Benjamin Hudson Klimko

bklimko@umd.edu ● www.linkedin.com/in/benjaminklimko

EDUCATION:

Rice University, Houston, Texas
- Bachelor of Science in Electrical Engineering May 2019; Specialization in Photonics, Electronics, and Nano-devices
- Master's in Electrical Engineering Fall 2018 – December 2019; Specialization in signal processing with applications to machine learning, and communication systems

University of Maryland, College Park
- PhD in Electrical Engineering Fall 2021- Present; Focus on photonic technologies for communication systems

RELEVANT COURSEWORK

Computational Physics (Spring 2018)   Quantum Electronics II (Fall 2020)
Introduction to Random Processes (Fall 2018)   Intro. to Photonics (Spring 2021)
Statistical Signal Processing (Spring 2019)   Quantum & Wave Phenomena (Fall 2021)
Modern Comm. Theory and Practice (Spring 2019)   Information Theory (Spring 2022)
Network Science and Analytics (Fall 2019)   Digital Signal Processing (Fall 2022)

RELEVANT PROJECTS/RESEARCH

Power Systems Lead
Team Axon Mobile, Rice University, Houston, TX   August 2018-May 2019
- Designed, prototyped, and tested power system for senior design project to create a wireless neural recorder

Undergraduate Researcher   October 2015-May 2017
Kevin Kelly Lab, Rice University Department of Electrical Engineering, Houston, TX
- Learned scanning probe microscopy techniques using gold and highly oriented pyrolytic graphite (HOPG)
- Analyzed atomic-scale defects of carbon nanotubes using ultra-high vacuum (UHV) scanning tunneling microscopes (STM)

Project Lead; Propulsion Team Member   September 2015-May 2016
Rice Eclipse, Rice University, Houston, TX
- Participated in rebuilding first generation hybrid engine and research on advanced avionics, fuel, and injector plate systems

EXPERIENCE

Professional Staff   March 2020-Present
Johns Hopkins University Applied Physics Lab
- Working on critical signal processing and communications issues requiring creative solutions

Systems Engineer Intern   May 2019- August 2019
Texas Instruments, Dallas, TX
- Researched deep learning models for speech recognition on embedded systems in Embedded Processing- Analytics Systems

Applications Engineer Intern   May 2018- August 2018
Texas Instruments, Dallas, TX
- Created reference design for next generation battery charger and tools to assist customers in design decisions
- Assisted with validation testing on new charger to ensure on-time release to market
- Interfaced with high volume customers to provide debugging support for in-production and prototype devices

Summer Research Assistant   May 2017- August 2017
Rice University, Houston, TX
- Collaborated with Dr. Gary Woods and Dr. Craig Rusin (Texas Children's Hospital) to develop system to monitor CPAP failure in neonatal intensive care patients
- Worked as part of a team on production and testing of system
- Began clinical trial at Texas Children's Hospital to test efficacy of system

Atomically Precise Manufacturing Lab Intern   May 2016- August 2016
Zyvex Labs, Richardson, TX
- Performed sample and STM tip preparation, UHV system maintenance, and electron microscopy inspection of tips

SKILLS

MATLAB, Python, RF signal analysis, fiber optic systems

ACTIVITIES/HONORS/INVOLVEMENT

World Winner, IEEE Circuits and Systems Society Student Design Competition   May 2019
Academic Fellow, Rice University   August 2018- May 2019