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Nota di contenuto	IoT-based Computational Modeling for Next Generation Agro-

ecosystems: Research Issues, Emerging Trends and Challenges -- An IoT-Based Time Constrained Spectrum Trading in Wireless Communication for Tertiary Market -- 5G NB-IoT Enabled Smart Green Agriculture 4.0: A Survey -- Drones for Intelligent Agricultural Management -- Multi-Modal Sensor Nodes in Experimental Scalable Agricultural IoT Application Scenarios -- Design Architecture of Intelligent Agri-Infrastructure Incorporating IoT and Cloud: Link Budget and Socio-Economic Impact -- Remote Sensing and Soil Quality -- Enabling IoT Wireless Technologies in Sustainable Livestock Farming toward Agriculture 4.0.

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Sommario/riassunto

This book brings to readers thirteen chapters with contributions to the benefits of using IoT and Cloud Computing to agro-ecosystems from a multi-disciplinary perspective. IoT and Cloud systems have prompted the development of a Cloud digital ecosystem referred to as Cloud-to-thing continuum computing. The key success of IoT computing and the Cloud digital ecosystem is that IoT can be integrated seamlessly with the physical environment and therefore has the potential to leverage innovative services in agro-ecosystems. Areas such as ecological monitoring, agriculture, and biodiversity constitute a large area of potential application of IoT and Cloud technologies. In contrast to traditional agriculture systems that have employed aggressive policies to increase productivity, new agro-ecosystems aim to increase productivity but also achieve efficiency and competitiveness in modern sustainable agriculture and contribute, more broadly, to the green economy and sustainable food-chain industry. Fundamental research as well as concrete applications from various real-life scenarios, such as smart farming, precision agriculture, green agriculture, sustainable livestock and sow farming, climate threat, and societal and environmental impacts, is presented. Research issues and challenges are also discussed towards envisioning efficient and scalable solutions to agro-ecosystems based on IoT and Cloud technologies. Our fundamental belief is that we can collectively trigger a new revolution that will transition agriculture into an equitable system that not only feeds the world, but also contributes to mitigating the climate change and biodiversity crises that our historical actions have triggered. .

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