

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

NPTEL Video Course - Computer Science and Engineering - Design and Analysis of Algorithms

Subject Co-ordinator - Prof. Sundar Viswanathan, Prof. Ajit A Diwan, Prof. Abhiram G Ranade

Co-ordinating Institute - IIT - Bombay

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

- Lecture 1 - Overview of the course
- Lecture 2 - Framework for Algorithms Analysis
- Lecture 3 - Algorithms Analysis Framework - II
- Lecture 4 - Asymptotic Notations
- Lecture 5 - Algorithm Design Techniques
- Lecture 6 - Divide And Conquer - I
- Lecture 7 - Divide And Conquer - II Median Finding
- Lecture 8 - Divide And Conquer - III Surfing Lower Bounds
- Lecture 9 - Divide And Conquer - IV Closest Pair
- Lecture 10 - Greedy Algorithms - I
- Lecture 11 - Greedy Algorithms - II
- Lecture 12 - Greedy Algorithms - III
- Lecture 13 - Greedy Algorithms - IV
- Lecture 14 - Pattern Matching - I
- Lecture 15 - Pattern Matching - II
- Lecture 16 - Combinational Search and Optimization - I
- Lecture 17 - Combinational Search and Optimization - II
- Lecture 18 - Dynamic Programming
- Lecture 19 - Longest Common Subsequences
- Lecture 20 - Matrix Chain Multiplication
- Lecture 21 - Scheduling with Startup and Holding Costs
- Lecture 22 - Average case Analysis of Quicksort
- Lecture 23 - Bipartite Maximum Matching
- Lecture 24 - Lower Bounds for Sorting
- Lecture 25 - Element Distinctness Lower Bounds
- Lecture 26 - NP-Completeness - I - Motivation
- Lecture 27 - NP-Completeness - II
- Lecture 28 - NP-Completeness - III
- Lecture 29 - NP-Completeness - IV

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- Lecture 30 - NP-Completeness - V
- Lecture 31 - NP-Completeness - VI
- Lecture 32 - Approximation Algorithms
- Lecture 33 - Approximation Algorithms
- Lecture 34 - Approximation Algorithms for NP