

1. Record Nr.	UNINA9910366577503321
Titolo	Internet of Things for Industry 4.0 : Design, Challenges and Solutions / / edited by G. R. Kanagachidambaresan, R. Anand, E. Balasubramanian, V. Mahima
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	3-030-32530-X
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (266 pages)
Collana	EAI/Springer Innovations in Communication and Computing, , 2522- 8595
Disciplina	004.678
Soggetti	Electrical engineering Electronics Microelectronics Application software Industrial engineering Production engineering User interfaces (Computer systems) Engineering—Data processing Communications Engineering, Networks Electronics and Microelectronics, Instrumentation Information Systems Applications (incl. Internet) Industrial and Production Engineering User Interfaces and Human Computer Interaction Data Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Part I - Smart sensing in Industries -- Sensor design and rapid prototyping for industrial problems -- Technology, protocols and new innovations in IIoT -- Predictive analytics for critical machines using deep learning and machine intelligence -- Smart object recognition for warehouse logistics and security -- Digital Twin creating, challenges and solutions -- Part II - Machine Intelligence and automation --

Machine Health monitoring and fool proof diagnosis -- Role of AI and bio inspired computing in decision making -- Deep learning concepts aiding Industrial applications -- Energy harvesting methodologies and experimentation of sensors and actuators -- Reliability analysis and fault tolerant architecture for IIoT and Edge Computing -- Delay tolerant system for critical machine monitoring -- Part III - Role of robotics in smart production -- Automation solution for smart development applications -- UAV, UGV solutions for warehouse logistics -- Customer interaction and feedback collection robots using deep learning -- Smart recognition system for Business predictions -- Role of RFID in industry 4.0 -- Conclusion.

Sommario/riassunto

This book covers challenges and solutions in establishing Industry 4.0 standards for Internet of Things. It proposes a clear view about the role of Internet of Things in establishing standards. The sensor design for industrial problem, challenges faced, and solutions are all addressed. The concept of digital twin and complexity in data analytics for predictive maintenance and fault prediction is also covered. The book is aimed at existing problems faced by the industry at present, with the goal of cost-efficiency and unmanned automation. It also concentrates on predictive maintenance and predictive failures. In addition, it includes design challenges and a survey of literature. Discusses the move towards Industry 4.0 standards and creating a digital twin concept to increase production Presents results and design solutions for industrial standards for IoT Intended for researchers, industrialists and data scientists.
