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Titolo	Adaptive Control of Bio-Inspired Manufacturing Systems // by Dunbing Tang, Kun Zheng, Wenbin Gu
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Disciplina	670
Soggetti	Control engineering Artificial intelligence Manufactures Quality control Reliability Industrial safety Control and Systems Theory Artificial Intelligence Manufacturing, Machines, Tools, Processes Quality Control, Reliability, Safety and Risk
Lingua di pubblicazione	Inglese
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Nota di contenuto	Bio-Inspired Manufacturing System Model -- Hormone-regulation based Algorithm for Production Scheduling Optimization -- NeuroEndocrine-regulation based Dynamic Coordination Mechanism in Bio-Inspired Manufacturing System -- Hormone-regulation based approach for distributed and on-line scheduling of machines and AGVs -- Production control strategy inspired by neuroendocrine regulation -- NeuroEndocrine-Immune regulation based approach for disturbance handling -- Prototype and Application of the Bio-Inspired Manufacturing System.
Sommario/riassunto	This book introduces state-of-the-art models and methods based on the neuroendocrine-immune-inspired approaches in the field of manufacturing control systems. It develops various bio-inspired intelligent approaches for multiple applications in order to efficiently

generate production plans and control solutions and agilely deal with the frequent unexpected disturbances at the shop floor level. It also provides an introduction to bio-inspired manufacturing systems with intelligent control structures and the latest technologies. Further, the book describes recent advances in the bio-inspired methodology for a high-level adaptability in manufacturing systems, including the bio-inspired control architecture and the implementation of intelligent and adaptive control approaches based on neuroendocrine-immune mechanisms and hormone-regulation principles. It offers a valuable resource for graduate students, researchers and engineers in the fields of production management, manufacturing system control and related areas. .
