1. Record Nr. UNINA9910484135503321

Titolo	DNA Computing and Molecular Programming : 20th International Conference, DNA 20, Kyoto, Japan, September 22-26, 2014. Proceedings / / edited by Satoshi Murata, Satoshi Kobayashi
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2014
ISBN	3-319-11295-3
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (X, 161 p. 51 illus.)
Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 8727
Disciplina	004
Soggetti	Computer science Algorithms Bioinformatics Artificial intelligence Artificial intelligence - Data processing Computer science - Mathematics Discrete mathematics Theory of Computation Computational and Systems Biology Artificial Intelligence Data Science Discrete Mathematics in Computer Science
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Design Principles for Single-Stranded RNA Origami Structures -- Fast Algorithmic Self-assembly of Simple Shapes Using Random -- Probability 1 Computation with Chemical Reaction Networks -- The Computational Capability of Chemical Reaction Automata -- Emulating Cellular Automata in Chemical Reaction-Diffusion Networks -- Computational Design of Reaction-Diffusion Patterns Using DNA-Based Chemical Reaction Networks -- Output Stability and Semi-linear Sets in Chemical Reaction Networks and Deciders -- Parallel and Scalable Computation and Spatial Dynamics with DNA-Based Chemical Reaction

	Networks on a Surface -- Abstract Modeling of Tethered DNA Circuits -- On Decidability and Closure Properties of Language Classes with Respect to Bio-operations.
Sommario/riassunto	This book constitutes the refereed proceedings of the 20th International Conference on DNA Computing and Molecular Programming, DNA 20, held in Kyoto, Japan, in September 2014. The 10 full papers presented were carefully selected from 55 submissions. The papers are organized in many disciplines (including mathematics, computer science, physics, chemistry, material science and biology) to address the analysis, design, and synthesis of information-based molecular systems.