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

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NPTEL Video Course - Electrical Engineering - Dynamics of Physical Systems
Subject Co-ordinator - Prof. S. Banerjee
Co-ordinating Institute - IIT - Kharagpur
Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable
Lecture 1 - Introduction to System Elements
Lecture 2 - Newton's Method and Constraints
Lecture 3 - Derivation of the Lagrangian Equation
Lecture 4 - Using the lagrangian Equation to Obtain Differential Equations (Part-I)
Lecture 5 - Using the lagrangian Equation to Obtain Differential Equations (Part-II)
Lecture 6 - Using the lagrangian Equation to Obtain Differential Equations (Part-III)
Lecture 7 - Using the lagrangian Equation to Obtain Differential Equations (Part-IV)
Lecture 8 - Obtaining First Order Equations
Lecture 9 - Application of the Hamiltonian Method
Lecture 10 - Obtaining Differential Equations Using Kirchoff's Laws
Lecture 11 - The Graph Theory Approach for Electrical Circuits (Part-I)
Lecture 12 - The Graph Theory Approach for Electrical Circuits (Part-II)
Lecture 13 - The Bond Graph Approach - I
Lecture 14 - The Bond Graph Approach - II
Lecture 15 - The Bond Graph Approach - III
Lecture 16 - The Bond Graph Approach - IV
Lecture 17 - The Bond Graph Approach - V
Lecture 18 - The Bond Graph Approach - VI
Lecture 19 - The Bond Graph Approach - VII
Lecture 20 - Numerical Solution of Differential Equations
Lecture 21 - Dynamics in the State Space
Lecture 22 - Vector Field Around Equilibrium Points - I
Lecture 23 - Vector Field Around Equilibrium Points - II
Lecture 24 - Vector Field Around Equilibrium Points - III
Lecture 25 - Vector Field Around Equilibrium Points - IV
Lecture 26 - High Dimensional Linear Systems
Lecture 27 - Linear Systems with External Input - I
Lecture 28 - Linear Systems with External Input - II
Lecture 29 - Linear Systems with External Input - III
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Lecture 30 - Dynamics of Nonlinear Systems - I

Lecture 31 - Dynamics of Nonlinear Systems - II

Lecture 32 - Dynamics of Nonlinear Systems - III

Lecture 33 - Discrete-Time Dynamical Systems - I

Lecture 34 - Discrete-Time Dynamical Systems - II
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