

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

NPTEL Video Course - Electrical Engineering - NOC:Computer Aided Power System Analysis

Subject Co-ordinator - Prof. Biswarup Das

Co-ordinating Institute - IIT - Roorkee

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

- Lecture 1 - Modeling of Power System Components
- Lecture 2 - Modeling of Power System Components (Continued...)
- Lecture 3 - Bus Admittance Matrix
- Lecture 4 - Bus Admittance Matrix with Mutual Impedance
- Lecture 5 - Bus Admittance Matrix with mutual impedance (Continued...)
- Lecture 6 - Power flow equations and classification of buses
- Lecture 7 - Basic Gauss - Seidel Numerical Method
- Lecture 8 - Gauss - Seidel Load Flow (GSLF)
- Lecture 9 - GSLF with Multiple Generators
- Lecture 10 - Example of GSLF
- Lecture 11 - Basics of Newton Raphson Numerical Method
- Lecture 12 - Newton - Raphson Load Flow (NRLF) in Polar Co-Ordinate
- Lecture 13 - NRLF in polar co-ordinate (Continued...)
- Lecture 14 - NRLF in polar co-ordinate (Continued...)
- Lecture 15 - NRLF (Polar) Algorithm and Example
- Lecture 16 - NRLF in rectangular coordinate
- Lecture 17 - NRLF in rectangular coordinate (Continued...)
- Lecture 18 - NRLF in rectangular coordinate (Continued...)
- Lecture 19 - Example of NRLF (Rectangular) Method
- Lecture 20 - Fast decoupled load flow (FDLF)
- Lecture 21 - FDLF (Continued...)
- Lecture 22 - FDLF (Continued...)
- Lecture 23 - AC- DC Load Flow
- Lecture 24 - AC- DC Load Flow (Continued...)
- Lecture 25 - AC- DC Load Flow (Continued...)
- Lecture 26 - Sparsity and Gaussian Elimination
- Lecture 27 - Gaussian Elimination Method
- Lecture 28 - Example of Gaussian Elimination Method
- Lecture 29 - Gaussian Elimination and Optimal Ordering

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

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- Lecture 30 - Triangular Factorization
- Lecture 31 - LU Decomposition
- Lecture 32 - Introduction to Contingency Analysis
- Lecture 33 - Linear Sensitivity Factor
- Lecture 34 - Linear Sensitivity Factors (Continued...)
- Lecture 35 - Line outage sensitivity factor
- Lecture 36 - Line outage sensitivity factor (Continued...)
- Lecture 37 - Line outage sensitivity factor (Continued...)
- Lecture 38 - State Estimation Technique
- Lecture 39 - Weighted Least Square (WLS) Method
- Lecture 40 - WLS (Continued...)
- Lecture 41 - WLS Examples
- Lecture 42 - Error Analysis
- Lecture 43 - Error Analysis (Continued...)
- Lecture 44 - Bad Data Detection
- Lecture 45 - Power system state estimation
- Lecture 46 - Power system state estimation (Continued...)
- Lecture 47 - Power system state estimation (Continued...)
- Lecture 48 - Power system state estimation (Continued...)
- Lecture 49 - Fault Analysis
- Lecture 50 - Fault Analysis (Continued...)
- Lecture 51 - Fault Analysis (Continued...)
- Lecture 52 - Fault Analysis (Continued...)
- Lecture 53 - Fault Analysis (Continued...)
- Lecture 54 - Fault Analysis (Continued...)
- Lecture 55 - Fault Analysis (Continued...)
- Lecture 56 - Fault Analysis (Continued...)
- Lecture 57 - Fault Analysis (Continued...)
- Lecture 58 - Fault Analysis (Continued...)
- Lecture 59 - Fault Analysis (Continued...)
- Lecture 60 - Fault Analysis (Continued...)