STRUCTURAL DYNAMICS

3-0-0-0-9

Loading: nature of dynamic loading, harmonic, random, types of dynamic loading; Continuous systems: rods (axial vibrations), beams (shear, axial and axial shear flexural vibrations); Discrete mass systems: SDOF (free and forced vibrations), MDOF (generalized coordinates, eigenvalue analysis, matrix and modal time history analysis); Introduction of random vibration: stochastic processes, stochastic analysis of linear dynamical systems to Gaussian inputs, SDOF, MDOF