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Tyler James Haina Ikehara

Third year Electrical Engineering PhD student aiming to obtain a summer internship related to my research interests of Wireless Communications, Electromagnetics, and RF Circuits. Passionate about learning and teaching others about STEM related topics.

Education

Doctor of Philosophy: Electrical Engineering **Graduation Year: 2027**

Future Leader Fellow | **Advisor: Dr. Thomas Marzetta**

New York University Tandon School of Engineering – Brooklyn, NY

Relevant Classwork: Linear Systems Approach to Wave Propagation, Probability and Stochastic Processes, Applied Matrix Theory, Machine Learning, Optimization Methods, Digital Signal Processing, Digital Communications, Electromagnetics, Wireless Communications, Linear Algebra I

GPA: 3.945

Bachelor of Science: Electrical Engineering, Minor – Music **September 2018 to June 2022**

Summa Cum Laude | Electrical and Computer Engineering Academic Excellence Award

Santa Clara University – Santa Clara, CA

Relevant Classwork: Microwave Circuit Analysis, Intro to Communication Systems, Electromagnetics I&II, Linear Systems, Linear Algebra, Probability and Statistics, Multivariable Calculus, Differential Equations, Modern Physics

GPA: 3.976

Research Experience

Research Project | Advisor: Dr. Thomas Marzetta **September 2022 to Present**

New York University Tandon School of Engineering – Brooklyn, NY

- Researched and proposed a novel electromagnetic feedback receiver array antenna system inspired by the human cochlea
- Simulated the behavior of the array in MATLAB using antenna array theory to understand the impedance matrix of the system

Research Intern **June 2021 to August 2021**

Naval Information Warfare Center Pacific – San Diego, CA

- Investigated the effectiveness of Direct Antenna Modulation and Cryocooled circuit components for High Frequency antenna systems
- Part of the Naval Research Enterprise Internship Program

Senior Design Project | Advisor: Dr. Kurt Schab **August 2021 to June 2022**

Santa Clara University – Santa Clara, CA

- Constructed a Radio Telescope using a Software Defined Radio as the main data processing component
- Designed a Microstrip Bandpass Filter for the Radio Astronomy frequency band of 1420 MHz

Guided Research | Advisor: Dr. Kurt Schab **July 2020 to August 2021**

Santa Clara University – Santa Clara, CA

- Researched Software Defined Radios and gained experience using GNU Radio
- Implemented a MATLAB script to compare the Signal to Noise Ratio for antennas with varying efficiency and Q-factor

Work Experience

Graduate Assistant **September 2024 to Present**

New York University Tandon School of Engineering – Brooklyn, NY

- Assisted with grading an undergraduate Linear Systems class
- Created quiz and homework solutions and held weekly office hours

Peer Educator **March 2022 to June 2022**

Santa Clara University – Santa Clara, CA

- Assisted with the Lab section of a Digital Signal Processing class
- Answered questions that the students had and ensured that their MATLAB codes were completed correctly

Skills

Programming: C/MATLAB/SCPI/SPICE/GNU Radio/Python/LaTeX/ADS/HFSS

Hardware: Microwave Antenna Equipment, Arduino, Soldering, Software Defined Radio, Analog Computers

Awards/Achievements

SCU Electrical and Computer Engineering Academic Excellence Award **June 2022**
SCU Senior Design Best in Session Presentation **June 2022**
Tau Beta Pi – California Charter Inductee **November 2020**
SCU Dean's List **2018-2021 School Years**