

1. Record Nr.	UNINA9910734094603321
Autore	Preuss Mike
Titolo	Multimodal Optimization by Means of Evolutionary Algorithms // by Mike Preuss
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2015
ISBN	3-319-07407-5
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (206 p.)
Collana	Natural Computing Series, , 2627-6461
Disciplina	006.336
Soggetti	Algorithms Computational intelligence Mathematical optimization Computational Intelligence Optimization
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.
Nota di contenuto	Introduction: Towards Multimodal Optimization -- Experimentation in Evolutionary Computation -- Groundwork for Niching -- Nearest-Better Clustering -- Niching Methods and Multimodal Optimization Performance -- Nearest-Better Based Niching.
Sommario/riassunto	This book offers the first comprehensive taxonomy for multimodal optimization algorithms, work with its root in topics such as niching, parallel evolutionary algorithms, and global optimization. The author explains niching in evolutionary algorithms and its benefits; he examines their suitability for use as diagnostic tools for experimental analysis, especially for detecting problem (type) properties; and he measures and compares the performances of niching and canonical EAs using different benchmark test problem sets. His work consolidates the recent successes in this domain, presenting and explaining use cases, algorithms, and performance measures, with a focus throughout on the goals of the optimization processes and a deep understanding of the algorithms used. The book will be useful for researchers and practitioners in the area of computational intelligence, particularly those engaged with heuristic search, multimodal optimization,

evolutionary computing, and experimental analysis.

---