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Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 11399
Disciplina	511.3
Soggetti	Computer science Software engineering Computer engineering Computer networks Artificial intelligence Electronic data processing—Management Theory of Computation Software Engineering Computer Engineering and Networks Artificial Intelligence IT Operations
Lingua di pubblicazione	Inglese
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Note generali	Includes index.
Nota di contenuto	Invited Papers -- Impacts of Membrane Computing on Theoretical Computer Science -- Time and Space Complexity of P Systems - And Why They Matter -- A Brute-Force Solution to the 27-Queens Puzzle Using a Distributed Computation -- Regular Papers. -Tissue P Systems with Point Mutation Rules -- Adaptive P Systems -- Chain Code P System Generating a Variant of the Peano Space-filling Curve -- APCol Systems with Agent Creation -- APCol Systems with Verifier Agents -- A Semantic Investigation of Spiking Neural P Systems -- Towards Automated Analysis of Belousov-Zhabotinsky Reactions in a Petri Dish

by Membrane Computing using Optic Flow -- Testing Identifiable Kernel P Systems using an X-machine Approach -- Actor-like cP Systems -- Solving QSAT in Sublinear Depth -- Design of specific P systems simulators on GPUs -- Construction of Stable and Lightweight Technical Structures Inspired by Ossification of Bones using Osteogenetic P Systems -- On Small Universality of Spiking Neural P Systems with Multiple Channels -- Modeling Plant Development with M Systems -- An Improved Quicksort Algorithm Based on Tissue-Like P Systems with Promoters.

Sommario/riassunto

This book constitutes revised selected papers from the 19th International Conference on Membrane Computing (CMC19), CMC 2018, which was held in Dresden, Germany, in September 2018. The 15 papers presented in this volume were carefully reviewed and selected from 20 submissions. The contributions aim to abstract computing ideas and models from the structure and the functioning of living cells, as well as from the way the cells are organized in tissues or higher order structures.