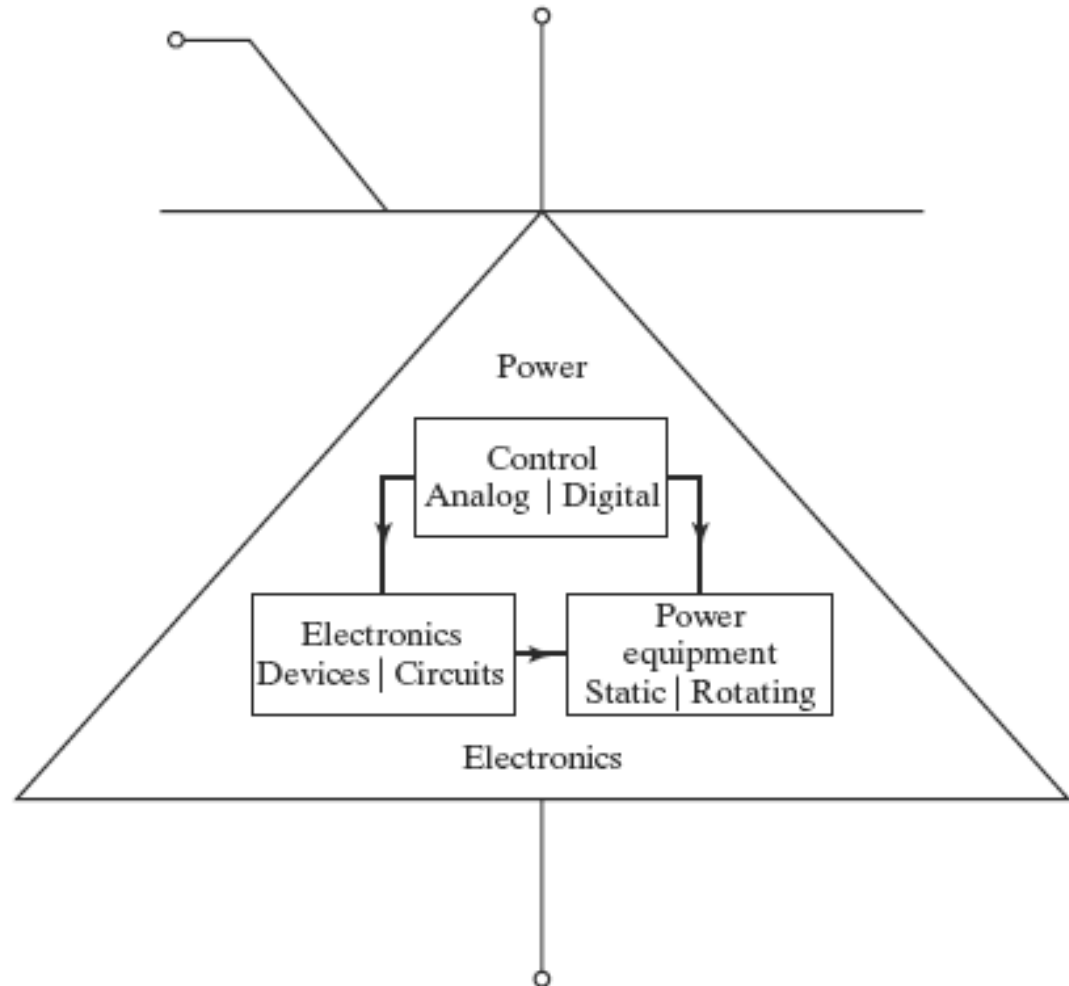


# Lecture 1

# POWER ELECTRONICS

*CIRCUITS, DEVICES, AND  
APPLICATIONS*

# Relationship of Power Electronics



# POWER ELECTRONICS TECHNOLOGY

- **As the technology for the power semiconductor devices and integrated circuit develops, the potential for applications of power electronics become wider. There are already many power semiconductor devices that are commercially available, however, the development in this direction is continuing.**
- **The power semiconductor devices or power electronic converter fall generally into four categories :**
  - AC to DC Converter (Controlled Rectifier)**
  - DC to DC Converter (DC Chopper)**
  - AC to AC Converter (AC voltage regulator)**
  - DC to AC Converter (Inverter)**
- **The design of power electronics converter circuits requires design the power and control circuits. The voltage and current harmonics that are generated by the power converters can be reduced or minimized with a proper choice of the control strategy.**

# NPTTEL LINK

- <http://nptel.ac.in/courses/108101038/2>