

GENEVIEVE FLASPOHLER

32 Vassar St, Room 32-330 ◊ Massachusetts Institute of Technology ◊ Cambridge, MA 02139

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EDUCATION

Massachusetts Institute of Technology &

September 2016 - Present

Woods Hole Oceanographic Institution Joint Program

Ph.D. Student in Electrical Engineering and Computer Science, Applied Ocean Engineering

Advised by: Yogesh Girdhar, Co-advised by: Nicholas Roy, GPA: 5.00

Relevant coursework: Bayesian modeling and inference, machine learning, natural language processing, inference and information theory, theory of computation

University of Michigan

September 2012 - June 2016

B.S.E. in Computer Engineering

GPA: 3.98, *Summa Cum Laude*

Relevant coursework: digital signal processing, computer vision, data structures & algorithms, microprocessor systems, computer architecture, probability, autonomous robotics, operating systems

RESEARCH EXPERIENCE

Massachusetts Institute of Technology & Woods Hole Oceanographic Institution

Cambridge, MA

September 2016 - Present

- Graduate Student Research Assistant, Electrical Engineering and Computer Science
- *Research interests:* marine robotics, robot autonomy, unsupervised machine learning, information theory, Bayesian inference

Woods Hole Oceanographic Institution

Woods Hole, MA

January 2015 - January 2016

- Developed machine learning algorithms to classify gait and behavior of marine invertebrates
- Designed modification to custom embedded sensor board, allowing the addition of peripheral sensors interfaced through I2C communication bus
- Ran live experiments on squid carrying embedded recording devices at the Woods Hole Laboratory

University of Michigan

Ann Arbor, MI

September 2014 - May 2015

- Designed and prototyped custom embedded hardware to transmit and receive vibratory communications
- Developed on-off keying modulation and digital signal processing firmware to send and interpret vibratory signals in real-time
- Presented published work in the ACM Hot Wireless Workshop 2015, Paris, France

INDUSTRY EXPERIENCE

FANUC Robotics America

Rochester Hills, MI

May 2014 - August 2014

- Developed a cross-browser compatible web interface for FANUC robot controllers
- Gained proficiency in HTML, CSS, JavaScript and received FANUC robot safety and control training

CONFERENCE AND WORKSHOP PUBLICATIONS AND PRESENTATIONS

1. **Flaspohler, G.**, Roy, N., & Girdhar, Y. (2018, May). *Near-optimal irrevocable sample selection for periodic data streams with applications to marine robotics*. To appear at Robotics and Automation (ICRA), 2018 IEEE International Conference on. IEEE, 2018.
2. **Flaspohler, G.**, Roy, N., & Girdhar, Y. (2017, September). *Feature discovery and visualization of robot mission data using convolutional autoencoders and Bayesian nonparametric topic modeling*. Intelligent Robots and Systems (IROS), 2017 IEEE/RSJ International Conference on. IEEE, 2017.
3. **Flaspohler, G.**, Silva, T., Mooney, A., & Girdhar, Y. (2017, June). *Classifying dolphin whistles using convolutional neural networks*. Presentation at the meeting of the Acoustical Society of America 2017, Boston MA.
4. **Flaspohler, G.** (2017, February). *Enabling curious Bayesian marine robotic exploration*. Short talk at MIT Robocon 2017, Cambridge MA.
5. Adkins, J.¹, **Flaspohler, G.**¹, & Dutta, P. (2015, September). *Ving: Bootstrapping the Desktop Area Network with a Vibratory Ping*. In Proceedings of the 2nd International Workshop on Hot Topics in Wireless (pp. 21-25). ACM.
6. **Flaspohler, G.** (2013, January). *Effects of prostheses on the metabolic cost of walking for lower-limb amputees*. Poster at the Michigan Research Community Symposium, Ann Arbor MI.

TEACHING EXPERIENCE

University of Michigan	Ann Arbor, MI
EECS 281: Advanced Algorithms and Data Structures in C++	January 2016 - June 2016
ENGR 100: Introduction to Human Centered Design	January 2013 - June 2015

AWARDS AND GRANTS

1. National Science Foundation Graduate Research Fellowship, \$102,000 plus tuition (2016 - Present)
2. University of Michigan's Engineering Distinguished Achievement Award, \$500 (May 2016)
3. University of Michigan's EECS William L. Everett Student Award of Excellence, \$500 (May 2016)
4. University of Michigan's EECS Scholar, \$500 (May 2016)
5. NSF REU Undergraduate Research Award, \$1,500 (May 2015)
6. University of Michigan's Electrical Engineering and Computer Science Outstanding Achievement Award, \$500 (May 2015)
7. University of Michigan's Marian Sarah Parker Prize, \$1,000 (May 2015)
8. University of Michigan's Darl F. and Lorene O. Caris Dean's Merit Scholarship full-ride, \$130,000 (September 2012 - May 2016)

*"When you want to build a ship,
do not begin by gathering wood,
cutting boards, and distributing work,
but awaken within the heart of man
the desire for the vast and endless sea."*

- Antoine de Saint-Exupery