

Eric Lei

CONTACT INFORMATION	111 Dryden Road Apt. 5M Ithaca, NY 14850 USA	<i>Email:</i> el536@cornell.edu <i>Phone:</i> (978)-263-5958
RESEARCH INTERESTS	Digital communications, signal processing, machine learning, applied mathematics, high-performance computing	
EDUCATION	Cornell University , Ithaca, NY B.S. in <i>Electrical and Computer Engineering</i> Minors in <i>Mathematics</i> and <i>Computer Science</i> GPA 3.88	2016 – 2020
HONORS AND AWARDS	NSF Graduate Research Fellowship, <i>National Science Foundation</i> Ganster Engineering Fellowship, <i>University of Pennsylvania</i> The Dean's Fellowship, <i>University of Pennsylvania</i> Tau Beta Pi Eta Kappa Nu, <i>Institute of Electrical and Electronic Engineers</i>	2020 2020 2020 2019 2018
RESEARCH EXPERIENCE	VLSI Information Processing Group , Ithaca, NY <i>Undergraduate Researcher with Prof. Christoph Studer</i> <ul style="list-style-type: none">• Positioning and localization in multi-antenna wireless systems• Developed novel supervised and unsupervised inference models using Siamese neural networks to obtain location information from channel-state-information Computer Systems Laboratory , Ithaca, NY <i>Undergraduate Researcher with Prof. Zhiru Zhang</i> <ul style="list-style-type: none">• Developed FPGA-accelerated implementations of cryptographic hash functions such as SHA and AES using high-level synthesis	Feb 2018 – Present Jun. 2017 – Aug. 2017
INDUSTRY EXPERIENCE	MIT Lincoln Laboratory , Lexington, MA <i>Summer Research Intern, Group 99 (Integrated Systems and Concepts)</i> <ul style="list-style-type: none">• Information theory and control systems design for free-space laser communication systems MIT Lincoln Laboratory , Lexington, MA <i>Summer Research Intern, Group 99 (Integrated Systems and Concepts)</i> <ul style="list-style-type: none">• Read-out integrated circuits for imaging sensors. Performed RTL design and verification with synthesis/implementation on a Xilinx Ultrascale FPGA.	May 2019 – Aug. 2019 Jun. 2018 – Aug. 2018
PUBLICATIONS AND PRESENTATIONS	E. Lei , O. Castañeda, O. Tirkkonen, T. Goldstein, and C. Studer, “Siamese Neural Networks for Wireless Positioning and Channel Charting,” <i>2019 57th Annual Allerton Conference on Communication, Control, and Computing (Allerton)</i> , Monticello, IL, 2019, pp. 200-207. E. Lei , O. Castañeda, and C. Studer, “Wireless Positioning via Twin Networks,” poster presentation at <i>Cornell Undergraduate Research Board Symposium</i> , Ithaca, NY, USA, Spring 2019.	
TEACHING	Teaching Assistant , Intro to Probability and Inference (ECE 3100) Teaching Assistant , Machine Learning for Intelligent Systems (CS 4780) Teaching Assistant , Digital Logic and Computer Organization (ECE 2300) Teaching Assistant , The Comp. Tech. Inside Your Smartphone (ECE 1210)	Spring 2020 Fall 2019 Fall 2018 Spring 2018, 2019

CAMPUS INVOLVEMENT AND OUTREACH	<p>Expanding Your Horizons, Ithaca, NY April 2019 <i>Volunteer</i></p> <ul style="list-style-type: none"> Helped under-represented minorities in high school learn about circuits in an educational workshop <p>Eta Kappa Nu, Ithaca, NY Oct. 2018 – Present <i>Member</i></p> <ul style="list-style-type: none"> Led exam review sessions for freshman and sophomore level ECE classes <p>IEEE Cornell Student Branch, Ithaca, NY Sep. 2018 – Feb. 2019 <i>Corporate Chair</i></p> <ul style="list-style-type: none"> Hosted information sessions for companies doing recruiting, professor talks for the student body <p>Cornell University Engineering Success, Ithaca, NY Jan. 2018 – Dec. 2018 <i>Tutor</i></p> <ul style="list-style-type: none"> Tutor for students in Discrete Structures (CS 2800) <p>Cornell Cup Robotics, Ithaca, NY Jan. 2017 – Feb. 2018 <i>Electrical Subteam Member</i></p> <ul style="list-style-type: none"> Worked on electronic hardware and software for semi-autonomous R2-D2 robot
TECHNICAL SKILLS	<ul style="list-style-type: none"> Computer Languages: C, C++, MATLAB, Python, Java, Verilog, R, PyMTL Libraries/Packages: NumPy, SciPy, Tensorflow, Keras, Scikit Learn, OpenMP, CVXPy, PyBind, Rcpp Tools: Git, Xilinx Vivado, Cadence Innovus