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Nota di contenuto	Cover -- Half Title -- Title Page -- Copyright Page -- Dedication -- Table of Contents -- Preface -- Acknowledgments -- Author -- 1 Continuous and Discrete Signals -- 1.1 Continuous Signals -- 1.1.1 Generation of Continuous Signals in MATLAB -- 1.1.2 Operations on Signals and Sequences -- 1.2 Discrete-Time Signals -- 1.2.1 Complex Sequences -- 1.3 Signals and Systems -- 1.4 Classification of Signals and Systems -- 1.4.1 Continuous-Time and Discrete-Time Signals -- 1.4.2 Analog and Digital Signals -- 1.4.3 Deterministic and Random Signals -- 1.4.4 Periodic and Nonperiodic Signals -- 1.4.5 Power and Energy Signals -- 1.4.5.1 What Is Digital Signal Processing -- 1.4.5.2 Why DSP -- 1.4.5.3 Applications (DSP -- 1.5 Introduction to MATLAB in DSP -- 1.5.1 MATLAB Windows -- 1.5.2 Basic Commands in MATLAB -- 1.6 Some Fundamental Sequences -- 1.6.1 Impulse Response in MATLAB -- 1.6.2 Signal Duration -- 1.7 Generation of Discrete Signals in MATLAB -- Problems -- 2 Signals Properties -- 2.1 Periodic and Aperiodic Sequences -- 2.2 Even and Odd Parts of a Signal (Symmetric Sequences -- 2.3 Signal Manipulations -- 2.3.1 Transformations of the Independent Variable -- 2.3.1.1 Shifting -- 2.3.1.2 Reversal -- 2.3.1.3 Time-Scaling -- 2.3.1.4 Addition, Multiplication, and Scaling -- 2.3.1.5 Addition -- 2.3.1.6 Multiplication -- 2.3.1.7 Scaling -- 2.3.1.8 Signal Decomposition -- 2.4 Discrete-Time Systems -- 2.4.1 System

Properties -- 2.4.1.1 Memoryless System -- 2.4.1.2 Additivity --
2.4.1.3 Homogeneity -- 2.4.1.4 Stability -- 2.5 Linear Time-Invariant
Causal Systems (LTI -- 2.5.1 Linearity -- 2.5.2 Time-Invariance --
2.5.3 Causality -- 2.6 Definitions -- 2.6.1 Continuous-Time System --
2.6.2 Discrete-Time System -- 2.6.2.1 Delay Operator -- 2.6.2.2
Convolution Property -- 2.6.2.3 Impulse Function -- 2.6.2.4 Impulse
Response -- 2.6.2.5 Frequency Response.
2.7 System Output -- 2.7.1 Causality -- 2.7.2 Stability -- 2.7.3
Invertibility -- 2.7.4 Memory -- Problems -- 3 Convolution -- 3.1
Linear Convolution -- 3.2 Convolution Properties -- 3.2.1
Commutative Property -- 3.2.2 Associative Property -- 3.2.3
Distributive Property -- 3.3 Types of Convolutions -- 3.3.1 Equations
Method -- 3.3.1.1 Convolution of Two Sequences in MATLAB -- 3.3.2
Graphical Method -- 3.3.3 Tabular Method -- Problems -- 4 Difference
Equations -- 4.1 Difference Equations and Impulse Responses -- 4.2
System Representation Using Its Impulse Response -- 4.3 The Methods
That One May Use to Solve the Difference Equations -- 4.4 The
Classical Approach -- Problems -- 5 Discrete-Time Fourier Series
(DTFS -- 5.1 DTFS Coefficients of Periodic Discrete Signals -- 5.2
Parseval's Relation -- 5.3 Discrete Fourier Series -- Problems -- 6
Discrete-Time Fourier Transform (DTFT -- 6.1 Frequency Response --
6.2 DTFT for Any Discrete Signal -- 6.3 Inverse DTFT -- 6.4
Interconnection of Systems -- 6.5 DTFT Properties -- 6.6 Applications
of DTFT -- 6.7 LSI Systems and Difference Equations -- 6.8 Solving
Difference Equations Using DTFT -- 6.9 Frequency Response in
MATLAB -- Problems -- 7 Discrete Fourier Transform (DFT -- 7.1
Method of Decimation-in-Frequency -- 7.2 Method of Decimation-in-
Time -- 7.3 Properties of Discrete Fourier Transform -- 7.4 Discrete
Fourier Transform of a Sequence in MATLAB -- 7.5 Linear Convolution
Using the DFT -- 7.6 Generation of Inverse Discrete Fourier Transform
in MATLAB -- Problems -- 8 Fast Fourier Transform (FFT -- 8.1 Fast
Fourier Transform Definition -- 8.1.1 Decimation-in-Time FFT -- 8.1.2
Decimation-in-Frequency FFT -- 8.2 Finding the FFT of Different
Signals in MATLAB -- 8.3 Power Spectral Density Using Square
Magnitude and Autocorrelation -- 8.3.1 Equivalence of FFT and N-
phase Sequence Component Transformation.
Problems -- 9 Z-Transform -- 9.1 Z-Transform Representation -- 9.2
Region of Convergence (ROC -- 9.3 Properties of the z-transform --
9.4 Inverse z-transform -- 9.4.1 Partial Fraction Expansion and a
Look-up Table -- 9.4.2 Power Series -- 9.4.3 Contour Integration --
Problems -- 10 Z-Transform Applications in DSP -- 10.1 Evaluation of
LTI System Response Using Z-Transform -- 10.2 Digital System
Implementation from Its Function -- 10.3 Pole-Zero Diagrams for a
Function in the z-Domain -- 10.4 Frequency Response Using z-
Transform -- Problems -- 11 Pole-Zero Stability -- 11.1 Concept Poles
and Zeros -- 11.1.1 Stability Determination Based z-Transform --
11.1.2 The Z-Transform -- 11.1.3 The "z-Plane -- 11.2 Difference
Equation and Transfer Function -- 11.3 BIBO Stability -- 11.4 The z-
Plane Pole-Zero Plot and Stability -- 11.5 Stability Rules -- Problems --
12 Sampling -- 12.1 Relating the FT to the DTFT for Discrete-Time
Signals -- 12.2 Sampling -- 12.3 Band-Limited Signals -- 12.4
Sampling of Continuous-Time Signals -- 12.5 Sampling Theorem --
12.6 Band-Pass Sampling -- 12.7 Quantization -- 12.8 Uniform and
Non-Uniform Quantization -- 12.9 Audio Sampling -- 12.10 Sampling
Rate -- Problems -- 13 Digital Filters -- 13.1 Types Of Filters --
13.1.1 Low-Pass Filters -- 13.1.2 High-Pass Filters -- 13.1.3 Band-
Pass Filters -- 13.1.4 Band-Stop Filters -- 13.2 Infinite-Impulse-
Response (IIR) Digital Filter -- 13.2.1 Design of Filters Using Bilinear

Transformation -- 13.2.2 Infinite-Impulse Response Filtering -- 13.2.3 Filter Characteristics -- 13.3 Finite Impulse Response (FIR) Digital Filter -- 13.3.1 The Advantages of FIR Filters -- 13.3.2 FIR Specifications -- 13.3.3 Gibbs Phenomenon and Different Windowing -- 13.4 Comparison of IIR and FIR Digital Filters -- Problems -- 14 Implementation of IIR -- 14.1 Direction-Form I Realization. 14.2 Direction-Form II Realization -- 14.3 Cascade (Series) Realization -- 14.4 Parallel Realization -- 14.5 Transposed-Direct-Form-I -- 14.6 Transposed-Direct-Form-II -- 14.7 Implementation of a Notch Filter by MATLAB -- 14.8 Implementation of Infinite-Impulse Response Filters -- 14.8.1 Analog-to-Digital Filter Design -- 14.8.2 Bilinear Transformation -- Problems -- 15 Implementation of FIR -- 15.1 Finite Impulse Response Filter Representation -- 15.2 Window Method -- 15.3 FIR-Filter Length Estimation Using Window Functions -- Problems -- 16 Digital Filter Design -- 16.1 IIR Filter Design -- 16.1.1 Analog-Filter Design -- 16.1.2 Bilinear Transformation (IIR Digital Filter -- 16.1.3 Higher-Order IIR Digital Filters -- 16.1.4 IIR Digital High-Pass, Band-Pass, and Band-Stop Filter Design -- 16.1.5 Design a IIR Low-Pass Filter Using MATLAB -- 16.1.6 Design a IIR High-Pass Filter Using MATLAB -- 16.1.7 Design an IIR Band-Pass Filter Using MATLAB -- 16.2 FIR-Filter Design -- 16.2.1 Design of FIR Filters Using Windows -- Problems -- Selected Bibliography -- Appendix A: Complex Numbers -- Appendix B: Mathematical Formulas -- Appendix C: MATLAB -- Index.

Sommario/riassunto

Digital Signal Processing: A Primer with MATLAB provides excellent coverage of discrete-time signals and systems. At the beginning of each chapter, an abstract states the chapter objectives. All principles are also presented in a lucid, logical, step-by-step approach. As much as possible, the authors avoid wordiness and detail overload that could hide concepts and impede understanding. In recognition of requirements by the Accreditation Board for Engineering and Technology (ABET) on integrating computer tools, the use of MATLAB is encouraged in a student-friendly manner. MATLAB is introduced in Appendix C and applied gradually throughout the book. Each illustrative example is immediately followed by practice problems along with its answer. Students can follow the example step-by-step to solve the practice problems without flipping pages or looking at the end of the book for answers. These practice problems test students' comprehension and reinforce key concepts before moving onto the next section. Toward the end of each chapter, the authors discuss some application aspects of the concepts covered in the chapter. The material covered in the chapter is applied to at least one or two practical problems. It helps students see how the concepts are used in real-life situations. Also, thoroughly worked examples are given liberally at the end of every section. These examples give students a solid grasp of the solutions as well as the confidence to solve similar problems themselves. Some of the problems are solved in two or three ways to facilitate a deeper understanding and comparison of different approaches. Designed for a three-hour semester course, Digital Signal Processing: A Primer with MATLAB is intended as a textbook for a senior-level undergraduate student in electrical and computer engineering. The prerequisites for a course based on this book are knowledge of standard mathematics, including calculus and complex numbers.
