Ahsan I. Nawroj
B.S., M.S., M.Phil., PhD (expected 2017)

SELECT PUBLICATIONS & PATENTS

Peer-Reviewed Journals

J4 **A. I. Nawroj**, J. P. Swensen, and A. M. Dollar, "Towards Modular Active-Cell Robots (MACROs): SMA Cell Design and Modeling of Compliant, Articulated Meshes", *IEEE Transactions in Robotics* (accepted)

J3 J. P. Swensen, **A. I. Nawroj**, P. E. I. Pounds, and A. M. Dollar, "Active cells for redundant and configurable articulated structures," *Smart Materials and Structures*, Oct. 2014.

J2 L. F. Schettino, A. Pallottie, C. Borland, S. Nessa, **A. I. Nawroj**, and Y.-C. Yu, "The organization of digit contact timing during grasping," *Expt. Brain Research. Experimentelle Hirnforschung. Expérimentation cérébrale*, Jun. 2013.

J1 **A. I. Nawroj**, J. P. Swensen, and A. M. Dollar, "Electrically conductive bulk composites through a contact-connected aggregate," *PLoS One*, Jan. 2013.

Peer-Reviewed Conferences

C4 **A. I. Nawroj**, J. P. Swensen, and A. M. Dollar, "Design of Mesoscale Active Cells for Networked, Compliant Robotic Structures," *Intelligent Robots and Systems (IROS)*, 2015. (Oral Presentation, Session Chair)

C3 J. P. Swensen, **A. I. Nawroj**, P. E. I. Pounds, and A. M. Dollar, "Simple, scalable active cells for articulated robot structures," in *2014 IEEE International Conference on Robotics and Automation (ICRA)*, 2014.

C2 **A. I. Nawroj**, M. Toneva, H. Admoni, and B. Scassellati, "An Exploration of Social Grouping in Robots: Effects of Behavioral Mimicry, Appearance, and Eye Gaze," *Cognitive Science Society*, 2014. (Presentation, Hardware demo)

C1 Y.-C. Yu, S. Shrestha, **A. I. Nawroj**, M. Sotomayor, and R. Koplin, "Microprocessor control of an ultrasonic scanning device," in *Programmable Devices and Embedded Systems*, 2012.

Patents

P1 Shrestha, Shailesh (Bremen, DE), **Nawroj, Ahsan** (Easton, PA, US), Yu, Yih-Choung (Easton, PA, US), Sotomayor, Marcos (New York, NY, US), Koplin, Richard (New York, NY, US), 2012
Ultrasonic Scanning Probe With a Tuning Fork-Type Oscillator and Feedback Control Thereof (United States). Control number: 20120236258.

TEACHING EXPERIENCE & MENTORSHIP

Teaching Fellow, Yale University, New Haven, CT
Introduction to Mechanical Design (ME 185: Design and prototyping laboratory assignments) 2014 – 2016

Peer tutor, Lafayette College, Easton, PA
Introduction to Computer Science (CS101: Programming concepts) 2010 – 2012
Introduction to Computer Science (CS103: Data structures and implementation) 2011 – 2012
Electrical Engineering (ECE323: Signals and Systems analysis) 2012

SKILLS

Technical:

- **Software Programming:** Python, Lisp, Matlab, Simulink, Java, C, C++, Objective-C, Javascript, HTML/CSS/PHP, Linux, Mac OS X, Windows environments, Robot Operating System (ROS), Arduino, Processing
- **Hardware programming and simulation:** Verilog, Spice
- **Hardware Fabrication:** Mill, Lathe, Drill press, Rapid prototyping (3D printers, Laser cutter, Molding techniques)
- **Other:** Autodesk Inventor, SolidWorks, Adobe Illustrator, Adobe Photoshop, Latex

Non-Technical:

- **Languages:** English (Fluent), Bengali (Native), Spanish (Conversational)

PROFESSIONAL AFFILIATIONS

Engineer-in-training (EIT), Pennsylvania (License # ET017823) 2012
Institute of Electrical and Electronics Engineers (IEEE): Student Member From 2011
American Society of Mechanical Engineers (ASME): Student Member From 2012
Phi Beta Kappa: Academic Honor Society From 2011
Eta Kappa Nu: Electrical Engineering Honor Society From 2011
Tau Beta Pi: Engineering Honor Society From 2011
Sigma Xi: Research Honor Society From 2011