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 | *VIVAX-METROTECH* JUNE '21 – PRESENT
- Performing IMU tilt estimation testing
- Designing breakout boards for IMUs using Altium Designer

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 | *VIVAX-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 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* JANURARY '21

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

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