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                       Calculus of Looping Sequences for Modeling Biological Membranes --
                       Membrane Computing in Connex Environment -- Regular Papers --
                       Skin Output in P Systems with Minimal Symport/Antiport and Two
                       Membranes -- On the Reachability Problem in P Systems with Mobile
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with String Objects and with Communication by Request -- On the Dynamics of PB Systems with Volatile Membranes -- A Logarithmic Bound for Solving Subset Sum with P Systems -- A Formal Framework for Static (Tissue) P Systems -- Conformon-P Systems with Negative Values -- Optimizing Evolution Rules Application and Communication Times in Membrane Systems Implementation -- Hill Kinetics Meets P Systems: A Case Study on Gene Regulatory Networks as Computing Agents in silico and in vivo -- Solving Numerical NP-Complete Problems with Spiking Neural P Systems -- Towards a Complete Covering of SBML Functionalities -- Active Membrane Systems Without Charges and Using Only Symmetric Elementary Division Characterise P -- Balancing Performance, Flexibility, and Scalability in a Parallel Computing Platform for Membrane Computing Applications -- On Flip-Flop Membrane Systems with Proteins -- Characterizing Membrane Structures Through Multiset Tree Automata -- OPERAS CC : An Instance of a Formal Framework for MAS Modeling Based on Population P Systems.

Sommario/riassunto	This volume contains a selection of papers presented at the Eighth Workshop on Membrane Computing, WMC8, which took place in Thessaloniki, Greece, during June 25–28, 2008. The ?rst three workshops on membrane computing were organized in Curtea de Arge¸ s, 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 -search Centre in Thessaloniki, under the auspices of the European Molecular Computing Consortium (EMCC). Special attention was paid to the interaction of membrane computing with biology and computer science, focusing 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.