Jacqueline Radding

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EDUCATION

California Polytechnic State University, San Luis Obispo (Cal Poly)　　　　　　　**September 2020–June 2025**
MS and BS, Electrical Engineering, Minor in Computer Science, GPA: 3.5　　　　　　　San Luis Obispo, CA

RELATED COURSEWORK

- Digital Design, Fundamentals of Computer Science, Data Structures, Continuous Time Signals, Electronics Manufacturing, Circuit Analysis, Discrete Mathematics, Classical and Digital Controls, Analog and Digital Design, Microcontroller Systems

SKILLS

- **Languages:**　　Python SystemVerilog, C/C++, Java, RISC-V ISA
- **Hardware:**　　Multimeter, Oscilloscope, Function Generator, Solder Iron, FPGA, STM32
- **Software:**　　Xilinx Vivado, Altium, EAGLE, MATLAB, LTspice, Revit, Adobe Premiere Pro, STM32 IDE
- **Technician Amateur Radio License, FCC, October 2020:** Call Sign: KN6LTD, ID: L02373378

WORK AND VOLUNTEER EXPERIENCE

Hewlett Packard Enterprise　　　　　　　　　　　　　　　　　　　　**June 2023-September 2023**
Electrical Engineering Intern　　　　　　　　　　　　　　　　　　　　　　　Milpitas, CA

- Used MATLAB to simulate radiated emissions from a drive carrier which lead to the discovery of an unintentional antenna in the casing.
- Ensured FCC compliance and wireless interference reduction during the development of a hybrid cloud-native storage product.
- Wrote a CISPR 32 and FCC electromagnetic compliance (EMC) paper for a cloud storage product.
- Consulted the mechanical team on increasing the airflow slots on the chassis while preventing slot antennas.
- Installed ASIC spread spectrum clocking on PCIe clocks to decrease radiated emissions using C.
- Evaluated the noise spectra of the system signals and clocks generated to prevent interference.
- Created software on MATLAB where any user can design a slot antenna and understand its characteristics.
- Implemented an antenna design lab simulation where the user can distance an antenna from the virtual slot and get the e-field strength.

Cal Poly IEEE　　　　　　　　　　　　　　　　　　　　　　　　　　　**June 2023–Present**
President　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　San Luis Obispo, CA

- Started workshop series for PSpice and MATLAB for freshmen and sophomore students.
- Increased enrollment by 50 people during the Fall quarter of 2023.
- Rebuilt club membership after COVID-19 and reconnected Cal Poly IEEE with sponsors and companies.
- Will be featured on an IEEE DEI panel with the IEEE National President Elect, Kathleen Kramer on October 26th, 2023.

Silverman and Light　　　　　　　　　　　　　　　　　　　　　　　**June 2022-September 2022**
Electrical Engineering Intern　　　　　　　　　　　　　　　　　　　　　　Emeryville, CA

- Used Revit to design single-line electrical diagrams for office and lab buildings including Intuitive Surgical in San Franscisco.
- Created a python app, DocuPET (document productivity enhancement tool), where 200 document headers could be edited at a time, saving tens of hours.

PROJECT EXPERIENCE

- **PolySat and ETIOILES Power Satellite Research Laboratory Engineer(March 2022-Present)**
  Worked with a team to create electrical power system boards using Altium. Consulted Avionics team on creating a RF thruster using a clock frequency.
- **Decay (June 2022):** Decay is a decision tree regression machine learning algorithm that can be used to find the degrading discharge energy (Wh) of a battery cell. Use https://www.batteryarchive.org/list.html?t=0001 and find a battery cell CSV file to analyze.
- **Digital Combination Lockbox(June-August 2021)**: Led a small team and created a digital combination lockbox SystemVerilog program on a FPGA Basys3 board that allowed a user to create and enter 3 sequences of three-bit passwords using a finite state machine and memory registers. If the entered passwords matched the created passwords, the seven-segment display would say "OPEN".
- **Bounce Back Fall Detection System(September-December 2020):** Created Bounce Back, a C/C++ and Bluetooth-based fall detection system that uses an accelerometer to detect when a patient falls and alerts senior center workers with an IOS or Android device. Bounce Back was designed to be price competitive with stand-alone fall buttons because elderly patients often cannot press any emergency buttons when they have a medical emergency.
- **32-bit Computer (December-March 2022):** Worked with a team to program a 32-bit computer using RISC-V and SystemVerilog on the Basys 3 FPGA board.
- **Continuity Tester(March 2021):** Designed and assembled a continuity tester PCB using EAGLE and created a 3D modeled continuity tester holder.
- **WaterWise / WaterWatcher (October 2020)**: Pitched a Raspberry Pi algae bloom detection system to the Cal Poly Center of Innovation and Entrepreneurship and presented live during the second round of finalists. Due to the rise in temperatures, water resources are becoming more susceptible to algae blooms, which is why a low maintenance detection system is necessary.

Hobbies and Interests

- I enjoy playing guitar, video editing, 3D printing, Pilates, and going hiking.