1 Harrington Court
Potsdam, NY 13676
https://mackkv.github.io

Kevin V. Mack

(607) 743-1926
mackkv@clarkson.edu
https://github.com/mackkv

Education

Clarkson University	**Potsdam, NY**	**Aug 2018 – (Expected)**

- **Ph.D. in Electrical Engineering**

Clarkson University	**Potsdam, NY**	**Aug 2016 – Aug 2018**

- M.Sc. in Electrical Engineering

Clarkson University	**Potsdam, NY**	**Aug 2014 – May 2016**

- Bachelor of Science in Electrical Engineering
  - Vice President, Student Chapter IEEE
  - Mathematics Minor

SUNY Broome	**Binghamton, NY**	**Aug 2012 – May 2014**

- Associate of Science in Engineering Science

Employment

Research Assistant	**Clarkson University, Potsdam**	**January 2017 – Present**

- Member of Clarkson's CoSiNe Lab as an RA. Projects include Bluetooth ranging and localization, underwater time-of-flight imaging and target recognition, as well as related problems. My role has included creating software drivers and applications for data collection, working with circuit design and optical hardware components, testing and applying signal processing algorithms, running performance simulations, performing experiments, and writing or contributing to research papers.

Teaching Assistant	**Clarkson University, Potsdam**	**August 2016 - December 2016**

- Held TA position in the Fall of 2016 for Clarkson's EE321 Systems and Signal Processing course taught by Dr. Mahesh Banavar. Responsibilities included helping students with homework, projects, and studying. Also held office hours, graded homework and projects, and taught review classes.

Field Supervisor	**Parks & Recreation, Binghamton**	**May 2012 - August 2014**

- Responsible for overseeing the activities at certain Binghamton City recreational facilities. Duties included a range of activities such as clerical work, equipment distribution, site supervising, score-keeping, and more.

Languages and Software

- MATLAB, R, Python, C/C++, Java, Assembly, LaTeX
- Linux (Ubuntu, CentOS, etc.), Windows, Mac
- Spyder, Idle, R Studio, Android Studio, Teamviewer, VirtualBox, Microsoft Office, Overleaf, CUDA (Python and MATLAB), Git/GitLab

Technical Experience

Master's Thesis Project

- Bluetooth localization for mobile devices (in indoor environments). The project utilized mobile Android devices such as smartphones and tablets in order to retrieve signal strength data for ranging and localization. The work includes topics such as optimization, detection problems, data analysis, elements of digital signal processing and linear algebra.

PhD Thesis Project

- Time-of-Flight Cameras for Underwater Situational Awareness. This project uses an existing 3D imaging camera technology and adapts it for underwater use. The project is both heavily involved in hardware, software, and algorithm development. This work is sponsored by the Office of Naval Research and is in direct partnership with the NAVAIR research division at NAWCAD Patuxent River, MD.

Graduate Level Coursework

- Digital Signal Processing (DSP), Stochastic Processes, Adaptive Signal Processing, Computer Vision, Pattern Recognition, Data Driven Analysis of Complex Systems, Detection and Estimation, Data Coding and Transmission, Bayesian Data Analysis, Neuromorphic Computing, Deep Learning, and Applied Dynamical Systems.

Academic Projects

- Real-time object tracking with USB camera (Computer Vision), bit-error rate simulations for communication schemes such as OOK, BPSK, and QPSK (Detection and Estimation), acoustic noise cancellation by channel estimation (Adaptive Signal Processing), RADAR Detector Design (Stochastic Processes), gravitational n-body simulation with equation-free modeling, Compressed Sensing, and Image Classification (Data Driven Analysis of Complex Systems).

Additional Experience and Awards

- Frank G. Paul Medal for Excellence in Science and Mathematics (SUNY Broome).
- Clarkson Leadership Award, William A. Dart Undergraduate Research Award, RAPS Conference Best Oral Presentation and Best Poster Runner-Up, SURE Conference Best Oral Presentation (Clarkson University).
- Naval Undersea Research Program (NURP) Sponsorship student awardee
- OCEANS '19 Seattle Conference Student Poster Competition travel award
- Received updated training of the military's Hacking 4 Defense (H4X) program- which is designed to teach students and faculty how to turn academic research into usable technology for the desired end user
- Several peer-reviewed publications I authored or co-authored, details can be found at https://mackkv.github.io/publications/

Interests

- Machine Learning, Optimization Problems, Digital Signal Processing, Adaptive Filter Theory, Image Processing, Data Analysis, GPU acceleration and parallel computing.