

Ryan J. Marcotte

NSF Fellow, PhD Candidate
University of Michigan
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EDUCATION

University of Michigan Ph.D. Computer Science & Engineering	Anticipated May 2020
University of Michigan M.S. Computer Science & Engineering	December 2016 GPA 3.877
University of Texas at Dallas B.S. Electrical Engineering, Summa Cum Laude	May 2015 GPA 3.986

EXPERIENCE

APRIL Robotics Lab, University of Michigan Graduate Research Assistant	June 2014–present
<ul style="list-style-type: none">• P.I.: Edwin Olson, Associate Professor• Researched planning and coordination techniques for multi-agent systems• Developed novel stochastic model of adversarial agents for pursuit-evasion games• Devised novel adaptive forward error correction system for robust communication in mobile ad hoc networks• Administered 802.11s mesh network for multi-agent mobile robotic platform• Created automated statistics collection tool for mobile ad hoc network• Implemented speed controller for low-speed electric autonomous vehicle	
SeRViCE Lab, UT Dallas Undergraduate Research Assistant	August 2013–May 2014
<ul style="list-style-type: none">• P.I.: Nicholas Gans, Clinical Associate Professor• Developed ground robot platform for research in formation control• Wrote software for networking, embedded systems, and controls• Designed high-level motion planner for rearranging agents in crowded environments	
Advanced Polymer Research Lab, UT Dallas Undergraduate Research Assistant	August 2011–August 2013
<ul style="list-style-type: none">• P.I.: Walter Voit, Associate Professor• Synthesized neural interfacing devices on shape memory polymer substrates• Characterized electrical properties of neural interfaces through <i>in vivo</i> and <i>in vitro</i> testing• Developed anisotropic conductive adhesives for fine-pitch interconnections in biomedical devices	

AWARDS AND HONORS

NSF Graduate Research Fellowship	April 2016
<ul style="list-style-type: none">• About 2000 awards per year nationwide in natural, social, and engineering sciences• \$138k value: \$34k stipend + \$12k tuition honorarium for 3 years	
NDSEG Fellowship	April 2016
<ul style="list-style-type: none">• About 200 awards per year nationwide in natural sciences, engineering, and mathematics	

- >\$150k value: \$34k stipend + full tuition/fees for 3 years
- UM Computer Science and Engineering Departmental Fellowship** February 2015
- Annual award to top admitted Ph.D. students in department
 - \$76k value: \$29k stipend + full tuition/fees for 1 year
- Goldwater Scholarship, Institutional Nomination** January 2013
- Most prestigious national undergraduate research award in the sciences
 - No award, but selected as 1 of 4 nominees from UT Dallas based on internal review process
- Eugene McDermott Scholarship** March 2011
- Internationally competitive merit scholarship at UT Dallas
 - >\$220k value: full tuition/fees + \$15k stipend for 4 years + \$12k study abroad allowance
- National Merit Finalist** May 2011
- Awarded to top 0.5% of each state's graduating high school students
 - Led to >\$1000k in scholarship offers

VOLUNTEERISM

- McDermott Scholars Alumni Association** June 2015–present
- Vice President of Development (July 2017–present)
 - Member, Board of Directors (June 2015–present)
 - Nonprofit corporation established in 2012 to provide support (financial and more) to UT Dallas and the Dallas community, with current endowment exceeding \$1 million
- Reaching and Inspiring Student Engineers** September 2011–May 2015
- Co-Founder, Vice-President (2012–2014)
 - Organization bringing hands-on science and engineering demonstrations to Dallas-area elementary students
 - Presentations to >2000 students at 20+ schools

REFEREED JOURNAL ARTICLES

- [6] D. Simon, T. Ware, R. J. Marcotte, B. R. Lund, D. W. Smith Jr, M. Di Prima, R. L. Rennaker, and W. Voit, "A comparison of polymer substrates for photolithographic processing of flexible bioelectronics," *Biomedical Microdevices*, vol. 15, no. 6, pp. 925–939, 2013.

REFEREED CONFERENCE PAPERS

- [2] R. J. Marcotte, X. Wang, and E. Olson, "AprilFEC: Real-time channel estimation and adaptive forward error correction," in *Proceedings of the RSS Workshop on Robot Communication in the Wild*, Jul. 2017.
- [4] R. J. Marcotte and E. Olson, "Adaptive forward error correction with adjustable-latency QoS for robotic networks," in *Robotics and Automation, IEEE International Conference on*, 2016.