

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

NPTEL Video Course - Computer Science and Engineering - NOC:Introduction to Algorithms and Analysis

Subject Co-ordinator - Prof. Sourav Mukhopadhyay

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Insertion sort  
Lecture 2 - Analysis of Insertion Sort  
Lecture 3 - Asymptotic Analysis  
Lecture 4 - Recurrence of Merge Sort  
Lecture 5 - Substitution Method  
Lecture 6 - The Master Method  
Lecture 7 - Divide-and-Conquer  
Lecture 8 - Divide-and-Conquer (Continued...)  
Lecture 9 - Straseen's Algorithms  
Lecture 10 - QuickSort  
Lecture 11 - Analysis of Quicksort  
Lecture 12 - Randomized Quicksort  
Lecture 13 - Heap  
Lecture 14 - Heap Sort  
Lecture 15 - Decision Tree  
Lecture 16 - Linear time Sorting  
Lecture 17 - Radix Sort and Bucket Sort  
Lecture 18 - Order Statistics  
Lecture 19 - Randomised Order Statistics  
Lecture 20 - Worst case linear time order statistics  
Lecture 21 - Hash Function  
Lecture 22 - Open Addressing  
Lecture 23 - Universal Hashing  
Lecture 24 - Perfect Hashing  
Lecture 25 - Binary Search Tree (BST) Sort  
Lecture 26 - Randomly build BST  
Lecture 27 - Red Black Tree  
Lecture 28 - Red Black Tree (Continued...)  
Lecture 29 - Augmentation of data structure

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- Lecture 30 - Interval trees
- Lecture 31 - Fixed universe successor
- Lecture 32 - Van Emde Boas data structure
- Lecture 33 - Amortized analysis
- Lecture 34 - Computational Geometry
- Lecture 35 - Computational Geometry (Continued...)
- Lecture 36 - Dynamic Programming
- Lecture 37 - Longest common subsequence
- Lecture 38 - Graphs
- Lecture 39 - Prim's Algorithms
- Lecture 40 - Graph Search
- Lecture 41
- Lecture 42
- Lecture 43
- Lecture 44
- Lecture 45
- Lecture 46
- Lecture 47
- Lecture 48
- Lecture 49
- Lecture 50
- Lecture 51
- Lecture 52 - Union-Find
- Lecture 53 - Augmented disjoint set data structure
- Lecture 54 - Network flow
- Lecture 55 - Network Flow (Continued...)