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Nota di contenuto	Invited Papers -- (Tissue) P Systems with Decaying Objects -- Alan Turing and John von Neumann - Their Brains and Their Computers -- Turing's Three Pioneering Initiatives and Their Interplays -- An Outline of MP Modeling Framework -- Turing Computability and Membrane Computing -- Membrane Systems and Hypercomputation -- Regular Papers -- Case-Study on the Influence of Noise to Log-Gain Principles for Flux Dynamic Discovery -- Asynchronous and Maximally Parallel Deterministic Controlled Non-cooperative P Systems Characterize NFIN and coNFIN -- Sequential P Systems with Regular Control -- Mobile Membranes with Objects on Surface as Colored Petri Nets -- On Structures and Behaviors of Spiking Neural P Systems and Petri Nets --

2D P Colonies -- Fast Distributed DFS Solutions for Edge-Disjoint Paths in Digraphs -- A New Approach for Solving SAT by P Systems with Active Membranes -- Maintenance of Chronobiological Information by P System Mediated Assembly of Control Units for Oscillatory Waveforms and Frequency -- Spiking Neural P Systems with Functional Astrocytes -- The Efficiency of Tissue P Systems with Cell Separation Relies on the Environment -- DCBA: Simulating Population Dynamics P Systems with Proportional Object Distribution -- Membranes with Boundaries -- On Efficient Algorithms for SAT -- Multigraphical Membrane Systems Revisited -- An Analysis of Correlative and Static Causality in P Systems -- Sublinear-Space P Systems with Active Membranes -- Modelling Ecological Systems with the Calculus of Wrapped Compartments -- Observer/Interpreter P Systems -- Limits of the Power of Tissue P Systems with Cell Division -- Fast Hardware Implementations of P Systems.

Sommario/riassunto

This book constitutes the thoroughly refereed post-conference proceedings of the 13th International Conference on Membrane Computing, CMC 2012, held in Budapest, Hungary, in August 2012. The 21 revised selected papers presented together with 6 invited lectures were carefully reviewed and selected from 25 papers presented at the conference. The book also deals with membrane systems, also called P systems, which are distributed and parallel algebraic models processing multisets of objects in a localized manner (evolution rules and evolving objects are encapsulated into compartments delimited by membranes), with an essential role played by the communication among compartments and with the environment.