

1. Record Nr.	UNINA9910254257603321
Autore	Cao Jiannong
Titolo	Wireless Sensor Networks for Structural Health Monitoring // by Jiannong Cao, Xuefeng Liu
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2016
ISBN	3-319-29034-7
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (105 p.)
Collana	SpringerBriefs in Electrical and Computer Engineering, , 2191-8112
Disciplina	624.171
Soggetti	Electrical engineering Computer networks Communications Engineering, Networks Computer Communication Networks
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Introduction -- Requirements, Challenges and Summary of Hardware and Software Design for a WSN-based SHM System -- Enabling Network-wide and Event-triggered Wakeup -- Design of Distributed SHM Algorithms within WSNs-A Cluster-based Approach -- Design of Distributed SHM Algorithms with WSNs-A Networked-Computing Approach -- Realizing Fault-Tolerant SHM in WSNs -- Conclusions. .
Sommario/riassunto	This brief covers the emerging area of wireless sensor network (WSN)-based structural health monitoring (SHM) systems, and introduces the authors' WSN-based platform called SenetSHM. It helps the reader differentiate specific requirements of SHM applications from other traditional WSN applications, and demonstrates how these requirements are addressed by using a series of systematic approaches. The brief serves as a practical guide, explaining both the state-of-the-art technologies in domain-specific applications of WSNs, as well as the methodologies used to address the specific requirements for a WSN application. In particular, the brief offers instruction for problem formulation and problem solving based on the authors' own experiences implementing SenetSHM. Seven concise chapters cover the development of hardware and software design of SenetSHM, as well as in-field experiments conducted while testing the platform. The brief's

exploration of the SenetSHM platform is a valuable feature for civil engineers designing their own similar SHM products, and the various concrete examples of problem formulation and algorithm design will make this an essential read for practitioners, researchers and students alike.

2. 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.

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