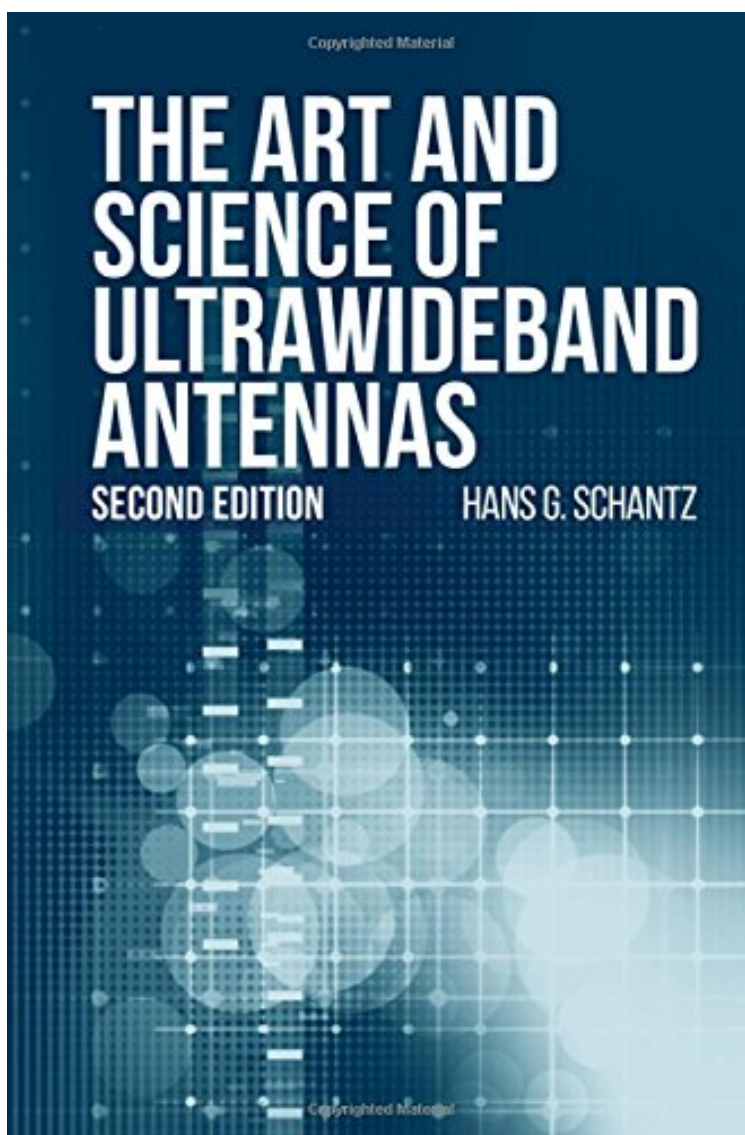


[Download free ebook] The Art and Science of Ultrawideband Antennas (Artech House Antennas and Electromagnetics Analysis Library)

The Art and Science of Ultrawideband Antennas (Artech House Antennas and Electromagnetics Analysis Library)

Hans G. Schantz

*DOC | *audiobook | ebooks | Download PDF | ePub*



[Download](#)

[Read Online](#)

#2430633 in Books 2015-06-01 Original language: English PDF # 1 1.50 x 6.40 x 9.20l, .0 #File Name: 1608079554592 pages | File size: 59.Mb

Hans G. Schantz : The Art and Science of Ultrawideband Antennas (Artech House Antennas and Electromagnetics Analysis Library) before purchasing it in order to gage whether or not it would be worth my time, and all praised The Art and Science of Ultrawideband Antennas (Artech House Antennas and Electromagnetics Analysis Library):

2 of 2 people found the following review helpful. Amazing. By James Rautio This is quite a book. Dr. Schantz has created a monumental work on UWB antennas. It appears that he has covered in detail every conceivable topic in this area, and he has done so in a carefully thought out manner that should be ideally suited to the practitioner in the field. The required mathematics are presented in a straight forward manner as needed. And on nearly every topic, Dr. Schantz provides detailed historical background, which reveals an extra dimension too often hidden in our work. By knowing where we have come from, not only can we appreciate the geniuses who have come before us, but we can also better see where we might go.

2 of 2 people found the following review helpful. An Improved edition of this UWB classic By KaiHans Schantz introduces time domain methods in antenna engineering and microwave techniques, which relate to ultra-wideband signals in this expanded second edition. The book includes well-researched historical roots of the antenna arts and technology, that are seldom encountered in contemporary text books. Chapters are sprinkled with illustrative examples, with solutions, as well as chapter-end problems meant to guide the serious student through UWB concepts. Schantz traces the antenna sciences from the early UWB beginnings of radio, through the narrow-banding and "e-to-the-j-omega suppressed" era. He encompasses a fresh modern electromagnetic energy flow concept, which leads to a better understanding of UWB wave interaction in cluttered environments. - Dr. Kai Siwiak, CEO, TimeDerivative, Inc.

3 of 3 people found the following review helpful. Great book By Customer Dr. Schantz's book is an outstanding resource for engineers and academics interested in antenna engineering, as it provides remarkable insights into the physics and operation of antennas, and a thorough overview of wideband antenna engineering. The book represents a great reference for skilled antenna engineers, and an excellent starting point for graduate students and novice engineers eager to learn more about the challenges of antenna theory and engineering, and of wideband antenna operation.

This comprehensive treatment of ultrawideband (UWB) antennas and time-domain microwave engineering serves as an invaluable practical reference for anyone involved in antenna and RF design work. This authoritative volume enables readers to select the proper UWB antennas for their applications, design and analyze UWB antennas, and integrate these antennas in an RF system. By applying time-domain thinking to problems of practical interest, the reader will not only learn how to build and analyze antennas, but also understand them at the most fundamental level. This second edition is updated and expanded throughout, providing readers with a history of antennas, numerous new problem sets and worked examples, along with new information on plotting time-domain field lines, time-domain reflectometry, matching techniques, and more. This book also addresses system issues like spectral control and antenna efficiency. Contents Overview: Introduction to UWB Antennas; History of UWB Antennas; Antennas as Transducers; Antennas as Transformers; Antennas as Radiators; Antennas as Energy Converters; Taxonomy of UWB Antennas; Antennas in Systems.

From the Back Cover s "Schantz introduces time domain methods in antenna engineering and microwave techniques, which relate to ultrawideband signals in this expanded second edition. The book is delightfully illuminating, and includes well-researched historical roots of the antenna arts, that are seldom encountered in contemporary text books. Chapters are sprinkled with illustrative examples and solutions, as well as chapter-end problems meant to guide the serious student through UWB concepts. Schantz traces the antenna sciences from the early UWB beginnings of radio, through the narrow-banding and "suppressed time harmonic" era, to encompass his fresh modern electromagnetic energy flow concept, which leads to a better understanding of UWB wave interaction in a complex environment." Dr. Kai Siwiak, CEO, TimeDerivative, Inc. "This is quite a book. Dr. Schantz has created a monumental work on UWB antennas. It appears that he has covered in detail every conceivable topic in this area, and he has done so in a carefully thought out manner that should be ideally suited to the practitioner in the field. The required mathematics are presented in a straight forward manner as needed. And on nearly every topic, Dr. Schantz provides detailed historical background, which reveals an extra dimension too often hidden in our work. By knowing where we have come from, not only can we appreciate the geniuses who have come before us, but we can also better see where we might go." James C. Rautio, PhD, President Sonnet Software, Inc. "Dr. Schantz's book is an outstanding resource for engineers and academics interested in antenna engineering, as it provides remarkable insights into the physics and operation of antennas, and a thorough overview of wideband antenna engineering. The book represents a great reference for skilled antenna engineers, and an excellent starting point for graduate students and novice engineers eager to learn more about the challenges of antenna theory and engineering, and of wideband antenna operation." Prof. Andrea Al, Department of Electrical and Computer Engineering, The University of Texas at Austin "Cover to cover, this updated edition is a treasure trove of theory and practice interleaved with fascinating, lively historical context; the author is a clear believer in not only going back to first principles but, when possible, going back to original sources in order to gain a fundamental understanding of the concepts. In particular, the discussion of energy is central here, which provides an insightful alternative viewpoint to antenna behavior that I have not found in other antenna texts. The reader is treated to a compelling discussion of UWB concepts and a wide range of UWB antennas, starting from radiation principles and progressing through to practical system-level considerations. As a result, this book pulls off the rare feat of being a

valuable resource for both the theorist as well as the practicing engineer." Prof. Steven Holland, Department of Electrical Engineering and Computer Science, Milwaukee School of Engineering

About the Author Hans G. Schantz is co-founder and CTO of The Q-Track Corporation, and a co-inventor of NFER technology and SafeSpot Collision Avoidance Systems. His prior work experience includes IBM, the Lawrence Livermore National Lab, The ElectroScience Lab of the Ohio State University, and Time Domain Corporation. He earned his Ph.D. in physics from the University of Texas at Austin.