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Sommario/riassunto

Introduces timed arrays and design approaches to meet the new high performance standards The author concentrates on any aspect of an antenna array that must be viewed from a time perspective. The first chapters briefly introduce antenna arrays and explain the difference between phased and timed arrays. Since timed arrays are designed for realistic time-varying signals and scenarios, the book also reviews wideband signals, baseband and passband RF signals, polarization and signal bandwidth. Other topics covered include time domain, mutual coupling, wideband elements, and dispersion. The author also presents a number of analog and digital beamforming networks for creating and manipulating beams. The book concludes with an overview of the methods to integrate time delay into the array design and of several other adaptive arrays that prove useful in many different systems. . Examines RF signal concepts such as polarization and signal bandwidth and their applications to timed antenna arrays. Covers arrays of point source, elements in timed antenna arrays, active electronically scanned array technology, and time delay in corporate fed arrays. Includes complete design examples for placing time delay in arrays Timed Arrays: Wideband and Time Varying Antenna Arrays is written for practicing engineers and scientists in wireless communication, radar, and remote sensing as well as graduate students and professors interested in advanced antenna topics. Randy Haupt, PhD., is Professor and Department Head of EECS at the Colorado School of Mines. He received his PhD from the University of Michigan and retired from the USAF as a LtCol. Dr. Haupt was an RF staff consultant at Ball Aerospace & Technologies, Corp., senior scientist and department head at the Applied Research Laboratory of Penn State, professor and department head of ECE at Utah State, professor and chair of EE at the University of Nevada Reno, and professor of EE at the USAF Academy. Dr. Haupt is a

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