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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Proton Pumping P Systems -- A Binary Data Structure for Membrane Processors: Connectivity Arrays -- Parsing with Active P Automata -- Universality of Minimal Symport/Antiport: Five Membranes Suffice -- Collapsing Hierarchies of Parallel Rewriting P Systems without Target Conflicts -- Evolution and Observation: A New Way to Look at Membrane Systems -- Tiling Rectangular Pictures with P Systems -- Simulating Boolean Circuits with P Systems -- P Systems Running on a Cluster of Computers -- Implementing in Prolog an Effective Cellular Solution to the Knapsack Problem -- On the Dynamics of PB Systems: A

Petri Net View -- P Systems Generating Hexagonal Picture Languages -- A Membrane System for the Leukocyte Selective Recruitment -- P Systems with Cutting/Recombination Rules Assigned to Membranes -- ? -P Automata with Communication Rules -- The Number of Membranes Matters -- An Agent-Based Behavioural Model of Monomorium Pharaonis Colonies -- Can Hyperbolic Geometry Be of Help for P Systems? -- A Linear-Time Solution to the Knapsack Problem Using P Systems with Active Membranes -- A Reconfigurable Hardware Membrane System -- P Systems and Petri Nets -- Simulation of Mobile Ambients by P Systems. Part 1 -- Computing Partial Recursive Functions by Transition P Systems -- P Systems with External Input and Learning Strategies -- A Distributed Simulation of Transition P Systems -- About Splicing P Systems with Immediate Communication and Non-extended Splicing P Systems.

Sommario/riassunto

This volume is based on papers presented at the Workshop on Membrane Computing, WMC 2003, which took place in Tarragona, Spain, in the period July 17–July 22, 2003. This was the Fourth Annual Membrane Computing Workshop, and the first one held outside Romania. The first three meetings were organized in Curtea de Argeş, Romania – they took place in August 2000 (with the proceedings published in Lecture Notes in Computer Science, Vol. 2235), in August 2001 (with a selection of papers published as a special issue of Fundamenta Informaticae, Vol. 49, Nos. 1–3, 2002), and in August 2002 (with the proceedings published in Lecture Notes in Computer Science, Vol. 2597). The 2003 workshop was the second workshop of the Molecular Computing Network (MolCoNet) funded by the EU Commission in the Fifth Framework Program Information Society Technologies (project number IST–2001–32008). The preproceedings of WMC 2003 were published as Technical Report 28/03 of the Research Group on Mathematical Linguistics from Rovira i Virgili University, Tarragona, and they were available during the workshop.
