

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

NPTEL Video Course - Electronics and Communication Engineering - NOC:Signal Processing Algorithms and Architecture

Subject Co-ordinator - Prof. Anirban Dasgupta

Co-ordinating Institute - IIT Guwahati

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

- Lecture 1 - Introduction to Time-Domain Signal Processing
- Lecture 2 - Correlation and Convolution
- Lecture 3 - Zero-crossing Detection
- Lecture 4 - Peak Detection
- Lecture 5 - Envelope Detection and Smoothing
- Lecture 6 - Pattern Matching
- Lecture 7 - Introduction to Frequency-Domain Signal Processing
- Lecture 8 - Fourier Analysis
- Lecture 9 - Fast Fourier Transforms
- Lecture 10 - Applications of FFT
- Lecture 11 - Z-transform
- Lecture 12 - Coherence Analysis
- Lecture 13 - Introduction to Time-Frequency Analysis
- Lecture 14 - Multirate Signal Processing - I
- Lecture 15 - Multirate Signal Processing - II
- Lecture 16 - Short-Time Fourier Transform (STFT)
- Lecture 17 - Wavelet Transform - I
- Lecture 18 - Wavelet Transform - II
- Lecture 19 - Introduction to Signal Processing Architectures
- Lecture 20 - Signal Processor Components
- Lecture 21 - Interfacing, Pipelining and Parallelism
- Lecture 22 - Filter Structures - I
- Lecture 23 - Filter Structures - II
- Lecture 24 - Filter Design

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