

YUHAN LIU (HELENA)

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EDUCATION

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|--|----------------|
| PhD., Applied Mathematics , University of Washington (UW) | 2019 - Present |
| • In Progress | |
| MASc., Electrical and Computer Engineering , University of Toronto (U of T) | 2019 |
| • CGPA: 4.00/4.00 | |
| BASc., Engineering Science (Electrical and Computer Option) , U of T | 2017 |
| • CGPA: 3.85/4.00 | |

HONORS AND AWARDS

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|---|-------------|
| • NSERC Postgraduate Scholarship (PGS D3): \$21000/year | 2020 - 2023 |
| • Queen Elizabeth II Graduate Scholarship: \$15000 | 2018 - 2019 |
| • Ontario Graduate Scholarship: \$15000 | 2017 - 2018 |
| • U of T Engineering Science Capstone Design Winner: \$1500 | 2017 |
| • U of T Engineering Society Award: \$4200 | 2015 |
| • NSERC Undergraduate Summer Research Award: \$5600 | 2014 |
| • U of T Club for Biomedical Engineering Competition Winner: \$300 | 2014 |
| • U of T Tetra Enable Competition Potential Award: \$200 | 2013 |

PEER REVIEWED PUBLICATIONS

2020

1. **Liu, Y.**, Grigorovsky, V., and Bardakjian, B., "Excitation and Inhibition Balance Underlying Epileptiform Activity," IEEE Transaction on Biomedical Engineering, 2020.

2019

1. Jacobs, D., **Liu, Y.H.**, Hilton, T., del Campo, M., Carlen, P.L., and Bardakjian, B.L., "Classification of Scalp EEG States Prior to Clinical Seizure Onset," IEEE Journal of Translational Engineering in Health and Medicine, 2019.

2017

1. **Liu, Y.**, Khisti, A., and Mahajan, A., "On privacy in smart metering systems with periodically time-varying input distribution," Proceedings of IEEE Global Conference on Signal and Information Processing, Nov. 14-16, 2017.
2. **Liu, Y.H.**, Lee, S-H., and Khisti, A., "Information-theoretic privacy in smart metering systems using cascaded rechargeable batteries," IEEE Signal Processing Letters, 2017.

ACCEPTED ABSTRACTS AND PRESENTATIONS

2019

1. **Liu, Y.H.** A Large-Scale Neuro-Glial Network Model of Seizure Termination. U of T Annual

Research Conference 2019. Talk.

2017

2. **Liu, Y.H.** Analysis of Privacy-Preserving Rechargeable Batteries in Smart Metering Systems from an Information Theoretical Point of View. Undergraduate Honour's Thesis.

2014

1. **Liu, Y.H.** Phase Synchrony Features for Improved Error-Related Potential Detection in Brain-Computer Interfaces. U of T IBBME Research Symposium. Talk

TEACHING EXPERIENCES

Teaching Assistant, Calculus with Analytic Geometry, UW 09/2019 – Present

- Conducted tutorials and graded quizzes for a class of 60 to 80 first year students
- Facilitated a supportive environment to engage students; in the TA observation feedback, students were comfortable to participate and ask questions during my section

Teaching Assistant, Fundamentals of Computer Programming, U of T 01/2019 – 04/2019

- Assisted a class of 100 engineering students with their weekly assignments in Python

Head Teaching Assistant, Linear Algebra, U of T 09/2018 – 12/2018

- Led a team of teaching assistants to provide support to a class of first year students for completing their weekly numeric computation assignments in MATLAB
- In their feedback, students said that they were able to leave each session with a deeper understanding of the course concepts and the ability to solve more challenging problems

Teaching Assistant, Introduction to Computer Programming, U of T 09/2017 – 12/2017

- Assisted a class of 100 engineering students with their weekly assignments in C and Python
- Tested the assignment before each lab session and suggested possible improvements

LEADERSHIP EXPERIENCES

Event Director, U of T IEEE Student Chapter 09/2016 – 04/2017

- Organized the Grad Talk Series, which allowed students to network with their prospective graduate school advisors at the U of T ECE department

Co-Chair, U of T Engineering Science Education Conference 03/2015 – 02/2016

- Selected by the Department of Engineering Science to lead and organize ESEC, which brought distinguished professionals to present their insights to 600 student attendees
- Participated in the selection of the speakers, scheduling the day and recruiting volunteers

Programming Director, U of T Undergraduate Engineering Research Day 05/2014 – 08/2014

- Coordinated the presentations of the conference, which allowed 118 research students to present their research and receive feedback from accomplished researchers in their fields

TECHNICAL SKILLS

Programming: MATLAB & Simulink, Python, Mathematica, C, Assembly Language

Operating Systems: Linux, Windows, MacIntosh