

1. Record Nr.	UNINA9910484948703321
Titolo	Cellular Automata : 14th International Conference on Cellular Automata for Research and Industry, ACRI 2020, Lodz, Poland, December 2–4, 2020, Proceedings // edited by Tomasz M. Gwizdaa, Luca Manzoni, Georgios Ch. Sirakoulis, Stefania Bandini, Krzysztof Podlaski
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2021
ISBN	3-030-69480-1
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (XI, 275 p. 111 illus., 83 illus. in color.)
Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 12599
Disciplina	511.3 511.35
Soggetti	Computer science Computer engineering Computer networks Natural language processing (Computer science) Theory of Computation Computer Engineering and Networks Natural Language Processing (NLP)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Theory and Cryptography -- A Cellular Automaton that computes Shortest Paths in Grid Graph -- Strengthening of ACORN Authenticated Cipher by using Cellular Automata -- Prevention of Fault Attacks in ASCON Authenticated Cipher using Cellular Automata -- Detection of topology changes in dynamical system: an information theoretic approach -- Observability of Affine Cellular Automaton through Mobile Sensors -- One-Dimensional Pattern Generation by Cellular Automata -- Exploring Semi-bent Boolean Functions Arising from Cellular Automata -- EnCash: an Authenticated Encryption scheme using Cellular Automata -- High Order Cellular Automata for Edge Detection: a Preliminary Study -- PENTAVIUM - Potent Trivium-like Stream Cipher Using Higher Radii Cellular Automata -- Modeling and Simulation --

Blockchain smart contract for cellular automata-based energy sharing -- Influence of topology on the dynamics of in silico ecosystems with non-hierarchical competition -- Control of 3D Cellular Automata via Actuator and space Attributes: Application to fires forest -- The Second Order CA-based Multiagent Systems with Income Sharing -- Parameter adjustment of a bio-inspired coordination model for swarm robotics using evolutionary optimisation -- Covering the Space with Sensor Tiles -- Implementation of Cellular Automata using Graphene Nanoribbons with Magnetic Contacts.-A Customized Assessment Tool based on Cellular Automata for the Visitability of an Urban Environment -- Time discretization in pedestrian dynamics simulations by discrete-continuous model -- DESERTICAS, a software to simulate desertification based on MEDALUS and CA -- Double diffusive mixed convection with thermodiffusion effect in a driven cavity by lattice Boltzmann method -- Logical Gates on Gliders in Restricted Space Domain Cellular Automata -- Modeling Carbon Dioxide Dispersion Indoors: A Cell-DEVS Experiment -- Disease Spreading Dynamics -- Using Cell-DEVS to Model the Spread of COVID-19 -- The disease spreading analysis on the grouped network -- Epidemic models with restricted circulation and social distancing on some network topologies -- Preliminaries on a stochastic cellular automaton based framework for studying the population dynamics of COVID-19. .

Sommario/riassunto

This book constitutes the refereed proceedings of the 14th International Conference on Cellular Automata for Research and Industry, ACRI 2020, which took place in Lodz, Poland, during December 2-4, 2020. The 24 full and 3 short papers presented in this volume were carefully reviewed and selected from 40 submissions. They were organized in topical sections named: theory and cryptography, modeling and simulation, and disease spreading dynamics.
