Introduction

Digital Signal Processing

Introduction and course contents

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Contents

Book

John G. Proakis, Dimitris G. Manolakis, "Digital Signal Processing: Principles, Algorithms, and Applications", Fourth Edition, Chapters 1–9. Pearson Prentice Hall, ISBN 0-13-187374-1.

Chapter 1 Introduction.

Chapter 2 Discrete-Time Signals and Systems.

Chapter 3 The z-Transform and its Application to the Analysis of LTI Systems.

Chapter 4 Frequency Analysis of Signals.

Chapter 5 Frequency-Domain Analysis of LTI Systems.

Chapter 6 Sampling and Reconstruction of Signals.

Chapter 7 The Discrete Fourier transform: Its properties and Applications.

Chapter 8 Efficient Computation of the DFT: Fast Transform Algorithms (not included).

Chapter 9 Implementation of Discrete-Time Systems.

Activities

Lectures 4 hours per week.

Exercises 4 hours per week.

Laborations 2 hours per week.

Two hand in exercises and part examinations ("duggor"). Lists to sign up for the labs will be available on the course web page.