


PERSONAL INFORMATION

Can Erdogan



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Date of birth 22 Jun 1989 | Nationality Turkish

EDUCATION AND TRAINING

15 Aug 2011–Present

Ph.D. Candidate in Robotics

Georgia Institute of Technology, Atlanta (United States)

- **Thesis title:** Planning in Constraint Space for Multi-body Manipulation Tasks
- **Research advisors:** Henrik Christensen, Frank Dellaert
- **Expected graduation time:** March 2016
- Leading hardware and software development on humanoid robot Golem Krang

15 Aug 2007–15 May 2011

Bachelors in Computer Science, minor in Robotics

Carnegie Mellon University, Pittsburgh (United States)

- **GPA:** CS: 3.48, robotics: 4.0
- **Specialization:** Multi-robot motion planning and learning (RoboCup SSL 2010-11)
- **Research advisor:** Manuela Veloso

PERSONAL SKILLS

Mother tongue(s) Turkish

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
French	A2	A2	A2	A2	A2
DELFA1					

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages

Organisational / managerial skills

- I lead a collaboration effort between undergraduate, masters and Ph.D. students in developing hardware and software on Golem Krang, a humanoid robot.
- I helped the organizing committee of the International Conference on Humanoids Robotics 2013 in reviewing papers, executing robot demos, and assisting with the conference program.
- I served as a teaching assistant for two years during my Ph.D. for a course on robot planning taught by Prof. Mike Stilman.

Job-related skills

- Software: Dynamic multibody simulators (i.e. Gazebo, DART, Box2D), robotic development with C++, rapid prototyping with Matlab.
- Hardware: CAD development with Solidworks, limited manufacturing (3D printer, water jet cutter, etc.) and electronics experience, applications on industrial manipulators (i.e. Schunk)

- Robotic platforms:
 - Golem Krang: a Segway-like balancing humanoid robot with two 7-dof Schunk manipulators at 1.9m (6'2") height and 140kg (300lbs) weight - primary research platform
 - Hubo 2 Plus: humanoid robot designed by KAIST - secondary research platform
 - Turtlebot/iRobot Create: 3D reconstruction and multi-robot control research
 - Nao: humanoid robot developed by Aldebaran Robotics - undergraduate locomotion research
 - CMDragons: RoboCup small sized league, undergraduate multi-robot learning research

ADDITIONAL INFORMATION

Journals

- C. Erdogan and M. Stilman. Autonomous Design of Functional Structures. *Advanced Robotics: Special Issue on Humanoid Robotics*, 2015.

Conferences

- A. Huaman, B. Milville, M.A. Gutierrez, C. Erdogan, M. Stilman, H. Christensen, H. Ben Amor. Exploiting Symmetries and Extrusions for Grasping Household Objects. *International Conference on Robotics and Automation (ICRA)*, 2015.
- M. Stilman, C. Erdogan, S. Reynolds-Haertle, M. Zafar, P. Hou and G. Tracy. Robots Using Environment Objects as Tools: The 'MacGyver' Paradigm for Mobile Manipulation. *International Conference on Robotics and Automation (ICRA)*, 2014.
- C. Erdogan and M. Stilman. Autonomous Realization of Simple Machines. *International Symposium on Experimental Robotics (ISER)*, 2014.
- C. Erdogan and M. Stilman. Incorporating Kinodynamic Constraints in Automated Design of Simple Machines. *International Conference on Intelligent Robots and Systems (IROS)*, 2014.
- C. Erdogan and M. Stilman. Planning in Constraint Space: Automated Design of Functional Structures. *International Conference on Robotics and Automation (ICRA)*, 2013.
- C. Erdogan, M. Paluri and F. Dellaert. Planar Segmentation of RGBD Images using Fast Linear Fitting and Markov Chain Monte Carlo. *Computer and Robot Vision (CRV)*, 2012.
- C. Erdogan and M. Veloso. Action Selection via Learning Behavior Patterns in Multi-Robot Systems. *International Joint Conference on Artificial Intelligence (IJCAI)*, 2011.

Technical reports

- C. Erdogan, A. Huaman and H. Ben Amor. Exploiting Object Symmetry for Efficient Grasping. Georgia Institute of Technology. GT-GOLEM-2015-001, 2015.
- S. Reynolds-Haertle, C. Erdogan and M. Stilman. 3D Modeling from Force-Torque Data with Passive Compliance. Georgia Institute of Technology. GT-GOLEM-2014-001, 2014.
- C. Erdogan, M. Zafar and M. Stilman. Krang Kinematics: A Denavit-Hartenberg Parameterization. Georgia Institute of Technology. GT-GOLEM-2014-001, 2014.
- M. Zafar, C. Erdogan and M. Stilman. Krang: Center of Mass Estimation. Georgia Institute of Technology. GT-GOLEM-2014-002, 2014.
- C. Erdogan, M. Zafar and M. Stilman. Gravity and Drift in Force/Torque Measurements. Georgia Institute of Technology. GT-GOLEM-2014-003, 2014.
- M. Zafar, C. Erdogan and M. Stilman. Towards Stable Balancing. Georgia Institute of Technology. GT-GOLEM-2014-004, 2014.