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Nota di contenuto	Chapter 1 Introduction -- Chapter 2 Methods of Fault Diagnosis and Prediction -- Chapter 3 Intelligent Predictive Maintenance System and Framework -- Chapter 4 IoT-based Perception Resource Management Framework and Model -- Chapter 5 Wireless Routing Model and Algorithm for Complex Manufacturing Environment -- Chapter 6 Protocol Integration and Design Case of Data Collection -- Chapter 7 Data-driven Fault Diagnosis Methods -- Chapter 8 Data-driven Fault Prediction Model and Methods -- Chapter 9 Maintenance Optimization Scheduling and Decision Making in Intelligent Factories -- Chapter 10 Large-scale Maintenance Service Forecasting and Optimization Configuration -- Chapter 11 Operation Process Control based on Cyber-Physical Systems.
Sommario/riassunto	In the field of equipment/product operation and maintenance (O&M) services, the new generation of information technologies such as the internet, big data, and artificial intelligence are deeply integrated with O&M services to form an internet-based Maintenance Repair & Operation (MRO) service network and an intelligent service environment. To deal with the uncertainties of multiple collaborative

entities and highly random equipment failures in the large-scale MRO network, this book establishes the theory, technology, and methods of Intelligent Predictive Maintenance (IPdM) for the MRO service network through the study of high-quality acquisition and integration of multi-source heterogeneous data, data-driven equipment fault diagnosis and prediction, large-scale maintenance decision-making, feedback, and control. The book systematically elaborates on the emerging theories, technologies, and methods in the field of equipment/product O&M services, covering a wide range of topics with rich contents. It emphasizes both systematic and scientific approaches as well as practicality. It offers both comprehensive and specialized discussions to reflect the strategic deployment and implementation of China's new generation of intelligent manufacturing and artificial intelligence in this field. The basis of English translation of this book, originally in Chinese, was facilitated by artificial intelligence. The content was later revised by the author for accuracy.
