

Foreword

The present volume contains the papers presented at the first workshop on *Theory and Applications of P Systems* (TAPS), held in Timișoara on September 26 and 27 of September 2005, as an event associated with the 7th edition of the SYNASC conference.

The workshop is intended to open a series of similar meetings devoted particularly to applications and implementations of membrane computing (P systems). This is fully possible now, at seven years since the research in membrane computing was initiated, because multiset processing in the compartmentalized framework provided by cell-like or tissue-like membrane structures used to be a widely applicable modelling technique, complementing classic techniques (mostly based on systems of differential equations) in various areas, such as biology, medicine, economics, linguistics, computer science (computer graphics, cryptography, approximate solutions to optimization problems, etc.). A series of applications in all these domains can be found in the recent volume *Applications of Membrane Computing* (Springer-Verlag, Berlin, 2005), edited by G. Ciobanu, Gh. Păun, M.J. Pérez-Jiménez. Thus, TAPS (with emphasis on A) can become the third annual meeting devoted to membrane computing, together with the already traditional *Workshop on Membrane Computing, WMC* (Curtea de Argeș, Romania, in 2000, 2001, 2002, Tarragona, Spain, in 2003, Milano, Italy, in 2004, Vienna, Austria, in 2005, with WMC7 to be held in Leiden, The Netherlands, in July 2006), and *Brainstorming Week on Membrane Computing* (Tarragona in 2003, Sevilla, Spain, in 2004 and 2005, and again Sevilla in February 2006). In this spectrum of membrane computing events, TAPS could become a place where new speakers, particularly PhD students, are encouraged to present their work to a receptive and friendly audience.

This workshop confirms the fact that membrane computing is a fast “emerging research front in computer science”, as it was appreciated by Thomson Institute for Scientific Information, ISI, in 2003 (see <http://esi-topics.com>). Details about all the meetings devoted to membrane computing, including pre-proceedings volumes and full bibliography,

can be found at the website <http://psystems.disco.unimib.it>, organized under the auspices of European Molecular Computing Consortium, EMCC.

Each paper submitted to TAPS was refereed by at least three members of the program committee, and the accepted papers were included in the volume after they were revised by the authors according to the respective reports. We express our gratitude to the referees for their very good work, and to the authors for preparing carefully their papers. A selection of the papers, also improved according to the discussions held during the workshop, will be considered for publication in an international journal.

We would like to thank the organizers from Timișoara for their work in preparing this meeting, and in making everything running smoothly.

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Gabriel Ciobanu and Gheorghe Păun, editors
Iași and Timișoara, September 2005

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TAPS'05

Workshop on Theory and Applications of P-Systems

September 26 - 27, 2005, Timișoara, Romania

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