

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

NPTEL Video Course - Civil Engineering - NOC:Environmental Modeling and Simulation

Subject Co-ordinator - Prof. Gargi Singh

Co-ordinating Institute - IIT - Roorkee

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

Lecture 1 - Introduction - Part I  
Lecture 2 - Introduction - Part II  
Lecture 3 - 1D Models - Part I  
Lecture 4 - 1D Models - Part II  
Lecture 5 - Logistic Growth Models - Part I  
Lecture 6 - Logistic Growth Models - Part II  
Lecture 7 - 1D Models: Auto Catalysis  
Lecture 8 - Semi Quantitative Approach to Solve 1D Models  
Lecture 9 - Using MATLAB for 1D systems  
Lecture 10 - Using R for 1D Systems  
Lecture 11 - Bifurcations - I  
Lecture 12 - Bifurcations - II  
Lecture 13 - Bifurcations - III  
Lecture 14 - Bifurcations - IV  
Lecture 15 - Bifurcations - V  
Lecture 16 - Insect Outbreak Model  
Lecture 17 - 2D Systems - I  
Lecture 18 - 2D Systems - II  
Lecture 19 - 2D Systems - III  
Lecture 20 - 2D Systems - IV  
Lecture 21 - 2D Systems - V  
Lecture 22 - 2D Systems - VI  
Lecture 23 - 2D Systems - VII  
Lecture 24 - 2D Systems - VIII  
Lecture 25 - 2D Systems - IX  
Lecture 26 - 2D Systems - X  
Lecture 27 - 2D Systems - XI  
Lecture 28 - 2D Systems - XII  
Lecture 29 - Limit Cycles - I

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- Lecture 30 - Limit cycles - II and Bifurcations
- Lecture 31 - Bifurcations
- Lecture 32 - Bifurcations - I
- Lecture 33 - Bifurcations - II
- Lecture 34 - Bifurcations - III
- Lecture 35 - Application of Empirical Approach - I
- Lecture 36 - Application of Empirical Approach - II
- Lecture 37 - Application of Empirical Approach - III
- Lecture 38 - Gaussian Plumes - Air - I
- Lecture 39 - Gaussian Plumes - Air - II
- Lecture 40 - Gaussian Plumes - Air - III
- Lecture 41 - Gaussian Plumes - Air - IV
- Lecture 42 - Gaussian Plumes - Air - V
- Lecture 43 - Gaussian Plumes - Air - VI
- Lecture 44 - Ground Water - I
- Lecture 45 - Ground Water - II
- Lecture 46 - Environmental Transport Processes
- Lecture 47 - Environmental Non-reactive and Reactive Processes - I
- Lecture 48 - Environmental Non-reactive and Reactive Processes - II
- Lecture 49 - Environmental Non-reactive and Reactive Processes - III
- Lecture 50 - Homogeneous reactors
- Lecture 51 - Heterogeneous Reactors - I
- Lecture 52 - Heterogeneous Reactors - II
- Lecture 53 - Ground Water Extraction
- Lecture 54 - 2D Model Using MATLAB
- Lecture 55 - Phase Portrait of 1D Models Using R
- Lecture 56 - Phase Portrait of 2D Models Using R
- Lecture 57 - Simulations - I
- Lecture 58 - Simulations - II
- Lecture 59 - Application: Climate change and GDP - I
- Lecture 60 - Application: Climate change and GDP - II