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   Nota di bibliografia   Includes bibliographical references and index.

   Nota di contenuto   Front cover; Contents; Preface; Acknowledgment; About the Editor;
                        Contributors; Part I: Research Challenges and Clustering; Body; Chapter
                        1: Research Challenges in Communication Protocol Design for
                        Underwater Sensor Networks; Chapter 2: Optimal Clustering for
                        Underwater Acoustic Sensor Networks; Part II: Topology Control and
                        Routing; Chapter 4: Multipath Virtual Sink Architecture for Underwater
                        Sensor Networks; Chapter 5: A Survey of Fault Tolerance in Ad-Hoc
                        Networks and Sensor Networks; Chapter 6: Time Synchronization in
                        Sensor Networks and Underwater Sensor Networks
                        Part IV: Medium Access ControlChapter 7: MAC Protocol Design for
                        Underwater Networks; Chapter 8: Dynamic TDMA- and MACA-Based
                        Protocolsf or Distributed Topology Underwater Acoustic Networks;
                        Chapter 9: Medium Access Control Layer for Underwater Sensor
                        Networks; Part V: Software, Hardware, and Channel Modeling; Chapter
                        10: Software-Driven Underwater Acoustic Sensor Networks; Chapter 11:
                        HW /SW Co-Design of a Low-Cost Underwater Sensor Node with
                        Intelligent, Secure Acoustic Communication Capabilities; Chapter 12:
                        Channel Modeling for Underwater AcousticS ensor Networks; Index;
                        Back cover

   Sommario/riassunto   A detailed review of underwater channel characteristics, Underwater
                        Acoustic Sensor Networks investigates the fundamental aspects of

underwater communication. Prominent researchers from around the world consider contemporary challenges in the development of underwater acoustic sensor networks (UW-ASNs) and introduce a cross-layer approach for effective integration of all communication functionalities. Discussing architectures for two- and three-dimensional sensor networks, this authoritative resource clearly delineates the main differences between terrestrial