

1. Record Nr.	UNINA9910734097803321
Autore	Trefzer Martin A
Titolo	Evolvable Hardware : From Practice to Application / / by Martin A. Trefzer, Andy M. Tyrrell
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2015
ISBN	3-662-44616-2
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (XXVII, 411 p. 187 illus., 78 illus. in color.)
Collana	Natural Computing Series, , 2627-6461
Disciplina	006.3823
Soggetti	Artificial intelligence Computational intelligence Algorithms Computers Artificial Intelligence Computational Intelligence Computer Hardware
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	Evolution, Development & Evolvable Hardware -- Devices and Architectures for Evolutionary Hardware -- Representations and Algorithms -- Measurement and Fitness Function -- Overcoming Variability Through Transistor Reconfiguration: Evolvable Hardware on the PAnDA Architecture -- Functional Equivalence Checking for Evolution of Complex Digital Circuits -- Fault Tolerant Applications -- Principles and Applications of Polymorphic Circuits -- A Developmental Image Compression Technique Using Gene Regulatory Networks -- Medical Applications of Evolvable Hardware -- Metamorphic Systems: A Schema for Adaptive Autonomous Systems -- Hierarchical Networks-on-Chip Architecture for Neuromorphic Hardware -- Evolvable Robot Hardware -- Developmental Evolvable Hardware -- App. A, Evolvable Hardware Practice.
Sommario/riassunto	This book covers the basic theory, practical details and advanced research of the implementation of evolutionary methods on physical substrates. Most of the examples are from electronic engineering

applications, including transistor-level design and system-level implementation. The authors present an overview of the successes achieved, and the book will act as a point of reference for both academic and industrial researchers.
