DESCRIPTION

This book provides an insight into the 'hot' field of Radio Frequency Identification (RFID) Systems

In this book, the authors provide an insight into the field of RFID systems with an emphasis on networking aspects and research challenges related to passive Ultra High Frequency (UHF) RFID systems. The book reviews various algorithms, protocols and design solutions that have been developed within the area, including most recent advances. In addition, authors cover a wide range of recognized problems in RFID industry, striking a balance between theoretical and practical coverage. Limitations of the technology and state-of-the-art solutions are identified and new research opportunities are addressed. Finally, the book is authored by experts and respected researchers in the field and every chapter is peer reviewed.

Key Features:

• Provides the most comprehensive analysis of networking aspects of RFID systems, including tag identification protocols and reader anti-collision algorithms

• Covers in detail major research problems of passive UHF systems such as improving reading accuracy, reading range and throughput

• Analyzes other "hot topics" including localization of passive RFID tags, energy harvesting, simulator and emulator design, security and privacy

• Discusses design of tag antennas, tag and reader circuits for passive UHF RFID systems
• Presents EPCGlobal architecture framework, middleware and protocols

• Includes an accompanying website with PowerPoint slides and solutions to the problems http://www.site.uottawa.ca/~mbolic/RFIDBook/

This book will be an invaluable guide for researchers and graduate students in electrical engineering and computer science, and researchers and developers in telecommunication industry.

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ABOUT THE AUTHOR

Dr Miodrag Bolic, University of Ottawa, Canada Miodrag Bolic joined University of Ottawa, Canada in 2004 as an assistant professor. He received his B.Sc. and M.Sc. degrees in electrical engineering from the University of Belgrade in 1996 and 2001 and his Ph.D. degree in electrical engineering from SUNY at Stony Brook, USA in 2004. He has over 7 years of industrial experience from the U.S. and Serbia related to physical layer design for Bluetooth and RFID networks as well as embedded and FPGA design. He is a cofounder of a start-up Astraion Inc., NY that develops novel RFID systems.

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