

Navid Mir

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Education

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

- 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

BINARY MULTIPLIER IC DESIGN | 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

LOW-POWER MAGNETIC LEVITATION SYSTEM | 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