

Contents

Preface	3
A. Alhazov: On the Power of Deterministic EC P Systems	11
A. Alhazov: A Note on P Systems with Activators.....	16
A. Alhazov, R. Freund, Gh. Păun: P Systems with Active Membranes and Two Polarizations	20
A. Alhazov, T.-O. Ishdorj: Membrane Operations in P Systems with Active Membranes	37
A. Alhazov, D. Sburlan: (Ultimately Confluent) Parallel Multiset-Rewriting Systems with Context	45
I.I. Ardelean, D. Besozzi: New Proposals for the Formalization of Membrane Proteins.....	53
I.I. Ardelean, M. Cavaliere, D. Sburlan: Computing Using Signals: From Cells to P Systems	60
F. Bernardini, M. Gheorghe: Cell Communication in Tissue P Systems and Cell Division in Population P Systems	74
D. Besozzi, E. Csuhaj-Varjú, G. Mauri, C. Zandron: Size and Power of Extended Gemmating P Pystems	92
M. Cavaliere, D. Genova: P Systems with Symport/Antiport of Rules	102
R. Ceterchi, M.J. Pérez-Jiménez: Simulating Shuffle-Exchange Networks with P Systems	117
G. Ciobanu: Pumps Systems of Membranes	130
A. Cordon-Franco, M.A. Gutiérrez-Naranjo, M.J. Pérez-Jiménez: Looking for P Truth.....	134

A. Cordon-Franco, M.A. Gutiérrez-Naranjo, M.J. Pérez-Jiménez, A. Riscos-Núñez: Weak Metrics on Configurations of a P System	139
F. Fontana, G. Franco: Maximum Search Using P Systems	152
G. Franco: Membrane Kauffman Networks	164
R. Freund, A. Leporati, M. Oswald, C. Zandron: Sequential P Systems with Unit Rules and Energy Assigned to Membranes	168
R. Freund, M. Oswald: P Systems with Antiport Rules for Evolution Rules.....	183
R. Freund, A. Păun: P Systems with Active Membranes and without Polarizations	193
R. Freund, Gh. Păun, M.J. Pérez-Jiménez: Tissue-like P Systems with Channel-States	206
P. Frisco: About P Systems with Symport/Antiport	224
M.A. Gutiérrez-Naranjo, M.J. Pérez-Jiménez, A. Riscos-Núñez: An Efficient Cellular Solution for the Partition Problem	237
M.A. Gutiérrez-Naranjo, M.J. Pérez-Jiménez, A. Riscos-Núñez: Towards a Programming Language in Cellular Computing	247
M.A. Gutiérrez-Naranjo, V. Rogozhin: Deductive Databases and P Systems	258
M. Ionescu, D. Sburlan: On P Systems with Promoters/Inhibitors	264
L. Ledesma, D. Manrique, A. Rodríguez-Patón, A. Silva: A Tissue P System and a DNA Microfluidic Device for Solving the Shortest Common Superstring Problem	281
A. Leporati, C. Zandron, G. Mauri: Simulating the Fredkin Gate with Energy-Based P Systems	292
I.A. Nepomuceno-Chamorro: A Java Simulator for Basic Transition P Systems	309
L. Pan, A. Alhazov, T.-O. Ishdorj: Further Remarks on P Systems with Active Membranes, Separation, Merging, and Release Rules	316
L. Pan, T.-O. Ishdorj: P Systems with Active Membranes and Separation Rules	325

L. Pan, C. Martin-Vide: Solving Multidimensional 0-1 Knapsack Problem by P Systems with Input and Active Membranes	342
Gh. Păun: Further Open Problems in Membrane Computing	354
Gh. Păun, M.J. Pérez-Jiménez, A. Riscos-Núñez: P Systems with Tables of Rules	366
Gh. Păun, M.J. Pérez-Jiménez, A. Riscos-Núñez: Tissue P Systems with Cell Division	380
M.J. Pérez-Jiménez, F.J. Romero-Campero: A CLIPS Simulator for Recognizer P Systems with Active Membranes	387
M.J. Pérez-Jiménez, F.J. Romero-Campero: Solving the BINPACKING Problem by Recognizer P Systems with Active Membranes	414
V. Rogozhin, E. Boian: Simulation of Mobile Ambients by P Systems. Part 2	431
F. Sancho-Caparrini: A Note on Complexity Measures for Probabilistic P Systems	443
J.M. Sempere: Covering Rules in P Systems: Some Preliminary Ideas	449