

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

NPTEL Video Course - Biotechnology - NOC:Introduction to Mechanobiology

Subject Co-ordinator - Prof. Shamik Sen

Co-ordinating Institute - IIT - Bombay

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

- Lecture 1 - Need to Study Mechanobiology
- Lecture 2 - Cell as a Tent, Individual Components
- Lecture 3 - Cell-ECM Crosstalk
- Lecture 4 - ECM Proteins
- Lecture 5 - Measuring Properties of Collagen Networks
- Lecture 6 - Properties of Collagen Networks
- Lecture 7 - Rheology
- Lecture 8 - Rheology of Biopolymer Networks
- Lecture 9 - Atomic Force Microscopy (AFM)
- Lecture 10 - Design of Protein Constructs for AFM
- Lecture 11 - Protein Unfolding using AFM
- Lecture 12 - Protein Unfolding using AFM
- Lecture 13 - Focal Adhesions
- Lecture 14 - Focal Adhesion Organization
- Lecture 15 - Focal Adhesions
- Lecture 16 - Cytoskeleton
- Lecture 17 - Force-velocity Relationships of Actin Networks
- Lecture 18 - Mesenchymal Cell Migration
- Lecture 19 - Actin Dynamics during Mesenchymal Migration
- Lecture 20 - Actin Dynamics during Mesenchymal Migration
- Lecture 21 - Adhesion Independent Migration
- Lecture 22 - Adhesion Independent and Collective Cell Migration
- Lecture 23 - Collective Cell Migration
- Lecture 24 - Mechanobiology of Stem Cell Fate - I
- Lecture 25 - Mechanobiology of Stem Cell Fate - II
- Lecture 26 - Mechanobiology of Stem Cell Fate - III
- Lecture 27 - Mechanobiology of Diseases
- Lecture 28 - Mechanobiology of Diseases
- Lecture 29 - Mechanobiology of Diseases

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- Lecture 30 - Mechanobiology of Diseases
- Lecture 31 - Mechanobiology of Diseases
- Lecture 32 - Nuclear Mechanotransduction
- Lecture 33 - Nuclear Mechanotransduction
- Lecture 34 - Nuclear Mechanotransduction
- Lecture 35 - Mechanical Forces and DNA damage
- Lecture 36 - Techniques in Mechanobiology
- Lecture 37 - Techniques in Mechanobiology
- Lecture 38 - Techniques in Mechanobiology
- Lecture 39 - Techniques in Mechanobiology
- Lecture 40 - Techniques in Mechanobiology