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| Nota di contenuto | Intro -- Preface -- Contents -- 1 Introduction to the Mycorrhiza Optimization Algorithm -- References -- 2 Theory for the Mycorrhiza Optimization Algorithm -- 2.1 Optimization -- 2.2 Mycorrhiza Networks Structure and Function -- 2.3 Characteristics of Mycorrhized Plants -- 2.4 The Mother Trees -- 2.5 Wood Wide Web -- References -- 3 Background for the Mycorrhiza Optimization Algorithm -- References -- 4 Problem Definition for Mycorrhiza Algorithm -- References -- 5 CMOA-Continuous Mycorrhiza Optimization Algorithm -- 5.1 CMOA Flowchart -- 5.2 CMOA Pseudocode -- 5.3 Continuous Lotka-Volterra System Equations -- 5.4 CMOA Algorithm Parameters -- 5.5 Benchmark Functions -- 5.6 Case Studies -- 5.6.1 CMOA Predator-Prey Model -- 5.6.2 CMOA Cooperative Model -- 5.6.3 CMOA Competitive Model -- 5.6.4 CMOA Ecosystem Model -- 5.6.5 Results -- 5.6.6 Hypothesis Test -- 5.6.7 Comparative CMOA with Others Methods -- 5.6.8 Results -- 5.6.9 Behavior -- 5.6.10 Convergence -- References -- 6 DMOA-Discrete Mycorrhiza Optimization Algorithm -- 6.1 DMOA Flowchart -- 6.2 DMOA Pseudocode -- 6.3 Discrete Lotka-Volterra System Equations -- 6.4 DMOA Algorithm Parameters -- 6.5 Case Studies -- 6.5.1 DMOA Ecosystem Model -- 6.5.2 Results -- 6.5.3 Comparative DMOA with Other Methods -- 6.5.4 Results -- 6.5.5 |

[Hypothesis Test -- 6.5.6 Comparative CMOA with DMOA -- 6.5.7](#)
[Behavior Comparative with Other Methods -- 6.5.8 Behavior](#)
[Comparative CMOA Versus DMOA -- 6.5.9 Convergence Comparative](#)
[CMOA Versus DMOA -- References -- 7 Conclusions of the Mycorrhiza](#)
[Optimization Algorithm -- Index.](#)

Sommario/riassunto

This book delves into the application of optimization algorithms inspired by mycorrhizal networks in the field of computational intelligence. Authored by Fevrier Valdez, Hector Carreon-Ortiz, and Oscar Castillo, it introduces two innovative algorithms: the Continuous Mycorrhiza Optimization Algorithm (CMOA) and the Discrete Mycorrhiza Optimization Algorithm (DMOA). These algorithms are based on the Lotka-Volterra System Equations and are designed to solve complex optimization problems by mimicking natural systems. Aimed at students, researchers, and professionals in engineering and computer science, the book provides theoretical foundations, detailed algorithmic descriptions, case studies, and comparative analyses of these algorithms. The authors aim to equip readers with tools to enhance efficiency, reduce costs, and improve performance in various domains, including engineering, finance, and machine learning.
