# Studies in Computational Intelligence

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**Series editor**

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Ronald R. Yager · Jordán Pascual Espada
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# New Advances in the Internet of Things

Springer

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# Preface

Internet of Things (IoT) promotes the creation of systems based on interconnected objects. These objects combine a physical and an electronic part, and they could be embedded devices, connected sensors, and other kind of electronic machines or devices. Most of IoT objects include sensors and actuators for interacting with the physical world.

The communication skill is one the main features of these objects. IoT objects use different communication protocols such as Internet or Bluetooth for exchanging information among them and other systems in an autonomous way without human interaction. Collaboration among objects is highly useful to improve tasks and processes in a wide range of different areas such as smart cities, logistic, transportation, smart homes, health systems, smart manufacturing, wearables, logistics, and agriculture. These IoT systems already provide great benefits to our society, but there are still a lot of challenges, improvement options, and new application fields.

This book was edited by Ronald R. Yager and Jordán Pascual. It selects ten chapters about recent and significant advances in the field of Internet of Things. Chapters are related to key fields: (1) RFID sensor networks and industrial Internet of Things; (2) communication efficiency in IoT networks; (3) publish/subscribe wireless sensor networks; (4) security and data quality; (5) smart cities, collective intelligence, and the Web of Things; (6) real-time protocols, wireless communication, and congestion control; (7) smart connectivity and user centric IoT applications; (8) storage system for data analytics in IoT; (9) IoT platforms, network protocols, and Quality of Service; and (10) mobile nodes in wireless networks. This selection presents ten relevant and innovative trends which will be able to generate great benefits over the current IoT development.

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