

# Navid Mir

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## Education

**ELECTRICAL ENGINEERING M.S.** | *UNIVERSITY OF CALIFORNIA, LOS ANGELES (UCLA)* JUNE '23

- Starting Fall 2021
- Emphasis on Circuits and Embedded Systems

**ELECTRICAL ENGINEERING B.S.** | *UNIVERSITY OF CALIFORNIA, SANTA BARBARA (UCSB)* JUNE '21

- 4.0 GPA
- Emphasis on *Digital Hardware Design* and *Digital Signal Processing (DSP)*
- 11 x Dean's Honors List for Engineering, College of Engineering Honors, Tau Beta Pi Honors, Outstanding EE Senior Award
- Activities: Undergraduate Research in Signal Processing, IEEE UCSB Chapter, Intramural Basketball, Pop's Orchestra

## Work and Laboratory Experience

**ELECTRICAL ENGINEERING INTERN** | *METROTECH* JUNE '21 – PRESENT

- Writing C firmware to interface with new sensor in embedded system
- Designing printed circuit boards using Altium Designer for product upgrades and custom breakout boards

**ASIC VERIFICATION INTERN** | *WESTERN DIGITAL* JUNE '20 – AUGUST '20

- Worked on automation tool for verification of ASIC SSD flash controller used in conjunction with Cadence verification tools
- Wrote SystemVerilog UVM testbenches for error correction code module

**ELECTRICAL ENGINEERING INTERN** | *METROTECH* JULY '19 – SEPTEMBER '19

- Tested and optimized RFID transmitter circuit to attain required antenna output power while maximizing efficiency
- Used Altium Designer for PCB design of several configurations of RFID transmitter circuit
- Designed efficient high voltage switching power supply for D-class amplifier, controlled with C code on ARM-based MCU

## Projects

*A portfolio of my projects can be found at my website: [navidmir.com](http://navidmir.com)*

**BINARY MULTIPLIER FABRICATION** | *ECE 120B: SEMICONDUCTOR DEVICE PROCESSING II* APRIL '21 – JUNE '21

- Fabricated 2 by 2 binary multiplier, inverter, NAND, common-source amplifier circuits with 100 um x 20 um NMOS
- Designed photolithography mask for circuits and fabricated in clean room

**ULTRA-LOW POWER MAGNETIC LEVITATION** | *BREWER LAB* OCTOBER '20 – JUNE '21

- Designed magnetic levitation system for over 97% reduction in power consumption over traditional designs
- Developed PID controller on microcontroller to achieve stable levitation with minimal oscillations
- Awarded top prize, "Excellence in Electrical Engineering"

**FACIAL-RECOGNITION SMART LOCK** | *SB HACKS V HACKATHON* JANUARY '19

- Worked on team project for a lock that grants entry to users via facial recognition of their photos uploaded on our website
- Led hardware development with Raspberry Pi/Arduino and collaborated on software integration
- Awarded "Best Security Hack Award" sponsored by Arthrex, Inc.

## Skills

**SOFTWARE/DESIGN TOOLS:** Verilog, C/C++, Python, MATLAB, Java, MIPS Assembly, Linux, Git, Jira, LTspice, Altium Designer

**HARDWARE:** Analog and digital circuit design, embedded systems with microcontrollers (Raspberry Pi, Arduino) and FPGAs, oscilloscopes, spectrum analyzers, through-hole and surface mount soldering

## Awards

**JOSEPH SAYOVITZ SCHOLARSHIP** | *UCSB COLLEGE OF ENGINEERING* JANUARY '21

**TBP SCHOLARSHIP** | *TAU BETA PI (TBP) ENGINEERING HONORS SOCIETY* JUNE '20

**ROGER WOOD SCHOLARSHIP** | *UCSB ELECTRICAL AND COMPUTER ENGINEERING DEPARTMENT* APRIL '20