

ECE154A — Discussion 00

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Hi!

- First-year PhD student, Strukov group
- Emphasis: neuromorphic VLSI
- SB native!
- Love hiking, backpacking, general outdoorsmanship



- Mix of review-lecture and small-group problem solving
- Thursday night survey — what topics do you need help with?
- Section & OH will be your Verilog support points!

Keep your eyes open for...

- Lab 1: Due Monday, Oct 4 (Find a partner!)
- PSet 1: officially assigned soon

Early transistor computers

Fixing a confusion from lecture, some quick comments:

- Early 1950's: several groups (Bell Labs, UManchester, Harwell, etc) working on “transistorizing” computers
- Early models still used some vacuum tubes (usually in I/O)
- Some ambiguity over who was first
- Usually credited: UManchester for a transistorized processor in '53, Harwell CADET fully transistor in '55
- '59: MOSFET invented, quickly takes center stage for digital logic

RTL simulation & you

- Mentor Graphics ModelSim — industry standard digital verification tool
- No licences for use on personal computers this year [?]
- Set up your CoE account, remote into a linux-running lab machine, run it there
- `eci-linux-lab.engr.ucsb.edu` is a load-balancer, you may not be assigned the same machine (sessions not persistent)
- `ecellvm-xx` where `xx` is your favorite number from 01 to 20
- `top` and `users` to check if too many already using it

Demo

