
Preface

The 15th Brainstorming Week on Membrane Computing (BWMC) was held in Sevilla, from January 31 to February 3, 2017, in the organization of the Research Group on Natural Computing (RGNC) 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 program was available at www.gcn.us.es/15bwmc_program

In the style of previous meetings in this series, the 15th 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 23 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 present volume is meant to be a working instrument, part of the interaction started during the stay of authors in Sevilla, making 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.

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* – volume 15, issue 4, 2016 (some papers from ACMC 2015 were also selected for this special issue).
- BWMC 2016: *Theoretical Computer Science* – in press (some papers from ACMC 2016 were also selected for this special issue).

Some of the papers elaborated during the 15th BWMC were submitted to various journals and 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>.

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

1. José Antonio Andreu-Guzmán, Universidad de Sevilla (Spain)
andreuguzman36@gmail.com
2. Lucie Cencialová, Silesian University (Opava, Czech Republic)
ciecilka@gmail.com
3. Rudolf Freund, Technological University of Vienna (Austria)
rudifreund@gmx.at
4. Carmen Graciani, Universidad de Sevilla (Spain)
cgdiaz@us.es
5. Sergiu Ivanov, Université Paris-Est Créteil (France)
sivanov@colimite.fr
6. Gábor Kolonits, Eötvös Loránd University (Hungary)
kolonits.gabor@gmail.com
7. Alberto Loporati, University of Milan-Bicocca (Italy)
leporati@disco.unimib.it
8. Francisco J. Macías-García, Universidad de Sevilla (Spain)
franmaciassevilla@gmail.com

9. Luca Manzoni, University of Milan-Bicocca (Italy)
luca.manzoni@disco.unimib.it
10. Miguel A. Martínez-del-Amor, Universidad de Sevilla (Spain)
mdelamor@us.es
11. David Orellana-Martín, Universidad de Sevilla (Spain)
dorellana@us.es
12. Ignacio Prez-Hurtado, Universidad of Seville (Spain)
perez@us.es
13. Mario de J. Pérez-Jiménez, Universidad de Sevilla (Spain) and Academia Europaea
marper@us.es
14. Antonio Enrico Porreca, University of MilanBicocca (Italy)
porreca@disco.unimib.it
15. Fernando Rendn-Segador, Universidad de Sevilla (Spain)
fernandojrs90@gmail.com
16. Agustín Riscos-Núñez, Universidad de Sevilla (Spain)
ariscosn@us.es
17. Daniel Rodríguez-Chavarría, Universidad de Sevilla (Spain)
danrodcha@gmail.com
18. Álvaro Romero-Jiménez, Universidad de Sevilla (Spain)
romero.alvaro@us.es
19. Eduardo Sánchez-Karhunen, Universidad de Sevilla (Spain)
sanche@us.es
20. Jose María Sempere-Luna, Politechnical University of Valencia (Spain)
jsempere@dsic.upv.es
21. Luis Valencia-Cabrera, Universidad de Sevilla (Spain)
lvalencia@us.es
22. Gyorgy Vaszil, University of Debrecen (Hungary)
vaszil.gyorgy@inf.unideb.hu
23. Lian Ye, Chongqing University (China)
ylredleaf@cqu.edu.cn

As mentioned above, the meeting was organized by the Research Group on Natural Computing from Sevilla University (<http://www.gcn.us.es>)– and all the members of this group were enthusiastically involved in this (not always easy) work.

The meeting was partially supported by Universidad de Sevilla, more precisely by Department of Computer Science and Artificial Intelligence and *VI Plan Propio*, *Vicerrectorado de Investigación de la Universidad de Sevilla*.

Carmen Graciani
Gheorghe Păun
Agustín Riscos-Núñez
Luis Valencia-Cabrera
(August 2017)