

Integrated Sensing, Communication and Computing Wireless Networks

Advances and Applications

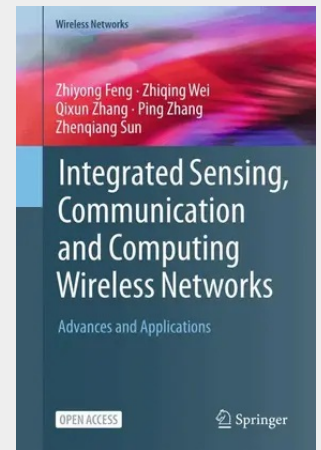
The open access book aims to provide a comprehensive overview of the latest research, development, and applications in the field of integrated sensing, communication and computing (ISCC) networks. It covers various aspects crucial for understanding and implementing this emerging technology, with a balanced blend of theoretical analysis, scheme design and system verification. Each section of book delves into specific components of ISCC networks. This open book offers valuable insights and knowledge to researchers, practitioners, and enthusiasts in the field.

The ISCC network refers to a network that possesses both the capabilities of physical-digital space sensing, ubiquitous intelligent communication, and computing. The high-precision localization of device-free targets can be performed to better understand the physical space. Moreover, computing technology will leverage large datasets and high computing resources to achieve extreme performance experience on exciting new services by merging the digital, physical, and human domains. It is foreseeable that the future mobile communication network will go beyond traditional pure communication by utilizing computing technology and providing the capability of surrounding environment sensing.

By providing a systematic introduction to ISCC networks, the book bridges the theoretical and algorithmic gap that has long existed between radar engineering, communication theory, signal processing, and wireless networking regarding ISCC networks. This open access book will serve as a primary starting point for new researchers to understand the integration of sensing, communication, and computing and as the ultimate guide for realizing the next-generation network paradigms.

This open access book provides researchers and engineers with the basic theory and practical algorithms of ISCC network. Additionally, it offers an easy-to-follow presentation and is ideal for graduate students.

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