
Preface

The 13th Brainstorming Week on Membrane Computing (BWMC) was held in Sevilla, from February 2 to February 6, 2015, 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.

The 2015 edition of the Brainstorming had a special focus on the interplay between membrane computing and high performance computing.

In the style of previous meetings in this series, the 13th 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 30 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 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 *Natural Computing*, which will also contain a selection of papers from ACMC 2015 (the Asian Conference on Membrane Computing, to be held in Hefei, Anhui, China, in November 2015).

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.

Other papers elaborated during the thirteenth 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:

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