelean57@yahoo.com
3. Mari Angels Colomer Cugat, University of Lleida, Spain, colomer@matematica.udl.cat
4. Erzsébet Csuhaj-Varjú, Faculty of Informatics, Eötvös Loránd University, Budapest, Hungary, csuhaj@inf.elte.hu
5. Rudolf Freund, Technological University of Vienna, Austria, rudifreund@gmx.at
6. Manuel García-Quismondo Fernández, University of Seville, Spain, mgarciaquismondo@us.es
7. Marian Gheorghe, University of Sheffield, United Kingdom, m.gheorghe@sheffield.ac.uk
8. Carmen Graciani Díaz, University of Seville, Spain, cgdiaz@us.es

9. Miguel A. Gutiérrez Naranjo, University of Seville, Spain, *magutier@us.es*
10. Florentin Ipate, University of Pitești, Romania, *florentin.ipate@ifsoft.ro*
11. Jozef Kelemen, Silesian University, Opava, Czech Republic,
jozef.kelemen@fpf.slu.cz
12. Abhay Krishna, CABIMER, Seville, Spain, *Abhay.Krishan@cabimer.es*
13. Raluca Lefticaru, University of Pitești, Romania, *raluca.lefticaru@gmail.com*
14. Alberto Leporati, University of Milano - Bicocca, Italy,
leporati@disco.unimib.it
15. Luis Felipe Macías Ramos, University of Seville, Spain, *lfmaciasr@us.es*
16. Vincenzo Manca, University of Verona, Italy, *vincenzo.manca@univr.it*
17. Luca Marchetti, University of Verona, Italy, *luca.marchetti@univr.it*
18. Miguel A. Martínez del Amor, University of Seville, Spain, *mdelamor@us.es*
19. Giancarlo Mauri, University of Milano - Bicocca, Italy, *mauri@disco.unimib.it*
20. Adam Obtulowicz, Polish Academy of sciences, Warsaw, Poland,
A.Obtulowicz@impan.pl
21. Ana Brândușa Pavel, Politehnica University of Bucharest, Romania,
anabrandusa@gmail.com
22. Gheorghe Păun, Romanian Academy, Bucharest, Romania, and University
of Seville, Spain, *gpaun@us.es*
23. Hong Peng, School of Mathematics and Computer Engineering, Xihua
University, China, *ph.xhu@hotmail.com*
24. Ignacio Pérez Hurtado de Mendoza, University of Seville, Spain, *perezh@us.es*
25. Mario de J. Pérez Jiménez, University of Seville, Spain, *marper@us.es*
26. Antonio Enrico Porreca, University of Milano - Bicocca, Italy,
porreca@disco.unimib.it
27. Raúl Reina Molina, University of Seville, Spain, *m75@gmail.com*
28. Agustín Riscos Núñez, University of Seville, Spain, *ariscosn@us.es*
29. Iurie Rogojin, Institute of Mathematics and Computer Science of the Academy
of Sciences of Moldova, Chișinău, Moldova, *yrogozhin@gmail.com*
30. Álvaro Romero Jiménez, University of Seville, Spain, *romero.alvaro@us.es*
31. Francisco José Romero Campero, University of Seville, Spain, *fran@us.es*
32. Jose María Sempere Luna, Polytechnical University of Valencia, Spain,
jsempere@dsic.upv.es
33. Petr Sosík, Silesian University, Opava, Czech Republic, and Universidad
Politécnica de Madrid, Spain, *petr.sosik@fpf.slu.cz*
34. Cristian Ștefan, University of Pitești, Romania, *liviu.stefan@yahoo.com*
35. Luis Valencia Cabrera, University of Seville, Spain, *lvalencia@us.es*
36. György Vaszil, Faculty of Informatics, University of Debrecen, Hungary,
vaszil.gyorgy@inf.unideb.hu
37. Serghéi Verlan, University of Paris Est, France, *verlan@univ-paris12.fr*
38. Jun Wang, Electrical and Information Engineering, Xihua University, China,
wj.xhu@hotmail.com
39. Claudio Zandron, University of Milano - Bicocca, Italy,
zandron@disco.unimib.it

40. Gexiang Zhang, School of Electrical Engineering, Southwest Jiaotong University, China, *gexiangzhang@gmail.com*

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Gheorghe Păun
Mario de Jesús Pérez-Jiménez
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