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

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NPTEL Video Course - Civil Engineering - NOC: Computational Hydraulics
Subject Co-ordinator - Dr. Anirban Dhar
Co-ordinating Institute - IIT - Kharagpur
Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable
Lecture 1 - Introduction to Computational Hydraulics
Lecture 2 - Problem Definition and Governing Equations (GE)
Lecture 3 - Classification of Problems based on Initial Condition (IC) and/or Boundary Conditions (BC)
Lecture 4 - Classification of Differential Equations
Lecture 5 - Numerical Methods
Lecture 6 - Finite Difference Approximation
Lecture 7 - Ordinary Differential Equation
Lecture 8 - Ordinary Differential Equation
Lecture 9 - Partial Differential Equation
Lecture 10 - Partial Differential Equation
Lecture 11 - Partial Differential Equation
Lecture 12 - Partial Differential Equation
Lecture 13 - Finite Volume Method - Overview
Lecture 14 - Finite Volume Method - BVP
Lecture 15 - Finite Volume Method - IBVP
Lecture 16 - Finite Volume Method - Conservation Law
Lecture 17 - Upwind Approach
Lecture 18 - Godunov Approach
Lecture 19
Lecture 20
Lecture 21 - Mesh-Tree Method
Lecture 22 - Mesh-Free Method
Lecture 23 - Mesh-Free Method
Lecture 24 - Numerical Method
Lecture 25 - Algebraic Equation
Lecture 26 - Algebraic Equation
Lecture 27 - Algebraic Equation
Lecture 28 - Algebraic Equation
Lecture 29 - Algebraic Equation
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Lecture 30 - Algebraic Equation
Lecture 31 - One-Dimensional Flow
Lecture 32 - Steady Two-Dimensional Flow
Lecture 33 - Unsteady Two-Dimensional Flow using Finite Difference Method
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Lecture 35
Lecture 36
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Lecture 38
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Lecture 40 - Steady Channel Flow
Lecture 41 - Steady Channel Flow
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Lecture 47
Lecture 48
Lecture 49 - Unsteady Flow in Pipes
Lecture 50 - Surface Water and Ground Water Interaction
Lecture 51 - Course Summary
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