GENEVIEVE E. FLASPOHLER

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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: John W. Fisher III and Nicholas Roy, GPA: 5.00/5.00

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

S.M. in Electrical Engineering and Computer Science *September 2016 - September 2018*
Advised by: Yogesh Girdhar and Nicholas Roy, GPA: 5.00/5.00
Thesis title: Statistical Models and Decision Making for Robotic Scientific Information Gathering

University of Michigan *September 2012 - June 2016*
B.S.E. in Computer Engineering
GPA: 3.98/4.00, *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*: Bayesian modeling and inference, robot planning and autonomy, machine learning, information theory, stochastic processes, field robotics and sensor planning.

Woods Hole Oceanographic Institution
Woods Hole, MA *January 2015 - January 2016*

- Developed machine learning algorithms to classify gait and behavior of marine invertebrates
- Designed custom embedded sensor board for *in situ* gait monitoring of marine invertebrates

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

INDUSTRY EXPERIENCE

FANUC Robotics America
Rochester Hills, MI *May 2014 - August 2014*

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

CONFERENCE AND WORKSHOP PUBLICATIONS

1. Doherty, K., **Flaspohler, G.**, Roy, N., & Girdhar, Y. (2018, September). *Approximate Distributed Spatiotemporal Topic Models for Multi-Robot Terrain Characterization.* Intelligent Robots and Systems (IROS), 2018 IEEE/RSJ International Conference on. IEEE, 2018.
IROS 2018 Best Paper Award Finalist
2. **Flaspohler, G.**, Roy, N., & Girdhar, Y. (2018, May). *Near-optimal irrevocable sample selection for periodic data streams with applications to marine robotics.* Robotics and Automation (ICRA), 2018 IEEE International Conference on. IEEE, 2018.
3. **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.
4. **Flaspohler, G.**[1], Adkins, J.[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.

CONFERENCE AND WORKSHOP PRESENTATIONS

1. **Flaspohler, G.** (2018, September). *Models and Decision-making for Scientific Robots.* Presentation at the Computational Sustainability Doctoral Consortium 2018, Ithaca NY.
2. **Flaspohler, G.** (2017, December). *Feature discovery and visualization of robot mission data using convolutional autoencoders and Bayesian nonparametric topic modeling.* Presentation at the Women in Machine Learning Workshop at NIPS 2017, Long Beach, CA.
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. Best Student Presentation in Applied Ocean Engineering Runner-up.
4. **Flaspohler, G.** (2017, February). *Enabling curious Bayesian marine robotic exploration.* Short talk at MIT Robocon 2017, Cambrdige MA.
5. **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.

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)

TEACHING AND MENTORING 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

TECHNICAL SKILLS

Languages	C++/C, Python, MATLAB
Tools and Libraries	OpenCV, Tensorflow, Robot Operating System (ROS) and LCM, GPy, Edward, Git, Eagle PCB design