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Lingua di pubblicazione	Inglese
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Particle Swarm Optimization (PSO) -- Fractional Order Darwinian PSO (FODPSO) -- Case Study I: Curve Fitting -- Case Study II: Image Segmentation -- Case Study III: Swarm Robotics -- Conclusions.
Sommario/riassunto	This book examines the bottom-up applicability of swarm intelligence to solving multiple problems, such as curve fitting, image segmentation, and swarm robotics. It compares the capabilities of some of the better-known bio-inspired optimization approaches, especially Particle Swarm Optimization (PSO), Darwinian Particle Swarm Optimization (DPSO) and the recently proposed Fractional Order Darwinian Particle Swarm Optimization (FODPSO), and comprehensively discusses their advantages and disadvantages. Further, it demonstrates the superiority and key advantages of using the FODPSO algorithm, such as its ability to provide an improved convergence towards a solution, while avoiding sub-optimality. This book offers a valuable resource for researchers in the fields of robotics, sports science, pattern recognition and machine learning, as well as for students of

electrical engineering and computer science.

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