

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

NPTEL Video Course - Mechanical Engineering - NOC:Automatic Control

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Co-ordinating Institute - IIT - Roorkee

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

- Lecture 1 - Definition and Types
- Lecture 2 - Performance Specifications
- Lecture 3 - Design Process
- Lecture 4 - Block Diagrams
- Lecture 5 - Laplace Transform and Transfer Function
- Lecture 6 - Translational Mechanical System
- Lecture 7 - Rotational Mechanical System
- Lecture 8 - Electrical System
- Lecture 9 - Linearization of Nonlinear Systems
- Lecture 10 - Numerical Problems
- Lecture 11 - Poles and Zeros
- Lecture 12 - First Order System
- Lecture 13 - Second Order System
- Lecture 14 - Underdamped Second Order System - I
- Lecture 15 - Underdamped Second Order System - II
- Lecture 16 - Definition of Stability
- Lecture 17 - Routh-Hurwitz Criterion
- Lecture 18 - Routh-Hurwitz Criterion- Special Cases
- Lecture 19 - Steady State Errors
- Lecture 20 - Static Error Constants
- Lecture 21 - Define Root Locus
- Lecture 22 - Sketching of Root Locus - I
- Lecture 23 - Sketching of Root Locus - II
- Lecture 24 - Sketching of Root Locus - III
- Lecture 25 - Numerical Examples and Second Order Approximation
- Lecture 26 - PI Controller Design
- Lecture 27 - PD Controller Design
- Lecture 28 - PID Controller Design
- Lecture 29 - Lag Compensation

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- Lecture 30 - Lead and Lag-Lead Compensation
- Lecture 31 - State Space Representation
- Lecture 32 - Converting a Transfer Function to State Space
- Lecture 33 - Converting From State Space to Transfer Function
- Lecture 34 - Controller Design
- Lecture 35 - Controller Design and Controllability
- Lecture 36 - Transfer Function, Poles, Zeros, Response
- Lecture 37 - Steady State Error, Root Locus
- Lecture 38 - Design Via Root Locus, Compensation - I
- Lecture 39 - Design Via Root Locus, Compensation - II
- Lecture 40 - State Space Method