

Lecture Notes in Networks and Systems

Volume 62

Series editor

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Short Preface

The energy transition so coveted by the entire world would be effective only through the increased integration of renewable energies in the advent of the concept of the smart city. This book aims to showcase trends in deployed technologies and research niches in the context of the considerable development of information and communication technologies at both the domestic and urban levels. The smart city makes it possible to efficiently and sustainably use all the renewable energy resources available to it in order to generate an added value in the proposed service and/or a reduction of the costs for the citizens while adopting a decentralized and open dimension to all citizens. The end goal of a smart city promises to improve the quality of life of all citizens in the city and in the countryside, in a sustainable way and respectful of the environment. Renewable energies are an indispensable answer in the supply of a smart city. From an environmental and technological point of view, renewable energies allow an optimal supply of the electricity network while emitting little or no pollution. Renewable energy innovations subject to the use of artificial intelligence technologies are more than likely to bring multiple benefits to the deployment and growth of smart, sustainable cities. Artificial intelligence is as useful for energy suppliers as it is for consumers. The latter can know in real time the price of electricity and adapt according to their consumption. The use of artificial intelligence today makes it possible to improve decentralized energy management by optimizing flows. The authors of this book have sought to clarify the issue of renewable energy related to the development of information and communication technologies, especially to the Industrial Internet of Things (IIoT) which is becoming increasingly important.

Short Biography



Dr. Mustapha Hatti was born in El Asnam (Chlef), Algeria. He studied at El Khaldounia school, then at El Wancharissi high school and obtained his electronics engineering diplomat from USTHB Algiers, and his post-graduation studies at USTO, Oran. He worked as research engineer, at CDSE, Ain oussera, Djelfa, CRD, Sonatrach, Hassi messaoud, CRNB, Birine, Djelfa, and senior scientist at UDES/EPST-CDER, Bou Ismail, Tipasa. He leads the “Tipasa Smart City” initiative and is an IEEE senior member, he is the author of several scientific papers and chapter books, and his areas of interest are smart sustainable energy systems, innovative, fuel cell, photovoltaic, optimization, and intelligent embedded systems.

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