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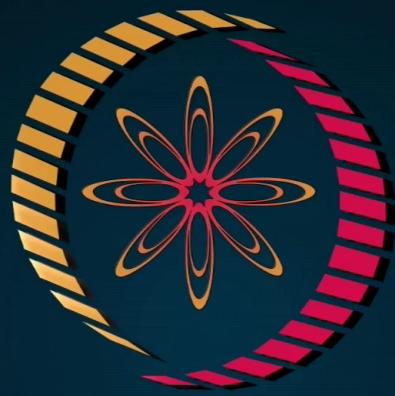
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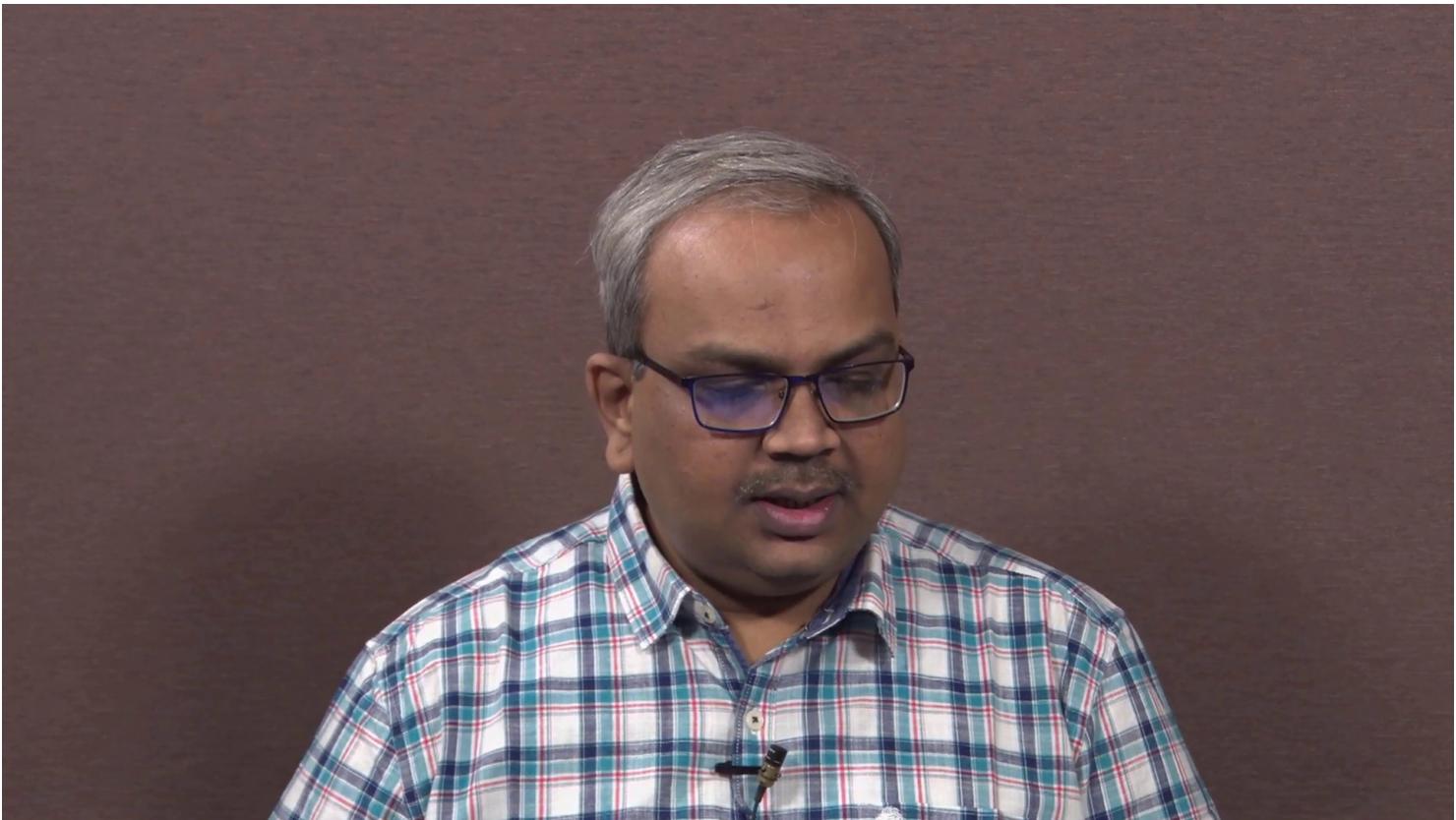
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An Initiative of MHRD







Week 5: Signal conditioning and Microprocessor Technology

Lecture 4: Microprocessor Technology



Outline



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- ❖ Microprocessors: introduction



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- ❖ Architecture, elements, operation

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- ❖ Micro-controllers: definition and difference
- ❖ Micro-computers



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- ❖ Microprocessors: introduction
- ❖ Architecture, elements, operation
- ❖ Micro-controllers: definition and difference
- ❖ Micro-computers
- ❖ Programmable logic controllers (PLCs): elements, configuration and operation



Programmable Logic Devices (PLD)

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 - Microcomputer - uses microprocessor as its central processing unit and contains all functions of a computer
 - Programmable Logic Controller (PLC) - to control the operation of *electro-mechanical* devices

Use of Microprocessors in automation

- Embedded microprocessor
 - Dedicated to controlling a specific function
 - Self-starting

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 - Requires no human intervention
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 - Own operating system

Microprocessor

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 - reads binary instructions from a storage device called memory

Microprocessor

- a multi-purpose, programmable device
 - reads binary instructions from a storage device called memory
 - processes data according to the instructions
 - provides results as output