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Nota di contenuto	Introduction to Advanced Technology for smart environment and Energy -- Evolving Technologies: IoT and Artificial Intelligence for environment and Energy -- Smart environment and Energy Systems -- Data Science for environment and Energy Informatics -- Robotics and Process Automation Technologies for Advanced Technology for smart Energy -- Blockchain in Energy Informatics -- Bioinformatics, smart Energy to Informatics and Analytics -- Augmented Reality in smart Energy -- Security and Privacy Solutions in smart Energy -- Image Processing in Energy -- Communication Technologies for Future Smart environment and Energy -- Wireless Body Area Networks and Smart Wearable's for environment and Energy -- Future Prospects and Applications of environment and Energy.
Sommario/riassunto	This book presents smart energy management in the context of energy transition. It presents the motivation, impacts and challenges related to this hot topic. Then, it focuses on the use of techniques and tools

based on artificial intelligence (AI) to solve the challenges related to this problem. A global diagram presenting the general principle of these techniques is presented. Then, these techniques are compared according to a set of criteria in order to show their advantages and disadvantages with respect to the conditions and constraints of intelligent energy management applications in the context of energy transition. Several examples are used throughout the white paper to illustrate the concepts and methods presented. An intelligent electrical network (smart grid—SG) includes heterogeneous and distributed electricity production, transmission, distribution and consumption components. It is the next generation of electricity network able to manage electricity demand (consumption/production/distribution) in a sustainable, reliable and economical way taking into account the penetration of renewable energies (solar, wind, etc.). Therefore, a (SG) smart grid also includes an intelligent layer that analyzes the data provided by consumers as well as that collected from the production side in order to optimize consumption and production according to weather conditions, the profile and habits of the consumer. In addition, this system can improve the use of green energy through renewable energy penetration and demand response.