1. Record Nr. UNINA9911006879703321 Autore Gaydecki Patrick Titolo Foundations of digital signal processing: theory, algorithms and hardware design / / Patrick Gaydecki London, : Institution of Electrical Engineers, c2004 Pubbl/distr/stampa **ISBN** 1-62870-455-1 1-281-97136-7 9786611971366 1-84919-017-8 Descrizione fisica 1 online resource (485 p.) Collana IEE circuits, devices and systems series; ; 15 621.3822 Disciplina Soggetti Signal processing - Digital techniques Signal detection Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Includes bibliographical references and index. Nota di bibliografia Nota di contenuto Contents; Preface; About the programs; 1 Definitions and applications of digital signal processing; 2 A linear systems toolbox; 3 An introduction to high-level computer programming using Delphi; 4 Analysis of simple electrical systems using complex impedance, differential and difference equations; 5 Introduction to convolution and correlation; 6 Fourier analysis; 7 Discrete Fourier properties and processing; 8 Introduction to Laplace space and the Laplace transform; 9 An introduction to z-space, the z-transform and digital filter design 10 Signal sampling, analog to digital and digital to analog conversion11 The design and implementation of finite impulse response filters; 12 The design and implementation of infinite impulse response filters; 13 Rudiments of adaptive filters; 14 The design and programming of real-time DSP systems Part 1: The Motorola DSP56309 processor Œ architecture and language; 15 The design and programming of real-time DSP systems Part 2: Hardware and alogrithms; 16 Concluding remarks; Appendix: Summary of the theory and algorithmic development of the fast Fourier transform;

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An introductory text, this book covers the basic theoretical, algorithmic and realtime aspects of digital signal processing (DSP).