

EDUCATION

Doctor of Philosophy in Electrical and Computer Engineering

Aug. 2019 – Present

University of Illinois at Urbana-Champaign

- Dissertation Title: “Multi-String Reconstruction Problems with Applications in Immunogenomics”
- Advisor: Ilan Shomorony
- Doctoral Committee: Ilan Shomorony (chair), Bruce Hajek, Olgica Milenkovic, Venugopal Veeravalli

Bachelor of Science in Electrical Engineering (Honors)

Sept. 2015 – Jun. 2019

University of California, San Diego

- Minor in Music

RESEARCH EXPERIENCE

Graduate Research Assistant

May 2020 – Present

Dr. Ilan Shomorony, Electrical and Computer Engineering, University of Illinois

- Determined feasibility regions for k -mer-based DNA assembly and storage retrieval methods
- Developed algorithm for inferring immunoglobulin genes from DNA sequences using de Bruijn graphs

Graduate Research Assistant

May 2021 – Aug. 2021

Dr. Venugopal Veeravalli, Electrical and Computer Engineering, University of Illinois

- Implemented and optimized a novel quickest change detection algorithm to instantly report seismic activity
- Collected, analyzed, and filtered seismic data for quality control

Undergraduate Researcher, Summer Research Internship Program

Apr. 2018 – June 2019

Dr. Pamela Cosman and Dr. Laurence Milstein, Electrical and Computer Engineering, UC San Diego

- Designed cognitive radio neural network that can detect signals in sampled sensing intervals matching radiometer accuracy
- Optimized decision-making performance of various network architectures

TEACHING EXPERIENCE

Teaching Assistant, Probability in Engineering Lab

Jan. 2022 – Present

- As lead instructor, present weekly lectures that integrate advanced probability and statistics topics into undergraduate curriculum
- Assist students in programming with Python during lab sections
- Write and grade quizzes, hold office hours, and manage lab graders for classes of up to 80 students

Teaching Assistant, Probability in Engineering

Jan. 2020 – Dec. 2021

- Tutored in small groups with customized assignments that met students' ability levels
- Ensured students were prepared for exams with frequent review sessions teaching problem-solving skills

MENTORSHIP AND OUTREACH EXPERIENCE

ECE Historically Underrepresented Genders Graduate Mentor <ul style="list-style-type: none">Meet with undergraduate students monthly for discussions on graduate school, research topics, and career options	Sept. 2022 – Present
Induction Mentor , IEEE-Eta Kappa Nu <ul style="list-style-type: none">Mentor 2-4 undergraduate and graduate students annually as part of their induction requirements for HKN	Sept. 2017 – Apr. 2022
Research Mentor <ul style="list-style-type: none">Assisted an undergraduate student working on a research project over the summerTaught skills such as data collection and neural network analysis with PythonAdvised on academic and career options throughout the project	May 2021 – Aug. 2021
Girls' STEM Fair , IEEE <ul style="list-style-type: none">Developed workshop teaching MATLAB and signal processing to middle school girlsOrganized panel of female professors and graduate students focused on inspiring women in STEM	Jan. 2018 – Apr. 2018
Engineering Academy , IEEE-Eta Kappa Nu <ul style="list-style-type: none">Launched Kappa Psi chapter's first Outreach Program under direction of ECE Department Chair, teaching hands-on electrical engineering workshops to classes of 10-13 high school studentsOrganized volunteer effort of additional student teachers to assist with class activitiesSecured funding from department and alumni for future outreach efforts	Sept. 2017 – Mar. 2018

PUBLICATIONS

- K. Levick** and I. Shomorony, "Fundamental Limits of Multiple Sequence Reconstruction from Substrings," 2023 *International Symposium on Information Theory*, Taipei, Taiwan, 2023.
- K. Levick**, R. Heckel, and I. Shomorony, "Achieving the Capacity of a DNA Storage Channel with Linear Coding Schemes," 2022 *Conference on Information Sciences and Systems*, Princeton, USA, 2022.
- K. Levick**, et al., "The Twelfefold Way of Non-Sequential Lossless Compression," 2021 *Data Compression Conference*, 2021. (Equal authorship from Illinois Information Theory students)
- Z. Yu, A. Gilman, Q. Peng, **K. Levick**, P. Cosman, and L. Milstein, "Comparison of Neural Network Architectures for Spectrum Sensing," 2019 *IEEE GLOBECOM 2019 Workshop on Advancements in Spectrum Sharing*, Waikoloa, USA, 2019.

HONORS AND AWARDS

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| NSF Student Travel Grant for ISIT Conference | 2023 |
| UIUC Mavis Future Faculty Fellows Program <ul style="list-style-type: none">Competitive fellowship for graduate students interested in academia | 2023 |
| UCSD ECE Alumni Service Award | 2021 |
| UCSD ECE Department Award of Excellence <ul style="list-style-type: none">One of two recipients out of 200+ graduates | 2019 |
| UCSD ECE Summer Research Scholarship | 2018 |
| Phi Beta Kappa | 2018 |
| Eta Kappa Nu | 2017 |