

Zackory Erickson

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Research Interests

My research encompasses assistive robotics, machine learning, and human-robot interaction. I am interested in enabling robots to intelligently interact with and assist people through haptic perception and data-driven learning.

Education

Georgia Institute of Technology Ph.D. in Robotics Advisor: Charles C. Kemp	2016–Present
University of Wisconsin–La Crosse B.S. in Computer Science, Mathematics (double major) · GPA: 3.93	2012–2016

Publications

Conference Publication

- [10] Z. Erickson, S. Chernova, and C. C. Kemp, “Semi-Supervised Haptic Material Recognition for Robots using Generative Adversarial Networks,” in *1st Annual Conference on Robot Learning (CoRL)*, 2017.
- [9] Z. Erickson, A. Clegg, W. Yu, G. Turk, C. K. Liu, and C. C. Kemp, “What Does the Person Feel? Learning to Infer Applied Forces During Robot-Assisted Dressing,” in *2017 IEEE International Conference on Robotics and Automation (ICRA)*, 2017.
- [8] A Clegg, W. Yu, Z. Erickson, C. K. Liu, and G. Turk, “Learning to Navigate Cloth using Haptics,” in *2017 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2017.
- [7] D. Park, H. Kim, Y. Hoshi, Z. Erickson, A. Kapusta, and C. C. Kemp, “Multimodal Execution Monitoring for Robot-Assisted Feeding,” in *2017 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2017.
- [6] D. Park, Z. Erickson, T. Bhattacharjee, and C. C. Kemp, “Multimodal Execution Monitoring for Anomaly Detection During Robot Manipulation,” in *2016 IEEE International Conference on Robotics and Automation (ICRA)*, 2016.
- [5] Z. Erickson and S. Foley, “On Ramp to Parallel Computing,” in *Midwest Instruction and Computing Symposium (MICS)*, 2014.

Workshop Publication

[4] Z. Erickson, M. Collier, A. Kapusta, and C. C. Kemp, "Investigating Capacitive Proximity Sensing for Tracking Human Pose During Robot-Assisted Dressing," in *IROS 2017 workshop on Assistance and Service Robotics in a Human Environment*, 2017.

[3] D. Park, Y. Kim, Z. Erickson, and C. C. Kemp, "Towards Assistive Feeding with a General-Purpose Mobile Manipulator," in *ICRA 2016 workshop on Human-Robot Interfaces for Enhanced Physical Interactions*, 2016.

Preprint

[2] Z. Erickson, H. Clever, G. Turk, C. K. Liu, and C. C. Kemp, "Deep Haptic Model Predictive Control for Robot-Assisted Dressing," *arXiv*, 2017.

[1] Z. Erickson, M. Collier, A. Kapusta, and C. C. Kemp, "Tracking Human Pose During Robot-Assisted Dressing using Single-Axis Capacitive Proximity Sensing," *arXiv*, 2017.

Conference Poster

Z. Erickson and S. Foley, On Ramp to Parallel Computing. *Celebration of Student Research*, UW-La Crosse, 2014.

Z. Erickson and S. Foley, On Ramp to Parallel Computing. *UW System Symposium for Undergraduate Research and Creative Activity*, UW–Milwaukee, 2014.

Invited Talks

Multimodal Anomaly Detection, Mathematics Colloquium, UW–La Crosse 2015

Honors and Awards

President's Fellowship – Georgia Tech 2016–Present

4th Heidelberg Laureate Forum 2016

Invited to Heidelberg to meet Turing Award winners, Fields Medalists, Abel Prize winners, and young researchers from around the world.

Honorable Mention – NSF GRFP 2016

Strzelczyk Award 2016

Awarded to the top graduating senior in the College of Science and Health for academic achievement and service to the campus and community.

MIT CONVERGE 2015

One of 18 prospective graduate students in the nation invited to tour MIT.

Berkeley Engineering Preview Days 2015

One of 14 prospective graduate students nationwide invited to tour UC Berkeley.

Grace Olwell Memorial Endowment Fund Scholarship 2015

Xcel Energy Scholarship 2015

John and Lois Storlie Scholarship in Computer Science	2014
Undergraduate Research Grant	2013
Scottish Rite Abbott Scholarship	2013
Dean's List, UW-La Crosse	8 Semesters

Mentoring

Current Undergraduate Students, Nathan Luskey, Vamsee Gangaram, Eliot Xing

Experience

Computer Science Tutor , UW-La Crosse Led weekly recitations for new computer science students.	2016
Intern , Watlow I developed unit test suites and helped establish test automation by setting up build servers, continuous integration servers, and a mocking framework.	2013
Software Developer , Office of Residence Life, UW-La Crosse Worked on software development for residence life web and desktop applications.	2012–2013

Outreach

RoboGrads, Vice President of Outreach , Coordinate tours and outreach events for over 20 robotics labs at Georgia Tech. Organize outreach events and robotics demos at schools, libraries, and museums in the greater Atlanta area.	2017–Present
Biomedical Robotics Club Mentor , Helping 50+ undergraduate students learn about and build assistive devices and robots for people with impairments.	2016–Present
Judge , FIRST Lego League	2015–Present
CS Outreach & Diversity Club , CS and robotics events for K-12 students.	2015–2016
Mentor , FIRST Robotics, Central High School and Holmen High School	2012–2016