

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

NPTEL Video Course - Electronics and Communication Engineering - Digital System design with PLDs and FPGAs

Subject Co-ordinator - Prof. Kuruvilla Varghese

Co-ordinating Institute - IISc - Bangalore

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

- Lecture 1 - Course Contents, Objective
- Lecture 2 - Revision of Prerequisite
- Lecture 3 - Design of Synchronous Sequential Circuits
- Lecture 4 - Analysis of Synchronous Sequential Circuits
- Lecture 5 - Top-down Design
- Lecture 6 - Controller Design
- Lecture 7 - Control algorithm and State diagram
- Lecture 8 - Case study 1
- Lecture 9 - FSM issues 1
- Lecture 10 - FSM Issues 2
- Lecture 11 - FSM Issues 3
- Lecture 12 - FSM Issues 4
- Lecture 13 - FSM Issues 5
- Lecture 14 - Synchronization 1
- Lecture 15 - Synchronization 2
- Lecture 16 - Case study 2
- Lecture 17 - Case study on FPGA Board
- Lecture 18 - Entity, Architecture and Operators
- Lecture 19 - Concurrency, Data flow and Behavioural models
- Lecture 20 - Structural Model, Simulation
- Lecture 21 - Simulating Concurrency
- Lecture 22 - Classes and Data types
- Lecture 23 - Concurrent statements and Sequential statements
- Lecture 24 - Sequential statements and Loops
- Lecture 25 - Modelling flip-flops, Registers
- Lecture 26 - Synthesis of Sequential circuits
- Lecture 27 - Libraries and Packages
- Lecture 28 - Operators, Delay modelling
- Lecture 29 - Delay modelling

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- Lecture 30 - VHDL Examples
- Lecture 31 - VHDL coding of FSM
- Lecture 32 - VHDL Test bench
- Lecture 33 - VHDL Examples, FSM Clock
- Lecture 34 - Evolution of PLDs
- Lecture 35 - Simple PLDs
- Lecture 36 - Simple PLDs
- Lecture 37 - Complex PLDs
- Lecture 38 - FPGA Introduction
- Lecture 39 - FPGA Interconnection, Design Methodology
- Lecture 40 - Xilinx Virtex FPGA's CLB
- Lecture 41 - Xilinx Virtex Resource Mapping, IO Block
- Lecture 42 - Xilinx Virtex Clock Tree
- Lecture 43 - FPGA Configuration
- Lecture 44 - Altera and Actel FPGAs