

**Third Brainstorming Week
on Membrane Computing**

Sevilla, January 31–February 4, 2005

M.A. Gutiérrez-Naranjo, A. Riscos-Núñez,
F.J. Romero-Campero, D. Sburlan
Editors

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Preface

The present volume contains part of the papers emerged from the Third Brainstorming Week on Membrane Computing (BWMC), held in Sevilla, from January 31 to February 4, 2005, 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, while the second edition took place in Sevilla at the beginning of February 2004.

Actually, this third edition was organized in parallel with the workshop *Cellular Computing (Complexity Aspects)* (CCCA) funded by European Science Foundations as a PESC Exploratory Workshop.

Similarly to the first editions, the meeting was conceived as a period of active interaction among the participants, with the emphasis on exchanging ideas and cooperation – with the first three days, those simultaneous with CCCA, also devoted to presentations.

The efficiency of this type of “one week scholarship in Sevilla” was again proved to be very high, with a great number of papers started during the meeting, and with other papers, started before, especially by internet interaction, completed in Sevilla.

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

A parallel volume, *Cellular Computing. Complexity Aspects* (edited by M.A. Gutiérrez-Naranjo, Gh. Păun and M.J. Pérez-Jimenez) was published by Fénix Editora, Sevilla, based on the papers presented and developed during CCCA – details can be found in the area web page <http://psystems.disco.unimib.it>.

After continuing the related research and after a further polishing, a selection of the papers from both the present volume and the CCCA volume will be considered for publication in a special issues of an international journal (after the first BWMC,

a special issue of *Natural Computing* – volume 2, number 3, 2003, and a special issue of *New Generation Computing* – volume 22, number 4, 2004, were published, while after the second BWMC, a special issue of *Journal of Universal Computer Science* – volume 10, number 5, 2004, and a special issue of *Soft Computing* – volume 9, number 5, 2005, were published). Other papers 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 Milano web page mentioned above.

The third edition of the BWMC was a definite success, again growing in comparison with the previous meeting, which was already much larger than the first edition, at least in what concerns the number of participants and the number of papers.

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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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 supported from various sources: (i) Proyecto de Investigación TIC2002–04220–C03–01 de Ministerio de Ciencia y Tecnología of Spain, (ii) Acción Coordinada IMUS 2003, (iii) Grupo de Investigación en Computación Natural (PAI TIC 193) de Junta de Andalucía, (iv) II Plan Propio de la Universidad de Sevilla, as well as by the Department of Computer Science and Artificial Intelligence from Sevilla University.

Gheorghe Păun
Mario J. Pérez-Jiménez
(Sevilla, April 10, 2005)

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