NPTEL Video Course - Chemical Engineering - NOC:MATLAB Programming for Numerical Computation

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Co-ordinating Institute - IIT - Madras

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

Lecture 30 - Using MATLAB command fsolve (multi-variable)
Lecture 31 - Newton-Raphson (multi Variable)
Lecture 32 - Introduction
Lecture 33 - Linear Least Squares Regression
Lecture 34 - Nonlinear and Functional Regression
Lecture 35 - Interpolation Functions in MATLAB
Lecture 36 - Introduction and Euler\'s Method
Lecture 37 - Runge-Kutta (RK-2) method
Lecture 38 - MATLAB ode45 algorithm
Lecture 39 - Higher order Runge-Kutta Methods
Lecture 40 - Error Analysis
Lecture 41 - Multi-Variable ODE
Lecture 42 - Stiff Systems & Solution using ode15s
Lecture 43 - Method of Lines for transient PDEs
Lecture 44 - A Final Example
Lecture 45 - Tutorial