1. Record Nr. UNINA9910646001103321 Autore Byrne Charles L. <1947, > Titolo Signal processing: a mathematical approach / / Charles L. Byrne, University of Massachusetts Lowell, Lowell, Massachusetts, USA Pubbl/distr/stampa Boca Raton: .: CRC Press, Taylor & Francis Group, . [2015] ©2015 **ISBN** 0-367-65894-1 0-429-15871-8 1-4822-4185-4 Edizione [2nd ed.] Descrizione fisica 1 online resource (436 p.) Collana Monographs and research notes in mathematics Disciplina 621.38220151 Soggetti Signal processing - Mathematics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali A Chapman and Hall book. Nota di bibliografia Includes bibliographical references and index. Front Cover; Signal Processing: A Mathematical Approach, Second Nota di contenuto Edition; MONOGRAPHS AND RESEARCH NOTES IN MATHEMATICS; Dedication; Contents; Preface; Chapter 1 Introduction; Chapter 2 Fourier Series and Fourier Transforms; Chapter 3 Remote Sensing; Chapter 4 Finite-Parameter Models; Chapter 5 Transmission and Remote Sensing: Chapter 6 The Fourier Transform and Convolution Filtering; Chapter 7 Infinite Sequences and Discrete Filters; Chapter 8 Convolution and the Vector DFT; Chapter 9 Plane-Wave Propagation; Chapter 10 The Phase Problem: Chapter 11 Transmission Tomography Chapter 12 Random SequencesChapter 13 Nonlinear Methods; Chapter 14 Discrete Entropy Maximization; Chapter 15 Analysis and Synthesis; Chapter 16 Wavelets; Chapter 17 The BLUE and the Kalman Filter; Chapter 18 Signal Detection and Estimation; Chapter 19 Inner Products; Chapter 20 Wiener Filtering; Chapter 21 Matrix Theory; Chapter 22 Compressed Sensing: Chapter 23 Probability: Chapter 24 Using the

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Sommario/riassunto

Signal Processing: A Mathematical Approach is designed to show how many of the mathematical tools the reader knows can be used to

Wave Equation; Chapter 25 Reconstruction in Hilbert Space; Chapter 26 Some Theory of Fourier Analysis; Chapter 27 Reverberation and Echo

understand and employ signal processing techniques in an applied environment. Assuming an advanced undergraduate- or graduate-level understanding of mathematics-including familiarity with Fourier series, matrices, probability, and statistics-this Second Edition: Contains new chapters on convolution and the vector DFT, plane-wave propagation, and the BLUE and Kalman filtersExpands the material on Fourier analysis to three new chapters to provide additional background