

Content

- An introduction to VLSI Design in CMOS

Taught by

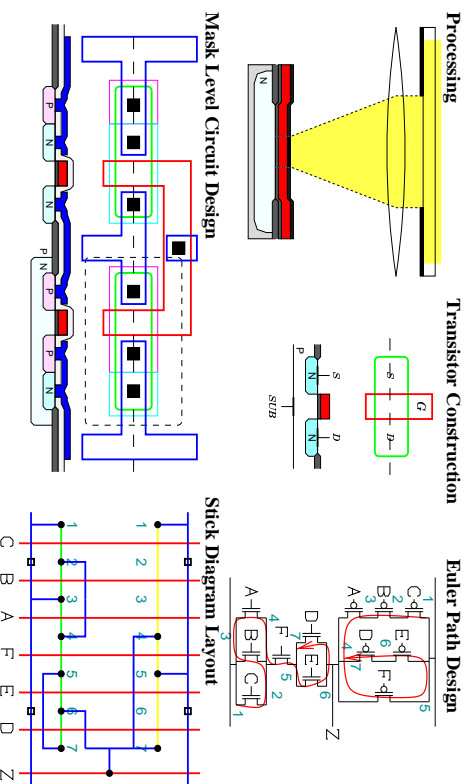
- Iain McNally

- Koushik Maharatna

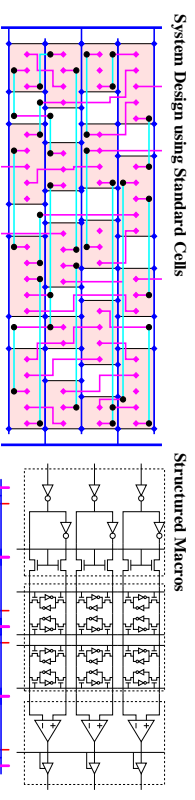
Assessment

- Examination 100%
- Informal Coursework 0%
- L-Edit Logic Gate Design and Layout

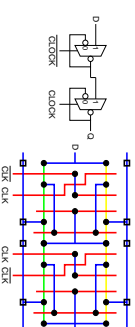
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Static CMOS Circuits



For more details see:
<http://users.ecs.soton.ac.uk/bim/notes/icd>

3

- Inverter transfer characteristics, noise margins, SPICE simulation
- Transient response and transistor sizing, SPICE simulation
- Speed-area trade-off
- Circuit Power Consumption, design tradeoffs speed-power, introduction to low power circuit design
- Capacitance estimation, buffer design, area-speed design tradeoffs
- Dynamic logic

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Part II

D2 IC Design Exercise

Simple Digital System Design using "Black Box" Standard Cells

Part III

ELEC3025 Integrated Circuit Design

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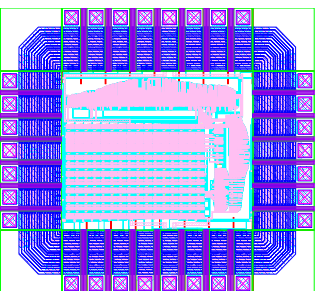
Part IV

ELEC6010 Digital IC Design

Lots of hands-on CAD

ELEC6027 VLSI Design Project

Complex System Design
Complete Custom IC Design Flow



ELEC6027 Novel 16-bit Microprocessor
(The best design from each year is fabricated)