The last decade has witnessed an unprecedented development and growth in global wireless communications systems, technologies and network “traffic” generated over network infrastructures.

This book presents state-of-the-art energy-efficient techniques, designs and implementations that pertain to wireless communication networks such as cellular networks, wireless local area networks (WLANs) and wireless ad hoc networks (WAHNs) including mobile ad hoc networks (MANETs), and wireless sensor networks (WSNs) as they are deployed across the world to facilitate “always on” reliable high-speed wireless access from anywhere, at anytime to accommodate the new paradigm of the “Internet of Things” (IoT).

The pervasive and exponential growth of Wi-Fi and the impact of bandwidth-intensive applications on the energy consumption of Wi-Fi-enabled devices are discussed along with energy harvesting as an advantageous option to power WAHNs.

The book aims to serve as a useful reference for researchers, students, regulatory authorities, and educators.