1. Record Nr. UNINA9911047810503321

Autore	Das Sukanta
Titolo	Non-Uniform Cellular Automata / / by Sukanta Das, Biplab K. Sikdar
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2026
ISBN	3-032-00257-5
Edizione	[1st ed. 2026.]
Descrizione fisica	1 online resource (556 pages)
Collana	Emergence, Complexity and Computation, , 2194-7295 ; ; 49
Altri autori (Persone)	SikdarBiplab K
Disciplina	006.3
Soggetti	Computational intelligence Artificial intelligence Computational Intelligence Artificial Intelligence
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	1.Introduction -- 2.Cellular Automata -- 3.Characterization Tools -- 4. Reversibility -- 5.Number Conservation -- 6.Maximal Length Cellular Automata -- 7."Cycle Structure of Linear and Complemented Cellular Automata" -- 8.Cycles in Non-Linear Cellular Automata -- 9. Convergence -- 10.Chaos.
Sommario/riassunto	This book covers the major theories of non-uniform cellular automata that have been developed during the last four decades. The non-uniform cellular automata started their journey as an effective tool of generating pseudo-random numbers in hardware. Over the years, they have flourished in different directions and the theories, related to reversibility, number conservation, maximality, cycle structure, convergence, chaos, etc. have been developed. The theories are presented, in this book, followed by the examples with pointers to the applications for better understanding. The readers can discover new application areas where the theories, provided in this book, are suitable. A few open problems are also included to trigger a reader to undertake research on non-uniform cellular automata to address the problems. The content of this book also meets the needs of undergraduate and graduate students who opted for the course on cellular automata.