

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

NPTEL Video Course - Electronics and Communication Engineering - NOC:Analog IC Design

Subject Co-ordinator - Prof. S. Aniruddhan

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Introduction to MOSFETs  
Lecture 2 - Simple MOSFET Circuits  
Lecture 3 - MOSFET Current Mirrors  
Lecture 4 - Cascode Amplifiers  
Lecture 5 - MOSFET in Integrated Circuits  
Lecture 6 - MOSFET Capacitances  
Lecture 7 - Noise  
Lecture 8 - Noise of Simple Circuits  
Lecture 9 - Systematic Mismatch  
Lecture 10 - Random Mismatch  
Lecture 11 - Differential Amplifiers  
Lecture 12 - Negative Feedback  
Lecture 13 - Stability of Negative Feedback Systems  
Lecture 14 - Dominant Pole Compensation  
Lecture 15 - Active Load  
Lecture 16 - One Stage OpAmps - 1  
Lecture 17 - One Stage OpAmps - 2  
Lecture 18 - One Stage OpAmps - 3  
Lecture 19 - Differential Amplifiers Offset  
Lecture 20 - One Stage OpAmps - Noise and Offset  
Lecture 21 - One Stage OpAmps - Slew Rate  
Lecture 22 - One Stage OpAmps - Datasheet  
Lecture 23 - One Stage OpAmps - Example 1  
Lecture 24 - One Stage OpAmps - Example 2  
Lecture 25 - Telescopic OpAmp - 1  
Lecture 26 - Telescopic OpAmp - 2  
Lecture 27 - Telescopic OpAmp - 3  
Lecture 28 - Telescopic OpAmp - 4  
Lecture 29 - Telescopic OpAmp - 5

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- Lecture 30 - Telescopic OpAmp - Datasheet
- Lecture 31 - Telescopic OpAmp - Design Example
- Lecture 32 - Folded-Cascode OpAmp - 1
- Lecture 33 - Folded-Cascode OpAmp - 2
- Lecture 34 - Folded-Cascode OpAmp - 3
- Lecture 35 - Folded-Cascode OpAmp - 4
- Lecture 36 - Folded-Cascode OpAmp - 5
- Lecture 37 - Negative feedback amplifier
- Lecture 38 - Step response, sinusoidal steady state response
- Lecture 39 - Loop gain and unity loop gain frequency; Opamp
- Lecture 40 - Opamp realization using controlled sources; Delay in the loop
- Lecture 41 - Negative feedback amplifier with ideal delay-small delays
- Lecture 42 - Negative feedback amplifier with ideal delay-large delays
- Lecture 43 - Negative feedback amplifier with parasitic poles and zeros
- Lecture 44 - Negative feedback amplifier with parasitic poles and zeros; Nyquist criterion
- Lecture 45 - Nyquist criterion; Phase margin
- Lecture 46 - Phase margin
- Lecture 47 - Single stage opamp realization
- Lecture 48 - Two stage miller compensated opamp
- Lecture 49 - Two stage miller compensated opamp.
- Lecture 50 - Two and three stage miller compensated opamps; Feedforward compensated opamp
- Lecture 51 - Two Stage Opamp
- Lecture 52 - Two Stage Opamp ; Three Stage and Triple Cascade Opamps
- Lecture 53 - Common Mode Rejection Ratio ; Example
- Lecture 54 - Fully differential single stage opamp
- Lecture 55 - Common mode feedback
- Lecture 56 - Fully differential single stage opamp-2
- Lecture 57 - Fully differential two stage opamp; Fully differential versus pseudo-differential