

# Semi Design

find you way in #VLSI with us

## Digital Circuit Design

1. The CMOS Inverter construction and Voltage Transfer Characteristics
2. Resistance and Capacitance and transient response.
3. Dynamic, Short Circuit and Leakage power – Stacking Effect
4. Combinational Circuit Design and capacitance
5. Parasitic Delay, Logical Effort and Electrical Effort
6. Gate sizing and Buffering
7. Asymmetric gate, Skewed gates
8. Dynamic Gates and Domino logic and Static Timing Analysis
9. Sequential circuits and feedback. Various D flip flop circuits – Static and Dynamic
10. Setup and Hold Time measurement. Timing analysis of latch/ flop based systems
11. Adders – Mirror adder, Carry Skip adder, Carry Select adder, Square Root adder
12. Multipliers – Signed and Unsigned arithmetic, Carry Save Multiplier implementation
13. Power Delay Product
14. Noise Margin