

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

NPTEL Video Course - Special Lecture Series - ACM Summer School on Graph Theory and Graph Algorithms

Subject Co-ordinator - Dr. N S. Narayanaswamy

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Introduction to Graph Theory - Part 1
Lecture 2 - Introduction to Graph Theory - Part 2
Lecture 3 - Introduction to Graph Algorithms - Part 1
Lecture 4 - Introduction to Graph Algorithms - Part 2
Lecture 5 - Havel Hakimi Theorem - Part 1
Lecture 6 - Havel Hakimi Theorem - Part 2
Lecture 7 - Havel Hakimi Theorem - Part 3
Lecture 8 - Graph Traversals - Part 1
Lecture 9 - Graph Traversals - Part 2
Lecture 10 - Topological Sort and Mengers Theorem - Part 1
Lecture 11 - Topological Sort and Mengers Theorem - Part 2
Lecture 12 - Topological Sort and Mengers Theorem - Part 3
Lecture 13 - Hamiltonian Graphs - Part 1
Lecture 14 - Hamiltonian Graphs - Part 2
Lecture 15 - Shortest path Algorithms 1 - Part 1
Lecture 16 - Shortest path Algorithms 1 - Part 2
Lecture 17 - Shortest path Algorithms 1 - Part 3
Lecture 18 - Shortest path Algorithms 1 - Part 4
Lecture 19 - Matching in Graphs - Part 1
Lecture 20 - Matching in Graphs - Part 2
Lecture 21 - Some Graph Theoretic Puzzles - Part 1
Lecture 22 - Some Graph Theoretic Puzzles - Part 2
Lecture 23 - Network Flow Algorithms - Part 1
Lecture 24 - Network Flow Algorithms - Part 2
Lecture 25 - Network Flow Algorithms - Part 3
Lecture 26 - Network Flow Algorithms - Part 4
Lecture 27 - Network Flow Algorithms - Part 5
Lecture 28 - Network Flow Algorithms - Part 6
Lecture 29 - Network Flows - Part 1

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- Lecture 30 - Network Flows - Part 2
- Lecture 31 - Network Flows - Part 3
- Lecture 32 - Network Flows - Part 4
- Lecture 33 - Turanâ s and Madrurâ s theorem - Part 1
- Lecture 34 - Turanâ s and Madrurâ s theorem - Part 2
- Lecture 35 - NP Computations - Part 1
- Lecture 36 - NP Computations - Part 2
- Lecture 37 - Spectral Graph Theory-I - Part 1
- Lecture 38 - Spectral Graph Theory-I - Part 2
- Lecture 39 - Spectral Graph Theory-I - Part 3
- Lecture 40 - NP Computations II - Part 1
- Lecture 41 - NP Computations II - Part 2
- Lecture 42 - Graph Coloring - Part 1
- Lecture 43 - Graph Coloring - Part 2
- Lecture 44 - Spectral Graph Theory-II - Part 1
- Lecture 45 - Spectral Graph Theory-II - Part 2
- Lecture 46 - NP Computations Reductions - Part 1
- Lecture 47 - NP Computations Reductions - Part 2
- Lecture 48 - NP Computations Reductions - Part 3
- Lecture 49 - Spectral Graph Theory-III - Part 1
- Lecture 50 - Planar Graphs - Part 1
- Lecture 51 - Planar Graphs - Part 2
- Lecture 52 - NP Computations and Approximation Algorithms - Part 1
- Lecture 53 - NP Computations and Approximation Algorithms - Part 2
- Lecture 54 - Spectral Graph Theory-IV - Part 1
- Lecture 55 - Spectral Graph Theory-IV - Part 2
- Lecture 56 - Approximation Algorithms I - Part 1
- Lecture 57 - Approximation Algorithms I - Part 2
- Lecture 58 - Social Network Analysis - Part 1
- Lecture 59 - Social Network Analysis - Part 2
- Lecture 60 - Spectral Graph Theory-V - Part 1
- Lecture 61 - Spectral Graph Theory-V - Part 2
- Lecture 62 - Approximation Algorithms II - Part 1
- Lecture 63 - Approximation Algorithms II - Part 2
- Lecture 64 - Spectral Graph Theory-VI - Part 1
- Lecture 65 - Spectral Graph Theory-VI - Part 2
- Lecture 66 - RSA Crypto - Part 1
- Lecture 67 - RSA Crypto - Part 2
- Lecture 68 - Approximation Algorithms III - Part 1

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- Lecture 69 - Approximation Algorithms III - Part 2
- Lecture 70 - Spectral Graph Theory-VII - Part 1
- Lecture 71 - Spectral Graph Theory-VII - Part 2
- Lecture 72 - Exact Exponential Algorithms - Part 1
- Lecture 73 - Exact Exponential Algorithms - Part 2
- Lecture 74 - Interconnection Networks - Part 1
- Lecture 75 - Interconnection Networks - Part 2
- Lecture 76 - Kernelization - Part 1
- Lecture 77 - Kernelization - Part 2
- Lecture 78 - Kernelization - Part 3
- Lecture 79 - Introduction to Parameterized Algorithms - Part 1
- Lecture 80 - Introduction to Parameterized Algorithms - Part 2
- Lecture 81 - Chordal Graphs - Part 1
- Lecture 82 - Chordal Graphs - Part 2
- Lecture 83 - Branching - Part 1
- Lecture 84 - Branching - Part 2
- Lecture 85 - Interval Graphs and Split Graphs - Part 1
- Lecture 86 - Interval Graphs and Split Graphs - Part 2
- Lecture 87 - Vertex cover linear vertex kernel using LP - Part 1
- Lecture 88 - Vertex cover linear vertex kernel using LP - Part 2
- Lecture 89 - Comparability Graphs - Part 1
- Lecture 90 - Comparability Graphs - Part 2
- Lecture 91 - Introduction to Randomized Algorithms and Karger's Min-cut Algorithm - Part 1
- Lecture 92 - Introduction to Randomized Algorithms and Karger's Min-cut Algorithm - Part 2
- Lecture 93 - Probability Methods to Ramsey Number - Part 2
- Lecture 94 - Probability Methods to Ramsey Number - Part 2
- Lecture 95 - Color Coding - Part 1
- Lecture 96 - Color Coding - Part 2
- Lecture 97 - Fast Min-cut Algorithm and its analysis - Part 1
- Lecture 98 - Fast Min-cut Algorithm and its analysis - Part 2
- Lecture 99 - Box Representations of Graphs - Part 1
- Lecture 100 - Box Representations of Graphs - Part 2
- Lecture 101 - Hardness for FPT - Part 1
- Lecture 102 - Hardness for FPT - Part 2
- Lecture 103 - Application of min-cut Algorithm

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

NPTEL Video Course - Special Lecture Series - ACM Summer School in Data Science

Subject Co-ordinator - Prof. Murugaiyan Amirthalingam

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Probability - Part 1
Lecture 2 - Probability - Part 2
Lecture 3 - Probability - Part 3
Lecture 4 - Math Foundation - Part 1
Lecture 5 - Math Foundation - Part 2
Lecture 6 - Math Foundation - Part 3
Lecture 7 - Math Foundation 2 - Part 1
Lecture 8 - Math Foundation 2 - Part 2
Lecture 9 - Math Foundation 2 - Part 3
Lecture 10 - Introduction to probability for Data science - Part 1
Lecture 11 - Introduction to probability for Data science - Part 2
Lecture 12 - Introduction to probability for Data science - Part 3
Lecture 13 - Introduction to Statistics for Data science - Part 1
Lecture 14 - Introduction to Statistics for Data science - Part 2
Lecture 15 - Introduction to Statistics for Data science - Part 3
Lecture 16 - Clustering I - Part 1
Lecture 17 - Clustering I - Part 2
Lecture 18 - Clustering I - Part 3
Lecture 19 - Clustering II - Part 1
Lecture 20 - Clustering II - Part 2
Lecture 21 - Clustering II - Part 3
Lecture 22 - Dimensionality Reduction - Part 1
Lecture 23 - Dimensionality Reduction - Part 2
Lecture 24 - Dimensionality Reduction - Part 3
Lecture 25 - Supervised Learning I - Part 1
Lecture 26 - Supervised Learning I - Part 2
Lecture 27 - Supervised Learning I - Part 3
Lecture 28 - Supervised Learning II - Part 1
Lecture 29 - Supervised Learning II - Part 2

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- Lecture 30 - Supervised Learning II - Part 3
- Lecture 31 - Supervised Learning III - Part 1
- Lecture 32 - Supervised Learning III - Part 2
- Lecture 33 - Supervised Learning III - Part 3
- Lecture 34 - Linear Models For Classification - Part 1
- Lecture 35 - Linear Models For Classification - Part 2
- Lecture 36 - Linear Models For Classification - Part 3
- Lecture 37 - Tree Based Methods - Part 1
- Lecture 38 - Tree Based Methods - Part 2
- Lecture 39 - SVMs - Part 1
- Lecture 40 - SVMs - Part 2
- Lecture 41 - SVMs - Part 3
- Lecture 42 - Ensemble Methods - Part 1
- Lecture 43 - Ensemble Methods - Part 2
- Lecture 44 - Ensemble Methods - Part 3
- Lecture 45 - Learning Theory - Part 1
- Lecture 46 - Learning Theory - Part 2
- Lecture 47 - Introduction to Probabilistic Modeling - Part 1
- Lecture 48 - Introduction to Probabilistic Modeling - Part 2
- Lecture 49 - Introduction to Probabilistic Modeling - Part 3
- Lecture 50 - Probabilistic/Bayesian Models for Regression - Part 1
- Lecture 51 - Probabilistic/Bayesian Models for Regression - Part 2
- Lecture 52 - Probabilistic/Bayesian Models for Regression - Part 3
- Lecture 53 - Probabilistic Classification, Latent Variable Models - Part 1
- Lecture 54 - Probabilistic Classification, Latent Variable Models - Part 2
- Lecture 55 - Probabilistic Classification, Latent Variable Models - Part 3
- Lecture 56 - Deep Learning I - Part 1
- Lecture 57 - Deep Learning I - Part 2
- Lecture 58 - Deep Learning I - Part 3
- Lecture 59 - Deep Learning II - Part 1
- Lecture 60 - Deep Learning II - Part 2
- Lecture 61 - Deep Learning II - Part 3
- Lecture 62 - Deep Learning III - Part 1
- Lecture 63 - Deep Learning III - Part 2
- Lecture 64 - Deep Learning III - Part 3
- Lecture 65 - Reinforcement learning I - Part 1
- Lecture 66 - Reinforcement learning I - Part 2
- Lecture 67 - Reinforcement learning II - Part 1
- Lecture 68 - Reinforcement learning II - Part 2

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- Lecture 69 - Map-Reduce and Spark - Part 1
- Lecture 70 - Map-Reduce and Spark - Part 2
- Lecture 71 - Map-Reduce and Spark - Part 3
- Lecture 72 - Scalable Machine Learning - Part 1
- Lecture 73 - Scalable Machine Learning - Part 2

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

NPTEL Video Course - Special Lecture Series - Topics in Theoretical Computer Science

Subject Co-ordinator - Dr. N S. Narayanaswamy

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Finite Automata

Lecture 2 - TMs, Halting Problems

Lecture 3 - Concurrency

Lecture 4 - Blockchain and Bitcoin

Lecture 5 - Complexity Theory

Lecture 6 - Lower Bounds, Dealing with NP hardness

Lecture 7 - Online and streaming algorithms

Lecture 8 - Zero Knowledge Proofs

Lecture 9 - Verification, Games

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

NPTEL Video Course - Special Lecture Series - Researching Anglo-Indians in India and the Diaspora

Subject Co-ordinator - Prof. Merin Simi Raj

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Keynote Address

Lecture 2 - A Synopsis of 'Two Cheers'

Lecture 3 - Higher Education Among Anglo-Indians

Lecture 4 - Perception of trust, risk and intimacy among elderly Anglo-Indians living in Tollygunge home in K

Lecture 5 - The Daunting Spirit and the Empowering Voice of Eunice De Souza

Lecture 6 - Origin Myth and Anglo-Indian Identity

Lecture 7 - Keynote Address

Lecture 8 - Shame and Guilt in Alison McQueens The Secret Children

Lecture 9 - Re-visiting McCluskieganj

Lecture 10 - The Imaging of the Anglo-Indian Woman in Colonialist Literature

Lecture 11 - Expostulating Celluloid Stereotypes

Lecture 12 - Chutney Mary

Lecture 13 - In Search of a New Home

Lecture 14 - (Re)discovering Anglo-Indians of Visakhapatnam - An Overview

Lecture 15 - Genealogy of Sporting Culture through a Study of Anglo-Indian Institutions of Asansol

Lecture 16 - Keynote Address

Lecture 17 - Crowdsourcing as a Research Tool

Lecture 18 - Researching Community, Writing Cultures

Lecture 19 - Revisiting the Anglo-Indian Community

Lecture 20 - Minoritizing English

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

NPTEL Video Course - Special Lecture Series - Dravidian Temple Architecture and Construction Techniques

Subject Co-ordinator - Unknown

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Introduction to Dravidian Temple Architecture and Construction Techniques - Part 1
Lecture 2 - Introduction to Dravidian Temple Architecture and Construction Techniques - Part 2
Lecture 3 - Introduction to Dravidian Temple Architecture and Construction Techniques - Part 3
Lecture 4 - Introduction to Dravidian Temple Architecture and Construction Techniques - Part 4
Lecture 5 - Introduction to Dravidian Temple Architecture and Construction Techniques - Part 5
Lecture 6 - Naal Kurithal - Part 1
Lecture 7 - Naal Kurithal - Part 2
Lecture 8 - Naal Kurithal - Part 3
Lecture 9 - Naal Kurithal - Part 4
Lecture 10 - Naal Kurithal - Part 5
Lecture 11 - Naal Kurithal - Part 6
Lecture 12 - Ayadhi Calculations - Part 1
Lecture 13 - Ayadhi Calculations - Part 2
Lecture 14 - Ayadhi Calculations - Part 3
Lecture 15 - Ayadhi Calculations - Part 4
Lecture 16 - Ayadhi Calculations - Part 5
Lecture 17 - Ayadhi Calculations - Part 6
Lecture 18 - Ayadhi Calculations - Part 7
Lecture 19 - Ayadhi Calculations - Part 8
Lecture 20 - Ayadhi Calculations - Part 9
Lecture 21 - Ayadhi Calculations - Part 10
Lecture 22 - Ayadhi Calculations - Part 11
Lecture 23 - Alavukal - Part 1
Lecture 24 - Alavukal - Part 2
Lecture 25 - Alavukal - Part 3
Lecture 26 - Alavukal - Part 4
Lecture 27 - Alavukal - Part 5
Lecture 28 - Alavukal - Part 6
Lecture 29 - Dhisai Aridhal - Part 1

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Lecture 30 - Dhisai Aridhal - Part 2
Lecture 31 - Dhisai Aridhal - Part 3
Lecture 32 - Dhisai Aridhal - Part 4
Lecture 33 - Dhisai Aridhal - Part 5
Lecture 34 - Site Analysis - Part 1
Lecture 35 - Site Analysis - Part 2
Lecture 36 - Site Analysis - Part 3
Lecture 37 - Site Analysis - Part 4
Lecture 38 - Site Analysis - Part 5
Lecture 39 - Site Analysis - Part 6
Lecture 40 - Site Analysis - Part 7
Lecture 41 - Site Analysis - Part 8
Lecture 42 - Site Analysis - Part 9
Lecture 43 - Formulation of Structure - Part 1
Lecture 44 - Formulation of Structure - Part 2
Lecture 45 - Formulation of Structure - Part 3
Lecture 46 - Formulation of Structure - Part 4
Lecture 47 - Formulation of Structure - Part 5
Lecture 48 - Formulation of Structure - Part 6
Lecture 49 - Formulation of Structure - Part 7
Lecture 50 - Formulation of Structure - Part 8
Lecture 51 - Formulation of Structure - Part 9
Lecture 52 - Formulation of Structure - Part 10
Lecture 53 - Formulation of Structure - Part 11
Lecture 54 - Formulation of Structure - Part 12
Lecture 55 - Formulation of Structure - Part 13
Lecture 56 - Formulation of Structure - Part 14
Lecture 57 - Formulation of Structure - Part 15
Lecture 58 - Formulation of Structure - Part 16
Lecture 59 - Formulation of Structure - Part 17
Lecture 60 - Formulation of Structure - Part 18
Lecture 61 - Formulation of Structure - Part 19
Lecture 62 - Formulation of Structure - Part 20
Lecture 63 - Formulation of Structure - Part 21
Lecture 64 - Formulation of Structure - Part 22
Lecture 65 - Formulation of Structure - Part 23
Lecture 66 - Formulation of Structure - Part 24
Lecture 67 - Formulation of Structure - Part 25
Lecture 68 - Formulation of Structure - Part 26

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- Lecture 69 - Formulation of Structure - Part 27
- Lecture 70 - Formulation of Structure - Part 28
- Lecture 71 - Formulation of Structure - Part 29
- Lecture 72 - Formulation of Structure - Part 30
- Lecture 73 - Formulation of Structure - Part 31
- Lecture 74 - Formulation of Structure - Part 32
- Lecture 75 - Formulation of Structure - Part 33
- Lecture 76 - Formulation of Structure - Part 34
- Lecture 77 - Formulation of Structure - Part 35
- Lecture 78 - Formulation of Structure - Part 36
- Lecture 79 - Formulation of Structure - Part 37
- Lecture 80 - Formulation of Structure - Part 38
- Lecture 81 - Formulation of Structure - Part 39
- Lecture 82 - Formulation of Structure - Part 40
- Lecture 83 - Formulation of Structure - Part 41
- Lecture 84 - Formulation of Structure - Part 42
- Lecture 85 - Formulation of Structure - Part 43
- Lecture 86 - Formulation of Structure - Part 44
- Lecture 87 - Formulation of Structure - Part 45
- Lecture 88 - Formulation of Structure - Part 46
- Lecture 89 - Characteristics of a Mandapam - Part 1
- Lecture 90 - Characteristics of a Mandapam - Part 2
- Lecture 91 - Characteristics of a Mandapam - Part 3
- Lecture 92 - Characteristics of a Mandapam - Part 4
- Lecture 93 - Characteristics of a Mandapam - Part 5
- Lecture 94 - Characteristics of a Mandapam - Part 6

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

NPTEL Video Course - Special Lecture Series - ACM Summer School in Data Science (Bangalore)

Subject Co-ordinator - Unknown

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Web Browser Security

Lecture 2 - Trusted Computing

Lecture 3 - Buffer Overflow Vulnerability and Protection Techneques

Lecture 4 - Secure Software Engineering

Lecture 5 - Challenges and Opportunities with Cloud Security

Lecture 6 - Cognitive Security with Watson

Lecture 7 - IBM MaaS360 Architecture Overview

Lecture 8 - Unified Risk Management Approach

Lecture 9 - Data Encryption and Post Quantum Cryptography (PQC)

Lecture 10 - Network Security - I

Lecture 11 - Network Security - II

Lecture 12 - Network Security - III

Lecture 13 - Network Security - IV

Lecture 14 - Network Security - V

Lecture 15 - Network Security - VI

Lecture 16 - Security

Lecture 17 - Security

Lecture 18 - Security

Lecture 19 - Security Gap Analysis - I

Lecture 20 - Security Gap Analysis - II

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

NPTEL Video Course - Special Lecture Series - ACM Summer School on Algorithmic Game Theory

Subject Co-ordinator - Prof. Meghana Nasre

Co-ordinating Institute - IIT - Madras

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

- Lecture 1 - Introduction to Stable Matchings
- Lecture 2 - Men-Optimality of the Men-Proposing Gale-Shapley Algorithm
- Lecture 3 - GS
- Lecture 4 - GS
- Lecture 5 - The Hospital Residents Problem
- Lecture 6 - Popular Matchings in the stable marriage problem
- Lecture 7 - Popularity in the House Allocation Problem - 1
- Lecture 8 - Popularity in the House Allocation Problem - 2
- Lecture 9 - Strategic Behavior in Popular Matchings
- Lecture 10 - Stable Roommates
- Lecture 11 - An Introduction to Voting
- Lecture 12 - The Game of Trust - Nicky Case's Interactive Essay
- Lecture 13 - Arrow's Theorem
- Lecture 14 - Gibbard-Satterthwaite Theorem
- Lecture 15 - Domain Restrictions and Multiwinner Elections
- Lecture 16 - Incentive Design in Crowdsourcing Applications
- Lecture 17 - Adversarial Approaches in Deep Learning - Part 1
- Lecture 18 - Adversarial Approaches in Deep Learning - Part 2
- Lecture 19 - Algorithmic for Computing Market Equilibrium
- Lecture 20 - Tournament Fixing and Superkings
- Lecture 21 - Tournament Fixing Parameterized by FAS
- Lecture 22 - Tournament Fixing with Bribery
- Lecture 23 - An Introduction to Cake-Cutting
- Lecture 24 - Two Algorithms for Finding Proportional Allocations
- Lecture 25 - Envy-Freenes and Approximate EF
- Lecture 26 - Sperner's Lemma and Applications
- Lecture 27 - Cake Cutting with a Secret Agent
- Lecture 28 - Fairness Notions for Indivisible Goods
- Lecture 29 - Computing EF1 Allocations

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- Lecture 30 - An Introduction to Rent Division
- Lecture 31 - Rent Division and Maximum Weight Matchings
- Lecture 32 - Hall's Theorem and Maximin Share
- Lecture 33 - Probability Review - Part 1
- Lecture 34 - Probability Review - Part 2
- Lecture 35 - Predicting Election Outcomes
- Lecture 36 - Reservoir Sampling and Preference Elicitation

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

NPTEL Video Course - Special Lecture Series - ACM Summer School on Graph Theory and Graph Algorithms (Dr. N.S.

Subject Co-ordinator - Dr. N.S. Narayanaswamy

Co-ordinating Institute - IIT - Madras

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

- Lecture 1 - Basic Graph theory and Graph Algorithms - Part 1
- Lecture 2 - Basic Graph theory and Graph Algorithms - Part 2
- Lecture 3 - Basic Graph theory and Graph Algorithms - Part 3
- Lecture 4 - Basic Graph theory and Graph Algorithms - Part 4
- Lecture 5 - Basic Graph theory and Graph Algorithms - Part 5
- Lecture 6 - Geometric Algorithms - Part 1
- Lecture 7 - Geometric Algorithms - Part 2
- Lecture 8 - Geometric Algorithms - Part 3
- Lecture 9 - Geometric Algorithms - Part 4
- Lecture 10 - Geometric Algorithms - Part 5
- Lecture 11 - Geometric Algorithms - Part 6
- Lecture 12 - Introduction to Computational Complexity, P, NP classes
- Lecture 13 - NPC Reductions through examples - Part 1
- Lecture 14 - NPC Reductions through examples - Part 2
- Lecture 15 - NPC Reductions through examples - 3SAT
- Lecture 16 - Subset Sum, Knapsack
- Lecture 17 - Directed Hamiltonian Path-NPC Reduction
- Lecture 18 - Introduction to LP Duality theorem
- Lecture 19 - Design of Approx. algorithms using primal dual scheme - Hitting set
- Lecture 20 - Approx Vertex Cover
- Lecture 21 - Approx for Min Cost VC, Approx for Min cost Set Cover
- Lecture 22 - 2-factor approx for metric TSP, 1.5 Approx christofides Algo
- Lecture 23 - knapsack Approx, 1/2 - factor Approx, 1- ϵ Approx
- Lecture 24 - Perfect graphs, weak and strong perfect graph conjecture, line graphs, interval graphs
- Lecture 25 - $\hat{\pm}$ perfection of interval graphs, chordal graphs, expansion lemma, proof for weak perfect conjecture
- Lecture 26 - $\hat{\pm}$ perfection of interval graphs, chordal graphs, expansion lemma, proof for weak perfect conjecture
- Lecture 27 - Comparability graph, Permutation graphs, AT-free graphs, Trapezoidal graphs, Circular arc graphs
- Lecture 28 - Fixed Parameter Algorithms, -VC, Cluster vertex deletion, - Branching
- Lecture 29 - Kernelization, -VC, Crown Decomposition, Feedback vertex set, Iterative compression, Analysing bra

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- Lecture 30 - Kernelization, -VC, CrownDecomposition, Feedback vertex set, Iterative compression, Analysing bra
- Lecture 31 - Kernelization, -VC, CrownDecomposition, Feedback vertex set, Iterative compression, Analysing bra
- Lecture 32 - Hardness in Parameterized Complexity - W - hard reductions Exponential algorithms - Part 1
- Lecture 33 - Hardness in Parameterized Complexity - W - hard reductions Exponential algorithms - Part 2

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

NPTEL Video Course - Special Lecture Series - ACM Summer School on Compiler Design and Construction

Subject Co-ordinator - Prof. Subhajit Roy

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Lattice Theory - Part 1
Lecture 2 - Lattice Theory - Part 2
Lecture 3 - Lattice Theory - Part 3
Lecture 4 - Lattice Theory - Part 4
Lecture 5 - Lattice Theory - Part 5
Lecture 6 - Lattice Theory - Part 6
Lecture 7 - Lattice Theory - Part 7
Lecture 8 - Lattice Theory - Part 8
Lecture 9 - Lattice Theory - Part 9
Lecture 10 - Machine Dependent Optimizations - Part 1
Lecture 11 - Machine Dependent Optimizations - Part 2
Lecture 12 - Machine Dependent Optimizations - Part 3
Lecture 13 - Machine Dependent Optimizations - Part 4
Lecture 14 - Machine Dependent Optimizations - Part 5
Lecture 15 - Machine Dependent Optimizations - Part 6
Lecture 16 - Machine Dependent Optimizations - Part 7
Lecture 17 - Machine Dependent Optimizations - Part 8
Lecture 18 - Machine Dependent Optimizations - Part 9
Lecture 19 - Machine Dependent Optimizations - Part 10
Lecture 20 - Program Execution Environment - Part 1
Lecture 21 - Program Execution Environment - Part 2
Lecture 22 - Program Execution Environment - Part 3
Lecture 23 - Program Execution Environment - Part 4
Lecture 24 - Program Execution Environment - Part 5
Lecture 25 - Program Execution Environment - Part 6
Lecture 26 - Program Execution Environment - Part 7
Lecture 27 - Program Execution Environment - Part 8
Lecture 28 - Optimizing Virtual Function Calls
Lecture 29 - High Level Optimizations - Part 1

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- Lecture 30 - High Level Optimizations - Part 2
- Lecture 31 - High Level Optimizations - Part 3
- Lecture 32 - High Level Optimizations - Part 4
- Lecture 33 - High Level Optimizations - Part 5
- Lecture 34 - High Level Optimizations - Part 6

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

NPTEL Video Course - Special Lecture Series - ACM Summer School on Geometric Algorithms and their Applications

Subject Co-ordinator - Prof. Arijit Bishnu

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Introduction to Computational Geometry
Lecture 2 - Convex hull
Lecture 3 - Quick hull
Lecture 4 - Plane sweep algorithm
Lecture 5 - Voronoi Diagram - I
Lecture 6 - Convex Geometry - I
Lecture 7 - Convex Geometry - II
Lecture 8 - Incidence Geometry - I
Lecture 9 - Incidence Geometry - II
Lecture 10 - Plane sweep algorithm
Lecture 11 - Polygon Triangulation
Lecture 12 - Geometric and Abstract Simplicial Complexes
Lecture 13 - Convex Polytopes and Polyhedra
Lecture 14 - Art Gallery Theorem
Lecture 15 - Smallest Enclosing Disc
Lecture 16 - Point Hyperplane Duality
Lecture 17 - Voronoi Diagrams and Delaunay triangulations - I
Lecture 18 - Voronoi Diagrams and Delaunay triangulations - II
Lecture 19 - Point Location
Lecture 20 - Range Searching (KD Tree)
Lecture 21 - Range Searching (Range Tree)
Lecture 22 - Visibility Graph and motion planning
Lecture 23 - Geometric Approximation
Lecture 24 - Application of incidence geometry in combinatorics
Lecture 25 - Robot motion planning and visibility
Lecture 26 - Reeb Graph Introduction and Morse Theory basics
Lecture 27 - Reeb Graph Properties
Lecture 28 - Reeb Graph Algorithms, Applications
Lecture 29 - Arrangements - I

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- Lecture 30 - Linear Programming
- Lecture 31 - Arrangements - II
- Lecture 32 - Zone Theorem and Application
- Lecture 33 - Randomized Incremental Construction - I
- Lecture 34 - Randomized Incremental Construction - II
- Lecture 35 - VC-dimension, Epsilon-nets, LP-based approximation for Geometric Covering
- Lecture 36 - Quasi-uniform Sampling for Weighted Covering Problems.
- Lecture 37 - Local Search for Packing and Covering
- Lecture 38 - PTAS via Local Search - I

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

NPTEL Video Course - Special Lecture Series - ACM Summer School on Algorithmic and Theoretical Aspects of Mac

Subject Co-ordinator - Meenakshi D'Souza

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Learning on Finite State Automata and Decision Session - 1

Lecture 2 - Learning on Finite State Automata and Decision Session - 2

Lecture 3 - Learning on Finite State Automata and Decision Session - 3

Lecture 4 - Probability Session - 1

Lecture 5 - Probability Session - 2

Lecture 6 - Probability Session - 3

Lecture 7 - Probability Session - 4

Lecture 8 - Probability Session - 5

Lecture 9 - Probability Session - 6

Lecture 10 - Probability Session - 7

Lecture 11 - Probability Session - 8

Lecture 12 - Probability Session - 9

Lecture 13 - Probability Session - 10

Lecture 14 - Algebra for Machine Learning Session - 1

Lecture 15 - Algebra for Machine Learning Session - 2

Lecture 16 - Algebra for Machine Learning Session - 3

Lecture 17 - Crptography and Machine Learning

Lecture 18 - Neural Networks Session - 1

Lecture 19 - Neural Networks Session - 2

Lecture 20 - Neural Networks Session - 3

Lecture 21 - Neural Networks Session - 4

Lecture 22 - Neural Networks Session - 5

Lecture 23 - Enterprise Applications of ML Session - 1

Lecture 24 - Basic of Algorithm Design Session - 1

Lecture 25 - Basic of Algorithm Design Session - 2

Lecture 26 - Basic of Algorithm Design Session - 3

Lecture 27 - Basic of Algorithm Design Session - 4

Lecture 28 - Introduction to Optimization Session - 1

Lecture 29 - Introduction to Optimization Session - 2

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

- Lecture 30 - Introduction to Reinforcement Learning Session - 1
- Lecture 31 - Introduction to Reinforcement Learning Session - 2
- Lecture 32 - Introduction to Reinforcement Learning Session - 3
- Lecture 33 - Introduction to Reinforcement Learning Session - 4
- Lecture 34 - Introduction to Reinforcement Learning Session - 5
- Lecture 35 - Introduction to Reinforcement Learning Session - 6
- Lecture 36 - Introduction to Reinforcement Learning Session - 7
- Lecture 37 - Introduction of Cryptography Session - 1
- Lecture 38 - Introduction of Cryptography Session - 2
- Lecture 39 - Introduction of Cryptography Session - 3
- Lecture 40 - Compressive Sensing Session - 1
- Lecture 41 - Compressive Sensing Session - 2
- Lecture 42 - Compressive Sensing Session - 3
- Lecture 43 - Compressive Sensing Session - 4
- Lecture 44 - Compressive Sensing Session - 5
- Lecture 45 - Compressive Sensing Session - 6
- Lecture 46 - Compressive Sensing Session - 7
- Lecture 47 - Compressive Sensing Session - 8

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

NPTEL Video Course - Special Lecture Series - ACM Winter School on Hybrid Cloud

Subject Co-ordinator - Prof. Sashikumar Ganesan

Co-ordinating Institute - IIT - Madras

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

- Lecture 1 - Department Introduction
- Lecture 2 - Introduction to Cloud Computing - Part 1
- Lecture 3 - Introduction to Cloud Computing - Part 2
- Lecture 4 - Cloud IaaS and Virtualization
- Lecture 5 - System Virtualization
- Lecture 6 - Mechanisms for System Virtualization
- Lecture 7 - Containers - Part 1
- Lecture 8 - Containers - Part 2
- Lecture 9 - AI and Hybrid Cloud
- Lecture 10 - Container Orchestration - Part 1
- Lecture 11 - Container Orchestration - Part 2
- Lecture 12 - Container Orchestration - Part 3
- Lecture 13 - Application Devops - Part 1
- Lecture 14 - Application Devops - Part 2
- Lecture 15 - Application Devops - Part 3
- Lecture 16 - Application Devops - Part 4
- Lecture 17 - Application Devops - Part 5
- Lecture 18 - Application Devops - Part 6
- Lecture 19 - Cloud as Distributed System - Part 1
- Lecture 20 - Cloud as Distributed System - Part 2

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

NPTEL Video Course - Special Lecture Series - ACM Indian Summer School on Programming Languages: Principles a

Subject Co-ordinator - Dr. Abhijat Vichare

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Review of Basic Concepts - Dr. Abhijat Vichare - Session - 1
Lecture 2 - Review of Basic Concepts - Dr. Abhijat Vichare - Session - 2
Lecture 3 - Review of Basic Concepts - Dr. Abhijat Vichare - Session - 3
Lecture 4 - Introduction to Lex and Yacc - Sameera Deshpande - Session - 1
Lecture 5 - Introduction to Lex and Yacc - Sameera Deshpande - Session - 2
Lecture 6 - Hello world, Revisiting the first program we write in c - Siddhesh Poyarekar - Session - 1
Lecture 7 - Compiler as system - Vivek Buzruk - Session - 1
Lecture 8 - Compiler as system - Vivek Buzruk - Session - 2
Lecture 9 - Introduction to Data Flow Analysis - Prof. Uday Khedker - Session - 1
Lecture 10 - Introduction to Data Flow Analysis - Prof. Uday Khedker - Session - 2
Lecture 11 - Introduction to Data Flow Analysis - Prof. Uday Khedker - Session - 3
Lecture 12 - Introduction to Data Flow Analysis - Prof. Uday Khedker - Session - 4
Lecture 13 - Introduction to Data Flow Analysis - Prof. Uday Khedker - Session - 5
Lecture 14 - Introduction to Data Flow Analysis - Prof. Uday Khedker - Session - 6
Lecture 15 - Undefined Behavior Compiler Optimization - Prathamesh K Session - 1
Lecture 16 - Program Semantics - Prof. Subhajit Roy Session - 1
Lecture 17 - Program Semantics - Prof. Subhajit Roy Session - 2
Lecture 18 - Program Semantics - Prof. Subhajit Roy Session - 3
Lecture 19 - Program Semantics - Prof. Subhajit Roy Session - 4
Lecture 20 - Program Semantics - Prof. Subhajit Roy Session - 5
Lecture 21 - Program Semantics - Prof. Subhajit Roy Session - 6
Lecture 22 - Program Semantics - Prof. Subhajit Roy Session - 7
Lecture 23 - Program Semantics - Prof. Subhajit Roy Session - 8
Lecture 24 - Introduction to Optimizations - Prof. V. Krishna N Session - 1
Lecture 25 - Introduction to Optimizations - Prof. V. Krishna N Session - 2
Lecture 26 - Introduction to Optimizations - Prof. V. Krishna N Session - 3
Lecture 27 - Introduction to Optimizations - Prof. V. Krishna N Session - 4
Lecture 28 - Compiler as system - Vivek S. Buzruk Session - 1
Lecture 29 - Compiler as system - Vivek S. Buzruk Session - 2

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

NPTEL Video Course - Special Lecture Series - ACM Winter School 2019 on High Performance Computing

Subject Co-ordinator - Dr. Mainak Chaudhuri

Co-ordinating Institute - IIT - Madras

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

- Lecture 1 - Basics of Computer Architecture and OS
- Lecture 2 - An Introduction to High Performance Computing
- Lecture 3 - Introduction to OpenMP
- Lecture 4 - Advanced OpenMP
- Lecture 5 - Introduction to MPI
- Lecture 6 - Advanced MPI
- Lecture 7 - Supercomputing in India
- Lecture 8 - Job Scheduling
- Lecture 9 - Introduction to GPU
- Lecture 10 - Introduction to Open ACC
- Lecture 11 - CPU and GPU Memory
- Lecture 12 - Optimizations and GPU Profiling
- Lecture 13 - CUDA C
- Lecture 14 - HPC Networking - I
- Lecture 15 - HPC Networking - II
- Lecture 16 - Research in HPS
- Lecture 17 - Case Study - Parallel Graph Algorithms
- Lecture 18 - Case Study - Solving PDEs at Extreme Scale

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

NPTEL Video Course - Special Lecture Series - Thermodynamics of Materials

Subject Co-ordinator - Prof. Sir H. K. D. H. Bhadeshia

Co-ordinating Institute - IIT - Madras

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

- Lecture 1 - Basic thermodynamic functions: Enthalpy, entropy, configurational entropy, Gibbs free energy
- Lecture 2 - State of equilibrium: Chemical potential, activity, equilibrium between solutions
- Lecture 3 - Case study: Mechanical alloying, alloying by deformation.
- Lecture 4 - Computer calculation of phase diagrams
- Lecture 5 - Thermodynamics of irreversible processes: Multiple irreversible processes
- Lecture 6 - Quasichemical solutions

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

NPTEL Video Course - Special Lecture Series - ACM India Summer School on Program Execution

Subject Co-ordinator - Unknown

Co-ordinating Institute - IIT - Madras

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

- Lecture 1 - ACM Summer School on Program Execution - Introduction
- Lecture 2 - Basics of Architecture - Part 1
- Lecture 3 - Basics of Architecture - Part 2
- Lecture 4 - Basics of Architecture - Part 3
- Lecture 5 - Basics of Architecture - Part 4
- Lecture 6 - A Review of Architectural Features for supporting Program Execution - Part 1
- Lecture 7 - A Review of Architectural Features for supporting Program Execution - Part 2
- Lecture 8 - A Review of Architectural Features for supporting Program Execution - Part 3
- Lecture 9 - A Review of Architectural Features for supporting Program Execution - Part 4
- Lecture 10 - Review of OS - IPC and beyond - Part 1
- Lecture 11 - Review of OS - IPC and beyond - Part 2
- Lecture 12 - From Programs to Processes (and threads) - Part 1
- Lecture 13 - From Programs to Processes (and threads) - Part 2
- Lecture 14 - Network Protocol Fundamentals
- Lecture 15 - Web protocols and Web Software - Part 1
- Lecture 16 - Web protocols and Web Software - Part 2
- Lecture 17 - Storage Systems - Part 1
- Lecture 18 - Storage Systems - Part 2
- Lecture 19 - Storage Systems - Part 3
- Lecture 20 - Basics of High Performance Computing - Part 1
- Lecture 21 - Basics of High Performance Computing - Part 2
- Lecture 22 - Basics of High Performance Computing - Part 3
- Lecture 23 - The Evolution of Linux as an Enterprise Operating System
- Lecture 24 - The Hypervisor - Lord of the Rings - Part 1
- Lecture 25 - The Hypervisor - Lord of the Rings - Part 2
- Lecture 26 - Hands on Lab - Create a VM and Play
- Lecture 27 - Containers and Kubernetes Era - Part 1
- Lecture 28 - Containers and Kubernetes Era - Part 2
- Lecture 29 - Containers and Kubernetes Era - Part 3

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

Lecture 30 - The Future of Compute - Part 1

Lecture 31 - The Future of Compute - Part 2

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

NPTEL Video Course - Special Lecture Series - ACM India Summer School on Programming Language Analysis and Op

Subject Co-ordinator - Girish Bharambe

Co-ordinating Institute - IIT - Madras

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

- Lecture 1 - Panel Discussion Q and A - Part 1
- Lecture 2 - Panel Discussion Q and A - Part 2
- Lecture 3 - Runtime and Linkers - Discussion - 1
- Lecture 4 - Runtime and Linkers - Discussion - 2
- Lecture 5 - Runtime and Linkers - Linkers
- Lecture 6 - Runtime and Linkers - Program Execution - Loader
- Lecture 7 - Runtime and Linkers - Static Libraries - Dynamic Linking
- Lecture 8 - Code Generation and Backend - An Introduction to LLVM Backend
- Lecture 9 - Code Generation and Backend - An Introduction to Loop Backend
- Lecture 10 - Code Generation and Backend - Code Generation with LLVM - Part 1
- Lecture 11 - Code Generation and Backend - Code Generation with LLVM - Part 2
- Lecture 12 - Machine Independent Optimizations - High Level Optimizations - 1
- Lecture 13 - Machine Independent optimizations - High Level Optimizations - 2
- Lecture 14 - Machine Independent optimizations - High Level Optimizations - 3
- Lecture 15 - Machine Independent optimizations - High Level Optimizations - 4
- Lecture 16 - Machine Independent optimizations - High Level Optimizations - 5
- Lecture 17 - Machine Independent optimizations - High Level Optimizations - 6
- Lecture 18 - Machine Architecture and Machine Dependent Optimizations - Machine Architecture - 1
- Lecture 19 - Machine Architecture and Machine Dependent Optimizations - Machine Architecture - 2
- Lecture 20 - Machine Architecture and Machine Dependent Optimizations - Machine Architecture - 3
- Lecture 21 - Machine Architecture and Machine Dependent Optimizations - Register Allocation - 1
- Lecture 22 - Machine Architecture and Machine Dependent Optimizations - Register Allocation - 2
- Lecture 23 - Machine Architecture and Machine Dependent Optimizations - Register Allocation - 3
- Lecture 24 - Machine Architecture and Machine Dependent Optimizations - Instruction Scheduling - 1
- Lecture 25 - Machine Architecture and Machine Dependent Optimizations - Instruction Scheduling - 2
- Lecture 26 - Machine Dependent Optimizations - Dependence Analysis and Loop transformations - 1
- Lecture 27 - Machine Dependent Optimizations - Dependence Analysis and Loop transformations - 2
- Lecture 28 - Control-Flow Analyses and Static Single Assignment form - Control Flow Analysis - 1
- Lecture 29 - Control-Flow Analyses and Static Single Assignment form - Control Flow Analysis - 2

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

- Lecture 30 - Control-Flow Analyses and Static Single Assignment form - Depth First Analysis of Flow Graphs
- Lecture 31 - Control-Flow Analyses and Static Single Assignment form - Dominators
- Lecture 32 - Control-Flow Analyses and Static Single Assignment form - Natural Loops (for Reducible Flow-Graphs)
- Lecture 33 - Control-Flow Analyses and Static Single Assignment form - The Static Single Assignment SSA Form
- Lecture 34 - Control-Flow Analyses and Static Single Assignment form - The Static Single Assignment SSA Form
- Lecture 35 - Polyhedral Compilation and Loop Optimizations - Polyhedral Compilation I Part 1
- Lecture 36 - Polyhedral Compilation and Loop Optimizations - Polyhedral Compilation I Part 2
- Lecture 37 - Polyhedral Compilation and Loop Optimizations - Polyhedral Compilation I - Part 3
- Lecture 38 - Polyhedral Compilation and Loop Optimizations - Polyhedral Compilation I - Part 4
- Lecture 39 - Polyhedral Compilation and Loop Optimizations - Polyhedral Compilation I - Part 5
- Lecture 40 - Polyhedral Compilation and Loop Optimizations - Polyhedral Compilation I - Part 6
- Lecture 41 - Polyhedral Compilation and Loop Optimizations - Polyhedral Compilation I - Part 7
- Lecture 42 - Polyhedral Compilation and Loop Optimizations - Affine Control Loops
- Lecture 43 - Polyhedral Compilation and Loop Optimizations - Simplifying Reductions Revised - 1
- Lecture 44 - Polyhedral Compilation and Loop Optimizations - Simplifying Reductions Revised - 2
- Lecture 45 - Polyhedral Compilation and Loop Optimizations - Simplifying Reductions Revised - 3
- Lecture 46 - Polyhedral Compilation and Loop Optimizations - Classical Optimization
- Lecture 47 - Polyhedral Compilation and Loop Optimizations - What is Program Analysis
- Lecture 48 - Polyhedral Compilation and Loop Optimizations - Live Variable Analysis - 1
- Lecture 49 - Polyhedral Compilation and Loop Optimizations - Live Variable Analysis - 2
- Lecture 50 - Polyhedral Compilation and Loop Optimizations - Available Expression Analysis
- Lecture 51 - Polyhedral Compilation and Loop Optimizations - Common Features of Bit Vector Frameworks
- Lecture 52 - Polyhedral Compilation and Loop Optimizations - The Birth of a Compiler - 1
- Lecture 53 - Polyhedral Compilation and Loop Optimizations - The Birth of a Compiler - 2
- Lecture 54 - Polyhedral Compilation and Loop Optimizations - The Structure of Modern Compiler Modern Challenges
- Lecture 55 - Polyhedral Compilation and Loop Optimizations - Conclusion

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

NPTEL Video Course - Special Lecture Series - ACM Summer School on Shape Modelling

Subject Co-ordinator - Aditya Tatu

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Linear Algebra and Optimization - 1
Lecture 2 - Linear Algebra and Optimization - 2
Lecture 3 - Linear Algebra and Optimization - 3
Lecture 4 - Linear Algebra and Optimization - 4
Lecture 5 - Curvature - Part 1
Lecture 6 - Curvature - Part 2
Lecture 7 - Curvature - Part 3
Lecture 8 - Introduction To Parametric Curves and Surfaces - 1
Lecture 9 - Introduction To Parametric Curves and Surfaces - 2
Lecture 10 - Introduction To Parametric Curves and Surfaces - 3
Lecture 11 - Introduction To Parametric Curves and Surfaces - 4
Lecture 12 - Introduction To Parametric Curves and Surfaces - 5
Lecture 13 - Introduction To Parametric Curves and Surfaces - 6
Lecture 14 - Introduction To Parametric Curves and Surfaces - 7
Lecture 15 - Introduction To Parametric Curves and Surfaces - 8
Lecture 16 - Introduction To Parametric Curves and Surfaces - 9
Lecture 17 - Implicit Surfaces - Part 1
Lecture 18 - Implicit Surfaces - Part 2
Lecture 19 - Implicit Surfaces - Part 3
Lecture 20 - MeshLab - Part 1
Lecture 21 - MeshLab - Part 2
Lecture 22 - MeshLab - Part 3
Lecture 23 - MeshLab - Part 4
Lecture 24 - Discrete Surface - Part 1
Lecture 25 - Discrete Surface - Part 2
Lecture 26 - Discrete Surface - Part 3
Lecture 27 - Discrete Surface - Part 4
Lecture 28 - Discrete Surface - Part 5
Lecture 29 - Laplace Beltrami on Manifolds and Meshes with Applications - Part 1

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

- Lecture 30 - Laplace Beltrami on Manifolds and Meshes with Applications - Part 2
- Lecture 31 - Laplace Beltrami on Manifolds and Meshes with Applications - Part 3
- Lecture 32 - Laplace Beltrami on Manifolds and Meshes with Applications - Part 4
- Lecture 33 - Laplace Beltrami on Manifolds and Meshes with Applications - Part 5
- Lecture 34 - Laplace Beltrami on Manifolds and Meshes with Applications - Part 6
- Lecture 35 - Internal Digital R and I - Part 1
- Lecture 36 - Internal Digital R and I - Part 2
- Lecture 37 - Internal Digital R and I - Part 3
- Lecture 38 - Rigid and Non rigid Shape Matching - Part 1
- Lecture 39 - Rigid and Non rigid Shape Matching - Part 2
- Lecture 40 - Rigid and Non rigid Shape Matching - Part 3
- Lecture 41 - Rigid and Non rigid Shape Matching - Part 4
- Lecture 42 - Geometric Deep Learning - Part 1
- Lecture 43 - Geometric Deep Learning - Part 2
- Lecture 44 - Geometric Deep Learning - Part 3
- Lecture 45 - Geometric Deep Learning - Part 4
- Lecture 46 - Geometric Deep Learning - Part 5
- Lecture 47 - Geometric Deep Learning - Frame Works
- Lecture 48 - Geometric Deep Learning - Lab 1
- Lecture 49 - Geometric Deep Learning - Lab 2
- Lecture 50 - Geometric Deep Learning - Lab 3

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

NPTEL Video Course - Special Lecture Series - ACM India Summer School on Shape Modelling

Subject Co-ordinator - Multi-Faculty

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - ACM India Summer School on Shape Modelling - Introduction
Lecture 2 - Linear Algebra and Optimization Refresher - 1
Lecture 3 - Linear Algebra and Optimization Refresher - 2
Lecture 4 - Linear Algebra and Optimization Refresher - 3
Lecture 5 - Linear Algebra and Optimization Refresher - 4
Lecture 6 - Overview of Python 3 + {Numpy, Scipy, Matplotlib} - Part 1
Lecture 7 - Overview of Python 3 + {Numpy, Scipy, Matplotlib} - Part 2
Lecture 8 - Curves and Surfaces - Part 1
Lecture 9 - Curves and Surfaces - Part 2
Lecture 10 - Curves and Surfaces - Part 3
Lecture 11 - Curves and Surfaces - Part 4
Lecture 12 - Curves and Surfaces - Part 5
Lecture 13 - Curves and Surfaces - Part 6
Lecture 14 - Curves and Surfaces - Part 7
Lecture 15 - Algorithms in Computational Geometry - Part 1
Lecture 16 - Algorithms in Computational Geometry - Part 2
Lecture 17 - Algorithms in Computational Geometry - Part 3
Lecture 18 - Algorithms in Computational Geometry - Part 4
Lecture 19 - Algorithms in Computational Geometry - Part 5
Lecture 20 - Algorithms in Computational Geometry Lab - Part 1
Lecture 21 - Algorithms in Computational Geometry Lab - Part 2
Lecture 22 - Algorithms in Computational Geometry Lab - Part 3
Lecture 23 - Discrete Surfaces - Part 1
Lecture 24 - Discrete Surfaces - Part 2
Lecture 25 - Discrete Surfaces - Part 3
Lecture 26 - Discrete Surfaces - Part 4
Lecture 27 - Discrete Surfaces - Part 5
Lecture 28 - Implicit and Discrete Surfaces
Lecture 29 - Discrete Surfaces - Part Lab - Part 1

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- Lecture 30 - Discrete Surfaces - Part Lab - Part 2
- Lecture 31 - Discrete Laplace Beltrami Operator - Part 1
- Lecture 32 - Discrete Laplace Beltrami Operator - Part 2
- Lecture 33 - Discrete Laplace Beltrami Operator - Part 3
- Lecture 34 - Discrete Laplace Beltrami Operator - Part 4
- Lecture 35 - Discrete Laplace Beltrami Operator - Part 5
- Lecture 36 - Discrete Laplace Beltrami Operator - Part 6
- Lecture 37 - Lab Libigl-Python-Blindings - Part 1
- Lecture 38 - Lab Libigl-Python-Blindings - Part 2
- Lecture 39 - Procrustes Shape Analysis - Part 1
- Lecture 40 - Procrustes Shape Analysis - Part 2
- Lecture 41 - Procrustes Shape Analysis - Part 3
- Lecture 42 - Procrustes Shape Analysis - Part 4
- Lecture 43 - Lab Procrustes Shape Analysis Template - Part 1
- Lecture 44 - Lab Procrustes Shape Analysis Template - Part 2
- Lecture 45 - Lab Procrustes Shape Analysis Template - Part 3
- Lecture 46 - Shape Deformation/Animation, Shape Matching - Part 1
- Lecture 47 - Shape Deformation/Animation, Shape Matching - Part 2
- Lecture 48 - Shape Deformation/Animation, Shape Matching - Part 3
- Lecture 49 - Shape Deformation/Animation, Shape Matching - Part 4
- Lecture 50 - Shape Deformation/Animation, Shape Matching - Part 5
- Lecture 51 - Geometric Deep Learning - Part 1
- Lecture 52 - Geometric Deep Learning - Part 2
- Lecture 53 - Geometric Deep Learning - Part 3
- Lecture 54 - Geometric Deep Learning - Part 4
- Lecture 55 - Geometric Deep Learning - Part 5
- Lecture 56 - Geometric Deep Learning - Part 6
- Lecture 57 - Topological Descriptors For Data and Shape Analysis - Part 1
- Lecture 58 - Topological Descriptors For Data and Shape Analysis - Part 2
- Lecture 59 - Topological Descriptors For Data and Shape Analysis - Part 3
- Lecture 60 - Topological Descriptors For Data and Shape Analysis - Part 4
- Lecture 61 - Panel Discussion On Shape Modelling In Academia and Industry - Part 1
- Lecture 62 - Panel Discussion On Shape Modelling In Academia and Industry - Part 2

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

NPTEL Video Course - Special Lecture Series - ACM India Winter School on Topics in Digital Trust

Subject Co-ordinator - Multi-Faculty

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - ACM Day 1 Session 1
Lecture 2 - ACM Day 1 Session 2 - Part I
Lecture 3 - ACM Day 1 Session 2 - Part II
Lecture 4 - ACM Day 1 Session 3 - Part I
Lecture 5 - ACM Day 1 Session 3 - Part II
Lecture 6 - ACM Day 2 Session 1 - Part I
Lecture 7 - ACM Day 2 Session 1 - Part II
Lecture 8 - ACM Day 2 Session 2 - Part I
Lecture 9 - ACM Day 2 Session 2 - Part II
Lecture 10 - ACM Day 3 Session 1 - Part 1
Lecture 11 - ACM Day 3 Session 1 - Part 2
Lecture 12 - ACM Day 3 Session 2 - Part 1
Lecture 13 - ACM Day 3 Session 2 - Part 2
Lecture 14 - ACM Day 3 Session 3 - Part I
Lecture 15 - ACM Day 3 Session 3 - Part II
Lecture 16 - ACM Day 3 Session 4 - Part I
Lecture 17 - ACM Day 3 Session 4 - Part II
Lecture 18 - ACM Day 4 session 1 - Part I
Lecture 19 - ACM Day 4 session 1 - Part II
Lecture 20 - ACM Day 4 session 2 - Part I
Lecture 21 - ACM Day 4 session 2 - Part II
Lecture 22 - ACM Day 5 session 1 - Part 1
Lecture 23 - ACM Day 5 session 1 - Part 2
Lecture 24 - ACM Day 5 session 2 - Part 1
Lecture 25 - ACM Day 5 session 2 - Part 2
Lecture 26 - ACM Day 6 session 1 - Part 1
Lecture 27 - ACM Day 6 session 1 - Part 2
Lecture 28 - ACM Day 6 session 2 - Part 1
Lecture 29 - ACM Day 6 session 2 - Part 2

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Lecture 30 - ACM Day 7 session 1 - Part I
Lecture 31 - ACM Day 7 session 1 - Part II
Lecture 32 - ACM Day 7 Session 2
Lecture 33 - ACM Day 8 Session 1
Lecture 34 - ACM Day 8 Session 2
Lecture 35 - ACM Day 8 Session 3
Lecture 36 - ACM Day 8 Session 4
Lecture 37 - ACM Day 9 Session 1
Lecture 38 - ACM Day 9 Session 2
Lecture 39 - ACM Day 9 Session 3
Lecture 40 - ACM Day 9 Session 4
Lecture 41 - ACM Day 9 Session 5 - Part 1
Lecture 42 - ACM Day 9 Session 5 - Part 2
Lecture 43 - ACM Day 10 Session 1
Lecture 44 - ACM Day 10 Session 2 - Part 1
Lecture 45 - ACM Day 10 Session 2 - Part 2
Lecture 46 - ACM Day 10 Session 3 - Part 1
Lecture 47 - ACM Day 10 Session 3 - Part 2

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

NPTEL Video Course - Special Lecture Series - ACM Winter School on Design, Implementation and Verification of

Subject Co-ordinator - Multi-Faculty

Co-ordinating Institute - IIT - Madras

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

- Lecture 1 - Mathematical Logic - Session 1
- Lecture 2 - Mathematical Logic - Session 2
- Lecture 3 - Industry Perspectives on Compiler Design
- Lecture 4 - Processor Datapath and Introduction to ILP Architecture - Session 1
- Lecture 5 - Processor Datapath and Introduction to ILP Architecture - Session 2
- Lecture 6 - Instruction Level Parallelism - Session 1
- Lecture 7 - Multithreading and Multicores
- Lecture 8 - Instruction Level Parallelism - Session 2
- Lecture 9 - DRAM Memory Organization
- Lecture 10 - Reactive Synthesis: A High-Level Introduction - Session 1
- Lecture 11 - Reactive Synthesis: A High-Level Introduction - Session 2
- Lecture 12 - Reactive Synthesis: A High-Level Introduction - Session 3
- Lecture 13 - Reactive Synthesis: A High-Level Introduction - Session 4
- Lecture 14 - Reduced Ordered Binary Decision Diagrams and And-Inverter Graphs - Session 1
- Lecture 15 - Reduced Ordered Binary Decision Diagrams and And-Inverter Graphs - Session 2
- Lecture 16 - Reduced Ordered Binary Decision Diagrams and And-Inverter Graphs - Session 3
- Lecture 17 - Runtime Environments - I
- Lecture 18 - Runtime Environments - II
- Lecture 19 - Hexagon DSPs in Snapdragon
- Lecture 20 - Types and Program Analysis
- Lecture 21 - Local and Global Optimizations
- Lecture 22 - Introduction to Data-Flow and Control-Flow Analyses
- Lecture 23 - Code Generation and Register Allocation
- Lecture 24 - The Static Single Assignment Form and Application to Program Optimizations
- Lecture 25 - Garbage Collection
- Lecture 26 - Program Testing and Verification - Session 1
- Lecture 27 - Program Testing and Verification - Session 2

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NPTEL Video Course - Special Lecture Series - Topics In Theoretical Computer Science (2023)

Subject Co-ordinator - Prof. Prajakta Nimbhorkar

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - NP-Completeness

Lecture 2 - Hilbert's Tenth Problem

Lecture 3 - SAT Solvers

Lecture 4 - Polynomial Identity Testing

Lecture 5 - Finite Graphs for Infinite Functions

Lecture 6 - A Panorama of Computational Problems

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

NPTEL Video Course - Special Lecture Series - ACM India Summer School on IoT and Embedded Systems

Subject Co-ordinator - Prof. Meenakshi DSouza

Co-ordinating Institute - IISc - Bangalore

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

Lecture 1 - ACM India Summer School on IoT and Embedded Systems - Introduction

Lecture 2 - Embedded Sysyem: An Introduction

Lecture 3 - Introduction to Embedded Sysyems

Lecture 4 - Introduction to IoT

Lecture 5 - AWS IoT: Tutorial and demonstration

Lecture 6 - IoT: Components, operating systems and protocols

Lecture 7 - Arduino programming

Lecture 8 - Arduino programming: Tutorial

Lecture 9 - IoT Applications

Lecture 10 - IoT Applications: Tutorial and demonstration - 1

Lecture 11 - IoT Applications: Tutorial and demonstration - 2

Lecture 12 - Cloud, edge and fog computing for IoT - Part I

Lecture 13 - Cloud, edge and fog computing for IoT - Part II

Lecture 14 - IoT Communication

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

NPTEL Video Course - Special Lecture Series - ACM India Summer School on Algorithms for Data Science (2023)

Subject Co-ordinator - Multi-Faculty

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Introduction - ACM India Summer School on Algorithms for Data Science

Lecture 2 - Introduction to Probability

Lecture 3 - Selection Problems

Lecture 4 - Median from Read-Only Memory

Lecture 5 - Majority and Heavy Hitters

Lecture 6 - Introduction to Probability Tail inequalities

Lecture 7 - Chernoff Bounds

Lecture 8 - Quickselect and Quicksort

Lecture 9 - Introduction to Randomized Algorithms: Graph Minimum Cut

Lecture 10 - Introduction to Streaming Algorithm and Reservoir Sampling

Lecture 11 - Approximate Counting in Streaming: MORRIS Counter

Lecture 12 - Median of Means Technique Applied to Approximate Counting

Lecture 13 - Counting Distinct Elements in Streaming

Lecture 14 - 2-Universal Hashing and Applications for Derandomizing

Lecture 15 - Approximate Heavy Hitters

Lecture 16 - Frequency Moments

Lecture 17 - Graph Streaming Algorithms

Lecture 18 - Locality Sensitive Hashing - Part 1

Lecture 19 - Locality Sensitive Hashing - Part 2

Lecture 20 - Locality Sensitive Hashing - Part 3

Lecture 21 - Graph Streaming Lower Bounds

Lecture 22 - Bloom Filters

Lecture 23 - Frequent Pattern Mining - Part 1

Lecture 24 - Frequent Pattern Mining - Part 2

Lecture 25 - Is AI ready for The real world?

Lecture 26 - Online Learning and Multiarmed Bandits - Part 1

Lecture 27 - Online Learning and Multiarmed Bandits - Part 2

Lecture 28 - Reinforcement Learning - Part 1

Lecture 29 - Reinforcement Learning - Part 2

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

- Lecture 30 - Singular Value Decomposition - Part 1
- Lecture 31 - Singular Value Decomposition - Part 2
- Lecture 32 - Graph Centralities
- Lecture 33 - Johnson Lindenstrauss Lemma
- Lecture 34 - Graph Centralities Clustering and Partition

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

NPTEL Video Course - Special Lecture Series - ACM India Summer School on Cybersecurity for Women

Subject Co-ordinator - Multi-Faculty

Co-ordinating Institute - IIT - Madras

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

- Lecture 1 - Mathematical Foundation for Cryptography - Part 1
- Lecture 2 - Mathematical Foundation for Cryptography - Part 2
- Lecture 3 - Modern Cryptography
- Lecture 4 - Modern Cryptography
- Lecture 5 - Modern Cryptography - Asymmetric Cryptography
- Lecture 6 - Network Security protocols and mechanisms - Part 1
- Lecture 7 - Network Security protocols and mechanisms - Part 2
- Lecture 8 - IOT Security Protocols - Part 1
- Lecture 9 - IOT Security Protocols - Part 2
- Lecture 10 - Introduction to Ethical Hacking - Part 1
- Lecture 11 - Introduction to Ethical Hacking - Part 2
- Lecture 12 - DevSecOps Embedding Security into DevOps - Part 1
- Lecture 13 - Web App Security
- Lecture 14 - Navigating the privacy landscape
- Lecture 15 - Hardware security
- Lecture 16 - Introduction to Blockchain
- Lecture 17 - Social Engineering and OSINT - Part 1
- Lecture 18 - Social Engineering and OSINT - Part 2
- Lecture 19 - Cloud Security and Secure Coding Practices - Part 1
- Lecture 20 - Cloud Security and Secure Coding Practices - Part 2
- Lecture 21 - Career Opportunities, Challenges and Support
- Lecture 22 - Quantum Cryptography - Part 1
- Lecture 23 - Quantum Cryptography - Part 2
- Lecture 24 - AI in cybersecurity

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