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Membrane Computing

8th International Workshop, WMC2007
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Revised, Selected, and Invited Papers

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In the memory of Nadia Busi

Preface

This volume contains a selection of papers presented at the **Eighth Workshop on Membrane Computing, WMC8**, which took place in Thessaloniki, Greece, from June 25 to June 28, 2008. The first three workshops on membrane computing were organized in Curtea de Argeş, Romania – they took place in August 2000 (with the proceedings published in *Lecture Notes in Computer Science*, volume 2235), in August 2001 (with a selection of papers published as a special issue of *Fundamenta Informaticae*, volume 49, numbers 1–3, 2002), and in August 2002 (with the proceedings published in *Lecture Notes in Computer Science*, volume 2597). The next four workshops were organized in Tarragona, Spain, in July 2003, in Milan, Italy, in June 2004, in Vienna, Austria, in July 2005, and in Leiden, The Netherlands, in July 2006, with the proceedings published as volumes 2933, 3365, 3850, and 4361, respectively, of *Lecture Notes in Computer Science*.

The 2007 edition of WMC was organized by the South-East European Research Centre from Thessaloniki, under the auspices of the European Molecular Computing Consortium (EMCC). A special attention was paid to the interaction of membrane computing with biology and computer science, focusing both on the biological roots of membrane computing, on applications of membrane computing in biology and medicine, and on possible electronically based implementations.

The pre-proceedings of WMC8 were published by the South-East European Research Centre, Thessaloniki, and they were available during the workshop. Each paper was refereed by two members of the program committee. Most of the papers selected for the present volume were significantly modified according to the discussions that took place during the workshop.

The volume includes all five invited talks as well as 22 regular papers, and so it presents a representative snapshot of current research in membrane computing (a comprehensive source of information about this fast emerging area of natural computing is the web page <http://psystems.disco.unimib.it>).

The program committee consisted of Gabriel Ciobanu (Iaşi, Romania), Erzsébeth Csuhaj-Varjú (Budapest, Hungary), Rudolf Freund (Vienna, Austria), Pierluigi Frisco (Edinburgh, UK), Marian Gheorghe (Sheffield, UK), Oscar H. Ibarra (Santa Barbara, USA), Petros Kefalas (Thessaloniki, Greece) – Co-chair, Vincenzo Manca (Verona, Italy), Giancarlo Mauri (Milan, Italy), Linqiang Pan (Wuhan, China), Gheorghe Păun (Bucharest, Romania) – Co-chair, Mario J. Pérez-Jiménez (Seville, Spain), and Athina Vakali (Thessaloniki, Greece).

The workshop was sponsored by City College, Thessaloniki, and the South-East European Research Centre (SEERC).

The editors are indebted to the members of the program committee, to all participants of WMC8, and in particular to the contributors to this volume. Special thanks go to the organizers for their efficiency, and to Springer-Verlag for the pleasant cooperation in the timely production of this volume.

At the beginning of September 2007, Nadia Busi passed away, after a short and severe illness. She was one of the most active researchers in membrane computing and the present volume includes the paper she has presented at WMC8, one of the last conferences Nadia has attended. Nadia will be remembered as a passionate researcher as well as a very nice person. As a token of respect and friendship that she enjoyed in our community, we devote this volume to her memory.

Rest in peace, Nadia. We all miss you.

October 2007

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