NPTEL Video Course - Mechanical Engineering - Convective Heat and Mass Transfer

Subject Co-ordinator - Prof. A.W. Date

Co-ordinating Institute - IIT - Bombay

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

Lecture 1 - Introduction
Lecture 2 - Flow Classifications
Lecture 3 - Laws of Convection
Lecture 4 - Scalar Transport Equations
Lecture 5 - Laminar Boundary Layers
Lecture 6 - Similarity Method
Lecture 7 - Similaity Solns Velocity BL
Lecture 8 - Similaity Solns Temperature BL - I
Lecture 9 - Similaity Solns Temperature BL - II
Lecture 10 - Integral BL Equations
Lecture 11 - Integral Solns Laminar Velocity BL
Lecture 12 - Integral Solns Laminar Temperature BL
Lecture 13 - Superposition Theory
Lecture 14 - Laminar Internal Flows
Lecture 15 - Fully-Developed Laminar Flows - 1
Lecture 16 - Fully-Developed Laminar Flows - 2
Lecture 17 - Fully-Developed Laminar Flows Heat Transfer - 1
Lecture 18 - Fully-Developed Laminar Flows Heat Transfer - 2
Lecture 19 - Laminar Internal Developing Flows Heat Transfer
Lecture 20 - Superposition Technique
Lecture 21 - Nature of Turbulent Flows
Lecture 22A - Sustaining Mechanism of Turbulence - 1
Lecture 22B - Sustaining Mechanism of Turbulence - 1
Lecture 23 - Sustaining Mechanism of Turbulence - 2
Lecture 24 - Near-Wall Turbulent Flows - 1
Lecture 25 - Near-Wall Turbulent Flows - 2
Lecture 26 - Turbulence Models - 1
Lecture 27 - Turbulence Models - 2
Lecture 28 - Turbulence Models - 3

Lecture 29 - Prediction of Turbulent Flows
Lecture 30 - Prediction of Turbulent Heat Transfer
Lecture 31 - Convective Mass Transfer
Lecture 32 - Stefan Flow Model
Lecture 33 - Couette Flow Model
Lecture 34 - Reynolds Flow Model
Lecture 35 - Boundary Layer Flow Model
Lecture 36 - Evaluation of g and Nw
Lecture 37 - Diffusion Mass Transfer Problems
Lecture 38 - Convective MT Couette Flow
Lecture 39 - Convective MT Reynolds Flow Model - 1
Lecture 40 - Convective MT Reynolds Flow Model - 2
Lecture 41 - Natural Convection
Lecture 42 - Diusion Jet Flames