

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

NPTEL Video Course - Physics - Nonequilibrium Statistical Mechanics

Subject Co-ordinator - Prof. V. Balakrishnan

Co-ordinating Institute - IIT - Madras

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

- Lecture 1 - Recapitulation of equilibrium statistical mechanics
- Lecture 2 - The Langevin model (Part 1)
- Lecture 3 - The Langevin model (Part 2)
- Lecture 4 - The Langevin model (Part 3)
- Lecture 5 - The Langevin model (Part 4)
- Lecture 6 - Linear response theory (Part 1)
- Lecture 7 - Linear response theory (Part 2)
- Lecture 8 - Linear response (Part 3)
- Lecture 9 - Linear response (Part 4)
- Lecture 10 - Linear response (Part 5)
- Lecture 11 - Linear response (Part 6)
- Lecture 12 - Linear response theory (Part 7)
- Lecture 13 - Quiz 1 - Questions and answers
- Lecture 14 - Linear response theory (Part 8)
- Lecture 15 - Linear response theory (Part 9)
- Lecture 16 - The dynamic mobility
- Lecture 17 - Fokker-Planck equations (Part 1)
- Lecture 18 - Fokker-Planck equations (Part 2)
- Lecture 19 - Fokker-Planck equations (Part 3)
- Lecture 20 - The generalized Langevin equation (Part 1)
- Lecture 21 - The generalized Langevin equation (Part 2)
- Lecture 22 - Diffusion in a magnetic field
- Lecture 23 - The Boltzmann equation for a dilute gas (Part 1)
- Lecture 24 - The Boltzmann equation for a dilute gas (Part 2)
- Lecture 25 - The Boltzmann equation for a dilute gas (Part 3)
- Lecture 26 - The Boltzmann equation for a dilute gas (Part 4)
- Lecture 27 - The Boltzmann equation for a dilute gas (Part 5)
- Lecture 28 - Quiz 2 - Questions and answers
- Lecture 29 - Critical phenomena (Part 1)

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- Lecture 30 - Critical phenomena (Part 2)
- Lecture 31 - Critical phenomena (Part 3)
- Lecture 32 - Critical phenomena (Part 4)
- Lecture 33 - Critical phenomena (Part 5)
- Lecture 34 - Critical phenomena (Part 6)
- Lecture 35 - Critical phenomena (Part 7)
- Lecture 36 - The Wiener process (standard Brownian motion)