

Preface

The present volume contains the papers emerged from the second Brainstorming Week on Membrane Computing (BWMC), held in Sevilla, from February 2 to February 7, 2004, 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.

Similarly to the first edition, the meeting was conceived as a period of active interaction, exchange of ideas, problems, research topics, and – mainly – joint work. The emphasis was not on conference-like presentations (although most of the participants had short and provocative presentations in the mornings of the first three days), but on working together, on cooperation. The formulation used one year ago was “one week scholarship” in a specified place, for people active in membrane computing, and this was valid also this year.

The interaction among participants was really high, with a large number of new ideas, new research topics, new results – papers included – appearing during the meeting. Rather important and significant is the fact that several new authors became visible during the brainstorming and new teams of authors were formed in this framework. It deserves to be emphasized that the interaction was enhanced by adequately using the internet communication before the meeting (several open problems were circulated, through the already well-known web page in Milano, <http://psystems.disco.unimib.it>, and/or through the recently created membrane computing forum page, in Sevilla, at <http://www.gcn.us.es/foro>).

The papers included in the present volume, some of them started before, the others started during the meeting, 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. After continuing the related research and after a further polishing, a selection of these papers will be considered for publication in a special issues of an international journal (after the 2003 BWMC, a special issue of *Natural Computing* – volume 2, number 3 from 2003 – and a special issue of *New Generation Computing* were edited with a selection of papers initially collected in a technical report of Rovira i Virgili University); other papers will be submitted to other journals or to one of the many conferences where membrane computing lies in the scope. The reader interested in the final version of these papers is advised to check the current bibliography in the Milano web page.

The second edition of the BWMC was a definite success, a step forward in comparison with the Tarragona edition at least in the number of participants and the number of papers. One year ago, the meeting was considered as an experimental one; now, after

confirming its efficiency and usefulness, the plan is to have it organized every year (the time and place will be announced in due time through the above mentioned web pages).

The list of participants is given below, with the aim of facilitating the further communication among the authors of the papers, as well as the comments from other participants:

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