NPTEL Video Course - Computer Science and Engineering - NOC:Computational Complexity

Subject Co-ordinator - Prof. Subrahmanyam Kalyanasundaram

Co-ordinating Institute - IIT - Hyderabad

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

Lecture 30 - Randomized Complexity Classes - Part 4
Lecture 31 - Comparison Between Randomized Complexity Classes
Lecture 32 - BPP is in Polynomial Hierarchy
Lecture 33 - Circuit Complexity - Part 1
Lecture 34 - Circuit Complexity - Part 2
Lecture 35 - Formal Definition of Circuits
Lecture 36 - Hierarchy Theorem for Circuit Size
Lecture 37 - Complexity Class : P/Poly
Lecture 38 - Karp-Lipton Theorem
Lecture 39 - Turing Machines That Take Advice
Lecture 40 - Classes NC and AC
Lecture 41 - Parity Not in AC0 - Part 1
Lecture 42 - Parity Not in AC0 - Part 2
Lecture 43 - Adleman's Theorem
Lecture 44 - Polynomial Identity Testing and Bipartite Perfect Matching in RNC
Lecture 45 - Search Bipartite Perfect Matching is in RNC - Part 1
Lecture 46 - Search Bipartite Perfect Matching is in RNC - Part 2
Lecture 47 - Promise Problems and Valiant-Vazirani Theorem
Lecture 48 - Valiant Vazirani Theorem Continued
Lecture 49 - #P and the Complexity of Counting
Lecture 50 - Permanent is #P-Complete - Part 1
Lecture 51 - Permanent is #P-Complete - Part 2
Lecture 52 - Toda's Theorem - Part 1
Lecture 53 - Toda's Theorem - Part 2
Lecture 54 - Introduction to Communication Complexity - Part 1
Lecture 55 - Introduction to Communication Complexity - Part 2
Lecture 56 - Lower Bound Techniques
Lecture 57 - Communication Complexity of Relations
Lecture 58 - Monotone Depth Lower Bound for Matching
Lecture 59 - Interactive Proofs
Lecture 60 - #3SAT is in IP
Lecture 61 - Public Coin Interactive Proofs and AM/MA
Lecture 62 - Simulating Private Coins using Public Coins
Lecture 63 - Summary and Concluding Remarks