

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Civil Engineering - NOC:Earthquake Seismology

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Co-ordinating Institute - IIT-ISM Dhanbad

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

- Lecture 1 - Introduction
- Lecture 2 - Waves on a String
- Lecture 3 - Stress
- Lecture 4 - Strain tensor and Constitutive equations
- Lecture 5 - Equations of Motion
- Lecture 6 - Wavenumber vector, Slowness, P-and S-wave Polarization
- Lecture 7 - Seismic spectrum, Seismogram rotation, Spherical Waves
- Lecture 8 - Energy in the Plane Wave, Potentials at an Interface
- Lecture 9 - Boundary Conditions, Types Of Interfaces, Ray Theory, Reflection/Transmission
- Lecture 10 - Snell's law, Transmission and Reflection Coefficients, Fermat's Principle, Huygen's
- Lecture 11 - Precritical, Critical, and Postcritical waves, reflection and transmission coefficients
- Lecture 12 - Surface waves
- Lecture 13 - Rayleigh Waves
- Lecture 14 - Love waves
- Lecture 15 - Dispersion
- Lecture 16 - Dispersion example in the Earth and Tsunamis
- Lecture 17 - Normal modes
- Lecture 18 - Torsional and Spheroidal Modes
- Lecture 19 - Solving numerical problems
- Lecture 20 - Refraction seismology
- Lecture 21 - Refraction seismology (Continued...)
- Lecture 22 - Reflection seismology (Continued...)
- Lecture 23 - Earth as a constant velocity Distribution
- Lecture 24 - Multi Channel Data Geometry
- Lecture 25 - Seismic waves in spherical earth
- Lecture 26 - Velocity distribution
- Lecture 27 - Body waves
- Lecture 28 - Core Phases
- Lecture 29 - Velocity structure of upper mantle and lower mantle

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- Lecture 30 - Anisotropic earth structure
- Lecture 31 - Anisotropic earth structure (Continued...)
- Lecture 32 - Attenuation and Anelasticity
- Lecture 33 - Attenuation and Anelasticity (Continued...)
- Lecture 34 - Attenuation and Anelasticity (Continued...)
- Lecture 35 - Composition of the mantle and core
- Lecture 36 - Composition of the mantle and core (Continued...)
- Lecture 37 - Composition of the mantle and core (Continued...)
- Lecture 38 - Composition of the mantle and core (Continued...)
- Lecture 39 - Earthquakes, focal mechanisms, moment tensors
- Lecture 40 - Earthquakes, focal mechanisms, moment tensors (Continued...)
- Lecture 41 - Earthquakes, focal mechanisms, moment tensors (Continued...)
- Lecture 42 - Earthquakes, focal mechanisms, moment tensors (Continued...)
- Lecture 43 - Earthquakes, focal mechanisms, moment tensors (Continued...)
- Lecture 44 - Brief on Earthquake geodesy
- Lecture 45 - Brief on Earthquake geodesy (Continued...)
- Lecture 46 - Brief on Earthquake geodesy (Continued...)
- Lecture 47 - Brief on Earthquake geodesy (Continued...)
- Lecture 48 - Source parameters, Earthquake statistics
- Lecture 49 - Source parameters, Earthquake statistics (Continued...)
- Lecture 50 - Source parameters, Earthquake statistics (Continued...)
- Lecture 51 - Source parameters, Earthquake statistics (Continued...)
- Lecture 52 - Source parameters, Earthquake statistics (Continued...)
- Lecture 53 - Seismology and Plate tectonics, Spreading centers, Subduction zones
- Lecture 54 - Seismology and Plate tectonics, Spreading centers, Subduction zones (Continued...)
- Lecture 55 - Seismology and Plate tectonics, Spreading centers, Subduction zones (Continued...)
- Lecture 56 - Numerical Problems in Seismology
- Lecture 57 - Numerical Problems in Seismology (Continued...)