NPTEL Video Course - Chemical Engineering - NOC:Computer Aided Applied Single Objective Optimization

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Co-ordinating Institute - IIT - Guwahati

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

Lecture 1 - Introduction to Optimization
Lecture 2 - Linear Regression
Lecture 3 - Multiple, Polynomial and General Linear Least Square Regression
Lecture 4 - Nonlinear Regression
Lecture 5 - Regression
Lecture 6 - Teaching Learning Based Optimization
Lecture 7 - Implementation of TLBO in MATLAB
Lecture 8 - Supplementary
Lecture 9 - Supplementary
Lecture 10 - Particle Swarm Optimization
Lecture 11 - Implementation of Particle Swarm Optimization using MATLAB
Lecture 12 - Differential Evolution
Lecture 13 - Implementation of Differential Evolution using MATLAB
Lecture 14 - Binary Coded Genetic Algorithm
Lecture 15 - Real Coded Genetic Algorithm
Lecture 16 - Implementation of Real Coded Genetic Algorithm using MATLAB
Lecture 17 - Artificial Bee Colony Algorithm
Lecture 18 - Working of Artificial Bee Colony Algorithm
Lecture 19 - Implementation of Artificial Bee Colony using MATLAB
Lecture 20 - Comparison of Variation Operators and Survival Strategies
Lecture 21 - Black-Box Optimization Problems
Lecture 22 - Constraint-Handling in Metaheuristic Techniques
Lecture 23 - Case Study
Lecture 24 - Case Study
Lecture 25 - Parallelization and Vectorization of Fitness Function
Lecture 26 - Constraint-Handling using Correction Approach
Lecture 27 - MATLAB inbuilt functions
Lecture 28 - MATLAB inbuilt functions
Lecture 29 - MATLAB Optimization Tool

Lecture 30 - MATLAB inbuilt functions
Lecture 31 - Simplex Method for LP
Lecture 32 - Branch and Bound Method for MILP
Lecture 33 - MILP formulation of Production Planning Problem
Lecture 34 - Generalized Algebraic Modelling System
Lecture 35 - Solution of Production Planning Problem using GAMS and NEOS, MIRO