

Alican Demir

alican@jhu.edu (443) 527-9199

4000 N. Charles St, Apt 806, Baltimore MD 21218, USA

EDUCATION

Sep 2011 – Present	JOHNS HOPKINS UNIVERSITY PhD. in Robotics (Passed Departmental Qualifier Exam and Graduate Board Oral)	Baltimore, MD, US
Sep 2007 – Aug 2009	JOHNS HOPKINS UNIVERSITY MSE. in Mechanical Engineering – <i>Thesis</i> : A Modular, Tunable Tactile Antenna for Exploring the Mechanics of Sensing	Baltimore, MD, US
Sep 2003 – May 2007	JOHNS HOPKINS UNIVERSITY BS. in Mechanical Engineering (<i>Robotics Concentration</i>) Minor in Entrepreneurship and Management	Baltimore, MD, US
Jun 2002 – Aug 2002	STANFORD UNIVERSITY Summer Session	Stanford, CA, US
Sep 2000 – Jun 2003	ISTANBUL LİSESI (IEL) High School, Science/Math Curriculum – High Honors – German ABITUR degree	Istanbul, TR

WORK EXPERIENCE AND INTERNSHIPS

Sep 2004 – Present	JOHNS HOPKINS UNIVERSITY LABORATORY FOR COMPUTATIONAL SENSING AND ROBOTICS	Baltimore MD, US
	<ul style="list-style-type: none">• Graduate Research Assistant Sep 2011 - Present – Bio-inspired robotics research on interplay between locomotion, sensing and the environment.• Research Specialist Sep 2009 - Aug 2011 – Researched the mechanics of antennal tactile sensing and designing the next generation of robotic tactile antennae in LIMBS Lab. – Worked and consulted on the experimental setups at “Fortune Lab” in the Department of Psychological and Brain Sciences.• Graduate Research Assistant Jun 2007 - Aug 2009 – Designed and developed a multi-segmented, modular sensory antenna with embedded computing in LIMBS Lab.• Undergraduate Research Assistant Sep 2004 - May 2007 – Worked on various concepts of developing an antenna based tactile sensing in “Locomotion In Mechanical and Biological Systems” (LIMBS) Lab.	
	DEPARTMENT OF MECHANICAL ENGINEERING	
	<ul style="list-style-type: none">• Teaching Assistant, 530.343 Design & Analysis of Dyn. Systems Feb 2011 - May 2011• Teaching Assistant, 530.343 Design & Analysis of Dyn. Systems Feb 2010 - May 2010• Teaching Assistant, 530.454 Manufacturing Engineering Sep 2008 - Dec 2008• Teaching Assistant, 530.102 Freshman Exp. in ME II Jan 2008 - May 2008• Lab Development Assistant, 530.101 Freshman Exp. in ME I Sep 2007 - Dec 2007 – Heavily contributed to the creation of a new mechanical engineering freshmen lab course to replace the general Physics I Lab course.	

Jun 2005 – Aug 2005	MERCEDES-BENZ Hosdere Plant, Intercity Coach R&D and Testing Facility – Worked as an engineering intern and successfully completed a comprehensive optimization proposal on the main MTS fatigue testing station.	Istanbul, TR
Jun 2004 – Jul 2004	PHILIPS HEALTHCARE Medical Systems Division – Worked as a field service engineering intern to diagnose and repair medical imaging devices (MRI's, CT's and Cardio-Vascular X-Ray's) in various hospitals and private radiology clinics.	Istanbul, TR

PUBLICATIONS

In Press	<p>J.-M. Mongeau, A. Demir, C. J. Dallmann, K. Jayaram, N. J. Cowan, and R. J. Full. “Passive dynamic properties of the cockroach antenna can facilitate effective computation during rapid running”, <i>Journal of Experimental Biology</i> 2014</p> <p>J.-M. Mongeau, A. Demir, J. Lee, and N. J. Cowan. “Locomotion and mechanics mediated tactile sensing: antenna reconfiguration simplifies control during high-speed navigation in cockroaches”, <i>Journal of Experimental Biology</i> 2013, 216 (24), 4530-4541.</p> <p>A. Demir, M. M. Ankarali, J. P. Dyhr, K. A. Morgansen, T. L. Daniel, and N. J. Cowan. “Inertial redirection of thrust forces for flight stabilization”, <i>15th International Conference on Climbing and Walking Robots and the Support Technologies for Mobile Machines</i> July 2012.</p> <p>A. Demir, E. W. Samson, J.-M. Mongeau, K. Jayaram, R. J. Full, N. J. Cowan, “A Tunable, Multisegmented Robotic Antenna for Identifying and Testing Biomechanical Design Principles,” <i>Society for Integrative and Comparative Biology</i> January 2011.</p> <p>J.-M. Mongeau, K. Jayaram, A. Demir, E. W. Samson, N. J. Cowan, R. J. Full, “Biomechanics of Tactile Sensor for Wall Following and Spatial Mapping,” <i>Society for Integrative and Comparative Biology</i> January 2011.</p> <p>A. Demir, E. W. Samson, and N. J. Cowan, “A Bio-Inspired, Tunable Antenna for Hypothesis Testing,” <i>IEEE International Conference of Robotics and Automation</i> May 2010.</p>
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AWARDS

2011 - 2012	CREEL FAMILY TEACHING ASSISTANT AWARD
2007 - 2008	CREEL FAMILY TEACHING ASSISTANT AWARD – Highest honor in department of Mechanical Engineering for teaching assistants. JHU EXCELLENCE IN TEACHING AWARD Finalist STUDENT EMPLOYEE OF THE YEAR AWARD Nominee
2006 - 2007	ASME Award (First Place) for ME Senior Design Project – Designed and built an automated paper folding platform for Pitney Bowes. As the chief design engineer of the 4-member group we received the top award by the local ASME Judges. ARTBOTS PEOPLE'S CHOICE AWARD – Designed and constructed a spirograph drawing robot as a final project in 530.421 which received the top honors. Article published in <i>Baltimore Sun</i> 12/09/2006 <i>Robots express their artistry.</i>
2005 - 2006	PROVOST'S UNDERGRADUATE RESEARCH AWARD – Proposed a fiber optic, flexible, segmented <i>Tactile Sensor Array</i> for robotic platforms.

SKILLS

Language	Turkish (Native); English (Fluent); German (Working)
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Prototyping	CAD; Feedback control design/implementation; Electro-Mechanical systems integration; PCB designing; Manufacturing (Laser cutting, machine shop certified for all basic and powered tools, FDM rapid prototyping, surface mount/thru-hole soldering)
Programming	<i>Advanced</i> – Python; C/C++; Communication Protocols (Serial, I ² C, Sockets); <i>Intermediate</i> – Web Programming (PHP, HTML5, Flex, Google App Engine); Database Management (SQL, SQLite, XML, Google App Engine)
Engineering Software	<i>Advanced</i> – Creo Parametric; Pro/ENGINEER with Mechanica; Matlab; <i>Intermediate</i> – SolidWorks; Altium Designer; AutoCAD; Keyshot; R; Lab View; C-Make;

OUTREACH

Sep 2013 – May 2014	SABES (STEM Achievement in Baltimore Elementary Schools) Mentor
Sep 2011 – Aug 2012	Minority Access to Research Careers (Morgan State University) Mentor
Aug 2008 – Aug 2010	Baltimore Ingenuity Project (Baltimore Polytechnic Institute) Mentor
Sep 2006 – May 2007	WISE Program (Women in Science and Engineering) Mentor
Sep 2005 – Dec 2005	JHU Model United Nations (National) 2005 Staff
Sep 2005 – May 2006	JHU ASME, SAE Mini-Baja 2005 Team member

RELEVANT COURSE WORK & REFERENCES: Available upon request.