

Shawanee' Patrick

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EDUCATION

*Texas A&M University, College Station, TX***Ph.D. Mechanical Engineering****August 2016-Present**

Areas of Concentration: Biomechanics, Rehabilitation Robotics, Gait Analysis

Advisor: Pilwon Hur

*Texas A&M University, College Station, TX***M.S. Mechanical Engineering****August 2016**

Thesis Title: Biomechanical Analysis of Lower Limb Powered Prosthesis

Advisor: Pilwon Hur

Committee: John Criscione, Michael Madigan, Michael Moreno

*Texas A&M University, College Station, TX***B.S. in Biomedical Engineering****May 2012**

Area of Concentration: Biomechanics

Minor: Math

RESEARCH INTERESTS

Prosthetics, Orthotics, Rehabilitation, Controls

PUBLICATIONS

- Victor Paredes, Woolim Hong, Shawanee Patrick, Huihua Zhao, Aaron Ames and Pilwon Hur. "Upslope Walking with Transfemoral Prosthesis using Optimization based Spline Generation." EEE/RSJ International Conference on Intelligent Robots and Systems, Daejeon, Korea, October 9-14, 2016, Submitted
- Jiang, Shu, Shawanee Patrick, Huihua Zhao, and Aaron D. Ames. "Outputs of human walking for bipedal robotic controller design." In American Control Conference (ACC), 2012, pp. 4843-4848. IEEE, 2012.

PRESENTATIONS

- "Towards Enhancing Gait Symmetry and Metabolic Costs for Amputee Gait With a Powered Transfemoral Prosthesis" Shawanee Patrick, Victor Paredes, Pilwon Hur
American Society of Biomechanics 40th Annual Meeting, August 2016, Poster
- Lab Presentation Women Exploring Engineering, Summer 2012, Summer 2013
- "Equations of Human Walking" Shawanee Patrick, Jiang, Shu, Huihua Zhao, and Aaron D. Ames. Louis Stokes Alliance for Minority Participation Annual Symposium 2012, Poster
- "Connecting Biomechanics to Robotics" Shawanee Patrick, Jiang, Shu, Huihua Zhao, and Aaron D. Ames. Undergraduate Student Research Grant Poster Presentation 2011, Poster

TEACHING EXPERIENCE

Mechanical Measurements, MEEN 260, Texas A&M University

Fall 2012

Teaching Assistant

- Taught the lab portion of the course.
- Prepared lab lectures; evaluated student performance and assigned lab grades

Personal Tutor

Fall 2013- present

- Provided supplemental instruction for Pre-Algebra, Algebra, Geometry, IPC, and Calculus for High School and College Students
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- Successfully helped students to understand the math and science materials
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AWARDS

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| • American Society of Biomechanics Diversity Travel Award | Aug. 2016 |
| • Texas Alliance for Graduate Education and the Professoriate Scholar | Aug. 2015-Present |
| • Louis Stokes Alliance for Minority Participation REU | Aug. 2011-May 2012 |
| • Century Scholar Scholarship | Aug. 2008 – May 2012 |
| • Region V International Initiative Award, National Society of Black Engineers (NSBE) | March 2011 |
| • Vanguard Scholar Award, (NSBE) | March 2011 |
| • College of Engineering Scholar | Aug. 2011 |
| • SMART Grant | 2010- 2011 |
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LEADERSHIP EXPERIENCE

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| Graduate Teaching Consultant- "Texas A&M Center for Teaching Excellence" Plan and deliver periodic workshops and special programs on teaching and learning, Participate in the fall and spring semester Teaching Assistant Institute {TAI} and TA Mentor Training Meetings | 2016-Present |
| Bridge to Doctorate Program Coordinator- "Louis Stokes Alliance for Minority Participation" Coordinate Seminars, manage expenses for BTM Programs, Analyze Program Results, Mentor graduate students, speak on panels for first year graduate students. | 2013-Present |
| Recruiter for College of Engineering Recruiter for Graduate Programs for Texas A&M College of Engineering, Served on Graduate Panels | 2012-Present |
| Student Worker- " Texas A&M Engineering Student Services and Academic Programs" Assisted with analysis, management and design of retention programs. Mentored incoming freshmen | 2008-2012 |
| International Chair – "Texas A&M - National Society of Black Engineers" Assisted with students' registrations, meeting agendas and programs for NSBE chapter in Belize. Organized school supply drives, and conference calls. | 2010-2012 |
| Mentor- "Texas A&M - National Society of Black Engineers" Met with mentee weekly, advised student with academic decisions, tutored student in engineering subject if able, or suggest and appropriate tutor. | 2011-2012 |
| Engineering Camp Counselor – "Texas A&M - Women Exploring Engineering, E-12" Mentored, and supervised a group of high school girls and minority students interested in engineering. | 2011,2013 |
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RELATED EXPERIENCE

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| Graduate Researcher Worked with a team to design prosthetic knee. Developed testing protocol for prosthetic knee and ankle. | 2012-Present |
| Undergraduate Researcher | 2010-2012 |

Wrote several literature reviews on current prosthetic knee and ankle research, as well as computer simulation of prosthetic legs, worked with two graduate students on a paper for the American Control Conference.

LANGUAGES

- English – native language
 - Spanish– speak, read, and write with basic competence.
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MEMBERSHIPS

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| • American Society of Biomechanics | 2016 -Present |
| • Texas A&M Academy of Future Faculty | 2016 -Present |
| • Texas Alliance for Graduate Education and the Professorate | 2014 -Present |
| • National Society of Black Engineers | 2008 -Present |
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SKILLS

- Solid Works
- Microsoft Excel
- Word Processing
- Matlab