

1. Record Nr.	UNINA9910734097903321
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Titolo	Natural Computing Algorithms // by Anthony Brabazon, Michael O'Neill, Seán McGarraghy
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2015
ISBN	3-662-43631-0
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (XX, 554 p. 164 illus., 22 illus. in color.)
Collana	Natural Computing Series, , 2627-6461
Disciplina	006.38
Soggetti	Computer science Computational intelligence Artificial intelligence Operations research Management science Social sciences—Mathematics Theory of Computation Computational Intelligence Artificial Intelligence Operations Research, Management Science Operations Research and Decision Theory Mathematics in Business, Economics and Finance
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	Introduction -- Introduction to Evolutionary Computing -- Genetic Algorithms -- Extending the Genetic Algorithm -- Evolution Strategies and Evolutionary Programming -- Differential Evolution -- Genetic Programming -- Particle Swarm Algorithms -- Ant Algorithms -- Honeybee Algorithms -- Other Social Algorithms -- Bacterial Foraging Algorithms -- Neural Networks for Supervised Learning -- Neural Networks for Unsupervised Learning -- Neuroevolution -- Artificial Immune Systems -- An Introduction to Developmental and Grammatical Computing -- Grammar-Based and Developmental Genetic Programming -- Grammatical Evolution -- TAG3P and

Developmental TAG3P -- Genetic Regulatory Networks -- An Introduction to Physics-Inspired Computing -- Physics-Inspired Computing Algorithms -- Quantum-Inspired Evolutionary Algorithms -- Plant-Inspired Algorithms -- Chemistry-Inspired Algorithms -- Conclusions -- References -- Index.

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## Sommario/riassunto

The field of natural computing has been the focus of a substantial research effort in recent decades. One particular strand of this research concerns the development of computational algorithms using metaphorical inspiration from systems and phenomena that occur in the natural world. These naturally inspired computing algorithms have proven to be successful problem-solvers across domains as diverse as management science, bioinformatics, finance, marketing, engineering, architecture and design. This book is a comprehensive introduction to natural computing algorithms, suitable for academic and industrial researchers and for undergraduate and graduate courses on natural computing in computer science, engineering and management science.

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