

DAVID PORFIRIO

CURRICULUM VITAE, NOVEMBER, 2019

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RESEARCH INTERESTS

I am interested in making the process of programming social robots easy and approachable for experts and non-expert designers alike. My work spans using **formal verification** to assist designers reason about interaction social norms, **program synthesis** to assist designers in implementing these interactions, and using **program repair** to automatically fix these interactions.

EDUCATION

PhD	University of Wisconsin–Madison (UW–Madison), Madison, WI, USA Computer Sciences	2018-present
MSc	UW–Madison, Madison, WI, USA Computer Sciences	2016-2018
BS	University of Arizona (UA), Tucson, AZ, USA Double degree (hon) in computer science and physiology Minor in mathematics Summa cum laude	2011-2016

RESEARCH EXPERIENCE

Doctoral Research UW–Madison, Madison, WI, USA Computer Sciences Advisors: Drs. Bilge Mutlu, Aws Albarghouthi, and Allison Sauppé	2016-present
Undergraduate Senior Thesis UW–Madison, Madison, WI, USA Computer Sciences Advisor: Dr. John Kececioglu	2015-2016
Undergraduate Research UW–Madison, Madison, WI, USA Computer Sciences Advisors: Drs. E. Fiona Bailey and Joanna Masel	2013-2014

FELLOWSHIPS, HONORS, and AWARDS

Heidelberg Laureate Forum Invited to attend as a young researcher	2019
Best Paper Award UIST '18	2018
NSF Graduate Research Fellowship	2017
Advanced Opportunity Fellowship Selected by the UW–Madison Computer Sciences Department	2016
Excellence in Undergraduate Research Award Selected by the UA Department of Computer Science	2016
Galileo Circle Scholar Selected by the UA Department of Computer Science	2015
National Hispanic Scholar Selected by the National Hispanic Recognition Program	2011

PUBLICATIONS

Porfiro, D., Fisher, E., Sauppé, A., Albarghouthi, A., & Mutlu, B. (2019, October). Bodystorming Human-Robot Interactions. In Proceedings of the 32nd Annual ACM Symposium on User Interface Software and Technology (pp. 479-491). ACM.

Porfiro, D., Sauppé, A., Albarghouthi, A., & Mutlu, B. (2019, March). Computational Tools for Human-Robot Interaction Design. In 2019 14th ACM/IEEE International Conference on Human-Robot Interaction (HRI) (pp. 733-735). IEEE.

Porfiro, D., Sauppé, A., Albarghouthi, A., & Mutlu, B. (2018, October). Authoring and verifying human-robot interactions. In The 31st Annual ACM Symposium on User Interface Software and Technology (pp. 75-86). ACM.

Xiong, K., McEntee, J. P., **Porfiro, D. J.**, & Masel, J. (2017). Drift barriers to quality control when genes are expressed at different levels. *Genetics*, 205(1), 397-407.

Shumway, K. R., **Porfiro, D. J.**, & Bailey, E. F. (2015). Phonation-related rate coding and recruitment in the genioglossus muscle. *Experimental brain research*, 233(7), 2133-2140.

POSTERS

Porfiro, D., Sauppé, A., Albarghouthi, A., & Mutlu, B. (2019) Computational Tools for Human-Robot Interaction Design, ACM/IEEE International Conference on Human-Robot Interaction; Daegu, South Korea

Porfiro, D., Sauppé, A., Albarghouthi, A., & Mutlu, B. (2017) Construction and Formal Verification of Human-Robot Interaction Designs, The Human Computer Interaction Consortium 2017 Workshop; Pajaro Dunes, CA

Karl R. Shumway, **David J Porfiro**, E. Fiona Bailey (2014) Force Regulation in cranial and spinal motoneuron pools, 25th Annual Undergraduate Biology Research Conference; Tucson, AZ

TEACHING EXPERIENCE

Teaching Assistant, UA

Summer 2015

Duties: holding office hours and grading programming assignments

CSC 352, Systems Programming and Unix

Section Leader, UA

Fall 2014 - Spring 2015

Duties: teaching lab sessions, holding office hours, and grading assignments

CSC 245, Introduction to Discrete Structures

CSC 227, Program Design and Development

OUTREACH

Grandparents University

2018-present

Instructor

Co-taught social robotics lecture and lab sessions geared towards children and their grandparents.

UA Mortar Board Senior Honor Society

2014-2015

Member

Performed community service and various times during membership.

Tucson Medical Center

2012-2013

Worked over 200 hours in the Pediatrics and Labor and Delivery Departments, assisting nurses and visitors