MECH 551. NONLINEAR DYNAMICS OF SHELL STRUCTURES.

Credits: 3

Offered by: Mechanical Engineering (Faculty of Engineering)

This course is not offered this catalogue year.

Description

Introduction to nonlinear dynamics and stability; softening and hardening systems; bifurcations; Lyapunov exponents; nonlinear strain-displacement relationships; Lagrangian description; plates and shells; nonlinear vibrations of plates and shells; reduced-order models; stability of shells with cardiovascular application; supersonic flutter of circular cylindrical shells (rockets).

- (3-0-6)
- Prerequisite: MECH 315 or MECH 419