1. Record Nr. UNISA996208334303316

Titolo	Two-dimensional signal analysis / / edited by Rene Garello
Pubbl/distr/stampa	London, : ISTE, [2008]
ISBN	9780470611067 (electronic book) 1-282-16496-1 9786612164965 0-470-61106-5 0-470-39364-5
Descrizione fisica	1 online resource (312 pages)
Collana	ISTE ; ; v.21
Altri autori (Persone)	GarelloRene
Disciplina	621.382/23 621.38223
Soggetti	Signal theory (Telecommunication) System analysis
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Two-Dimensional Signal Analysis; Table of Contents; Introduction; Chapter 1. Basic Elements of 2-D Signal Processing; 1.1. Introduction; 1.2. Deterministic 2-D signals; 1.2.1. Definition; 1.2.2. Particular 2-D signals; 1.3. Random 2-D signals; 1.3.1. Definition; 1.3.2. Characterization up to the second order; 1.3.3. Stationarity; 1.3.4. Characterization of orders higher than two; 1.3.5. Ergodicity; 1.3.6. Specificities of random 2-D signals; 1.3.7. Particular random signals; 1.3.7.1. White noise; 1.3.7.2. Gaussian process; 1.4. 2-D systems; 1.4.1. Definition; 1.4.2. Main 2-D operators 1.4.3. Main properties1.4.4. Linear time-invariant (LTI) system; 1.4.5. Example; 1.4.6. Separable system; 1.4.7. Stability of 2-D systems; 1.4.8. Support of the impulse response - causality; 1.5. Characterization of 2-D signals and systems; 1.5.1. Frequency response of an LTI system; 1.5.2. 2-D Fourier transform; 1.5.2.1. Definition; 1.5.2.2. Properties; 1.5.3. Discrete 2-D Fourier transform; 1.5.3.1. Definition; 1.5.3.2. Properties; 1.5.3.3. Calculation of the 2-D DFT; 1.5.4. 2-D z transform; 1.5.4.1. Definition; 1.5.4.2. Region of convergence; 1.5.4.3. Properties

Sommario/riassunto

This title sets out to show that 2-D signal analysis has its own role to play alongside signal processing and image processing.Concentrating its coverage on those 2-D signals coming from physical sensors (such as radars and sonars), the discussion explores a 2-D spectral approach but develops the modeling of 2-D signals and proposes several data-oriented analysis techniques for dealing with them. Coverage is also given to potential future developments in this area.