

## NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Electronics and Communication Engineering - Digital Signal Processing

Subject Co-ordinator - Prof. S.C. Dutta Roy

Co-ordinating Institute - IIT - Delhi

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

- Lecture 1 - Digital Signal Processing Introduction
- Lecture 2 - Digital Signal Processing Introduction (Continued.)
- Lecture 3 - Digital Systems
- Lecture 4 - Characterization Description, Testing of Digital Systems
- Lecture 5 - LTI Systems Step & Impulse Responses, Convolution
- Lecture 6 - Inverse Systems, Stability, FIR & IIR
- Lecture 7 - FIR & IIR; Recursive & Non Recursive
- Lecture 8 - Discrete Time Fourier Transform
- Lecture 9 - Discrete Fourier Transform (DFT)
- Lecture 10 - DFT (Continued.)
- Lecture 11 - DFT (Continued.) Introduction to Z Transform
- Lecture 12 - Z Transform
- Lecture 13 - Z Transform (Continued.)
- Lecture 14 - Discrete Time Systems in the Frequency Domain
- Lecture 15 - Simple Digital Filters
- Lecture 16 - All Pass Filters, Com.Filters
- Lecture 17 - Linear Phase filters, Complementary Transfer Fn
- Lecture 18 - Compensatory Transfer Functions, (Continued.)
- Lecture 19 - Test for Stability using All Pass Functions
- Lecture 20 - Digital Processing of Continuous Time Signals
- Lecture 21 - Problem Solving Session
- Lecture 22 - Problem Solving Session
- Lecture 23 - Analog Filter Design
- Lecture 24 - Analog Chebyshev LPF Design
- Lecture 25 - Analog Filter Design (Continued.)
- Lecture 26 - Analog frequency Transformation
- Lecture 27 - Problem Solving Session on Discrete Time System
- Lecture 28 - Digital Filter Structures
- Lecture 29 - IIR Realizations

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- Lecture 30 - All Pass Realizations
- Lecture 31 - Lattice Synthesis (Continued.)
- Lecture 32 - FIR Lattice Synthesis
- Lecture 33 - FIR Lattice (Continued.) and Digital Filter Design
- Lecture 34 - IIR Filter Design
- Lecture 35 - IIR Design by Bilinear Transformation
- Lecture 36 - IIR Design Examples
- Lecture 37 - Digital to Digital Frequency Transformation
- Lecture 38 - FIR Design
- Lecture 39 - FIR Digital Filter Design by Windowing
- Lecture 40 - FIR Design by Windowing & Frequency Sampling
- Lecture 41 - Solving Problems on DSP Structures
- Lecture 42 - FIR Design by Frequency Sampling
- Lecture 43 - FIR Design by Frequency Sampling (Continued.)