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		Application software
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		Artificial Intelligence
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	Nota di contenuto	Holonic Manufacturing Systems – Device Control -- Holonic Manufacturing Systems: Phase II -- A Mechanism for Ensuring Safe Behaviors of Holonic Manufacturing Systems -- A Real-Time Interface for Holonic Control Devices -- Integration of Automation Resources in Holonic Manufacturing Applications -- Foundations/Platforms -- JAVA-Based Agent Platform Evaluation -- An Approach to the Formal Specification of Holonic Control Systems -- Holonic Multiagent

Systems: A Foundation for the Organisation of Multiagent Systems -- The Link between Autonomy and Organisation in Multiagent Systems -- Scheduling and Resource Allocation -- Fault-Tolerant Behaviour in Holonic Manufacturing Systems: A Simulation Study -- Multiagent-Based Process Planning and Scheduling in Context of Supply Chains -- Improving Multi-agent Based Scheduling by Neurodynamic Programming -- Agent Architecture for Dynamic Job Routing in Holonic Environment Based on the Theory of Constraints -- Simulation and Integration -- A Heterogeneous Multi-agent Modelling for Distributed Simulation of Supply Chains -- Integration of Shop Floor Holons with Automated Business Processes -- Proposal of Holonic Manufacturing Execution Systems Based on Web Service Technologies for Mexican SMEs -- Multi-agent Systems -- Secure FIPA Compliant Agent Architecture Draft -- Agent Exchange – Virtual Trading Environment -- Adding OWL Semantics to Ontologies Used in Multi-agent Systems for Manufacturing -- Complex Data Integration Based on a Multi-agent System -- A Multi-agent Architecture for Distributed Design -- AgentAllocator: An Agent-Based Multi-criteria Decision Support System for Task Allocation -- Applications -- An Approach to Process Automation Based on Cooperating Subprocess Agents -- Evaluating a Holonic Packing Cell -- FABMAS: An Agent-Based System for Production Control of Semiconductor Manufacturing Processes -- A Case Study for Modular Plant Control -- Implementation of Mobile-Agent-Based Network Management Systems for National Broadband Experimental Networks in Taiwan -- An Agent-Based Simulator for Electricity Markets: Seller, Buyer, and Trader Players -- AgenTec – Concepts for Agent Technology in Automation -- Cost-Based Dynamic Reconfiguration System for Evolving Holarchies.

| Sommario/riassunto | The increasing complexity of manufacturing systems as well as the overall demands for flexible and fault-tolerant control of production processes stimulates (among many others) two key emerging technologies that are already making an important breakthrough in the field of intelligent manufacturing, control, and diagnostics. These two paradigms are: • the holonic approach based on the event-driven control strategy, usually aimed at modular control systems that are directly physically linked with the manufacturing hardware equipment, and • the multi-agent approach developed in the area of distributed information processing. The research communities working in both these fields are approaching the problem of intelligent manufacturing from different viewpoints and, until recently, to a certain extent, in an independent way. We can however observe quite a clear convergence of these fields in the last few years: the communities have started to cooperate, joining efforts to solve the painful problems involved in achieving effective industrial practice. We can see convergence in the terminology, standards and methods being applied. |