

Structural Vibration and Isolation

Short-term Course at NSTL Visakhapatnam

By

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4-day course outline

1. Day 1 (20-4-26, 10:00-13:00 and 14:30-17:30):
 - (a) Forced, base and rotating imbalance excitations, FRF, transmissibility (3 hr, ADG)
 - (b) Vibration absorption, damping and isolation, vibration control strategies (2 hr, ADG)
 - (c) Modal analysis of multi-DoF systems, impulse and periodic excitation (1 hr, KS)

2. Day 2 (21-4-26, 10:00-13:30 and 15:00-17:30):
 - (a) Axial and torsional vibrations of bars, modal analysis, Ritz solution method, FE analysis (3.5 hr, KS)
 - (b) Wave propagation analysis, impedance and scattering, effect of lumped mass and stiffness (2.5 hr, ADG)

3. Day 3 (22-4-26, 10:00-13:00 and 14:30-17:30):
 - (a) Vibrations of beams and frames, modal analysis, Ritz solution method, FE analysis (3 hr, KS)
 - (b) Effect of rotary inertia and shear (1 hr, KS)
 - (c) Wave propagation analysis, effect of lumped mass and stiffness (2 hr, ADG)

4. Day 4 (23-4-26, 9:30-13:30):
 - (a) Vibrations of plates, boundary conditions, modal analysis (2.5 hr, KS)
 - (b) Wave propagation in plates, plate-fluid interaction and emission of sound (1.5 hr, ADG)