Sina Aghli

(202) 688 5868 ● sina.aghli@colorado.edu

EDUCATION:

PhD. Computer Science	**2015 - Present**
University of Colorado Boulder, Boulder, CO	
School of Engineering	
PhD. Mechanical and Aerospace Engineering (Transferred)	**2012 - 2014**
The George Washington University, Washington, Dc	
School of Engineering and Applied Science	
M.S. Mechatronic Engineering	**2012**
University of Tabriz, Tabriz, Iran	
School of Engineering and Emerging Technologies	
Thesis: Design, fabrication and control of a Parallel Cable Robot	
B.S. Computer Hardware Engineering	**2009**
Azad University, Khoy, Iran	
School of Engineering and Applied Science	
Thesis: Design of Data-Path, ALU, BPU and Control Unit for an 8-bit CPU in VHDL	

HONORS:

Ranked second among graduates of mechatronics engineering, Tabriz University	2012
Committee member of Mechatronic workgroup in Shahidfahmideh center of excellence	2011
Member of Iran's National Elites Foundation	2011
Golden medal in 11th Iran Skills national contest (field of Mechatronics)	2011
Granted with exceptional talented student scholarship to enter graduate school program of Tabriz University without taking national entrance exam	2010
Silver medal in Khwarizmi national science festival	2010
Referee committee member of Intelligent Automobiles national contest	2010
Ranked second among graduates of computer hardware engineering, Azad University	2009

HONORS (*Continued*):

Fourth place in IRANOPEN international Robocup contest	2009
Third place in Robot Rally national contest	2009
Second place in IRANOPEN international Robocup contest	2008
Exceptional Talented member of Young Researchers Club, Iran	2007

TEACHING BACKGROUND:

Instructor of Discrete Mathematics class at University of Colorado Boulder	2016
Teacher Assistant for Discrete Mathematics Class at University of Colorado Boulder	2015
Teacher Assistant for Computer Programming Class at University of Colorado Boulder	2015
Instructor of Robotic class in Schools of Exceptional Talented students Tabriz, Iran	2010

RESEARCH EXPERIENCE:

Graduate Research Assistant
University of Colorado Boulder

- Design of a Model-Predictive-Controller for self-driving vehicles
- Design of a four wheeled self-driving robot capable of doing agile maneuvers
- Design of a wheeled robot capable jumping over rough terrain

Graduate Research Assistant
George Washington University

- Design of electronic control units for a full size self-driving car
- Design of electronics and communication system for a Hybrid Mobile Robot

Graduate Research Assistant
Tabriz University

- Design of a cable driven robot manipulator
- Resolution multiplier system for Optical Encoders
- Design and implementation of an inchworm crawling robot

JOB EXPERIENCE:

Research advisor at Magnelab	2015 - Present
Level 3 Autonomous vehicle engineer at ZOOX	2015
R&D engineer at Imatak-Sanat company	2008

Major Freelance Projects

Design and fabrication of 4-wheeled pipe inspection robot for East Azerbaijan State Waste Water company	2012
Design of a vocal carpet pattern player system	2011
Design of a vision based pistachio nut sorting algorithm	2011
Design of an air compressor controller	2010
Design of an automatic sliding door controller	2010
Design and fabrication of 4-wheeled pipe inspection robot for East Azerbaijan State Waste Water company	2012
Design of a vocal carpet pattern player system	2011
Design of a vision based pistachio nut sorting algorithm	2011
Design of an air compressor controller	2010
Design of an automatic sliding door controller	2010
Design of a 700 watt DC motor driver and controller for use in treadmills	2010
Design of an industrial vibrator for Machine Industrial Manufactory CO	2010
Design of a high voltage wire defect tester	2009
Design of an Electronic Control Unit for salt spreader of snow removal trucks at Imatak-Sanat company	2009
Design of an alarm system for illegal height of automobiles at the entrance of Miyane tunnel of eastern Azerbaijan province	2006

PAPERS AND CONFERENCES:

Sina Aghli and Christoffer Heckman, "Terrain Aware Model Predictive Controller for Autonomous Ground Vehicles" BGSR workshop at Robotics: Science and Systems conference 2017

Noorani, Mohammad-Reza Sayyed, Ahmad Ghanbari, and Sina Aghli. "Design and fabrication of a worm robot prototype." *Robotics and Mechatronics (ICROM), 2015 3rd RSI International Conference on.* IEEE, 2015.

LANGUAGES:

English	Fluent
Farsi	Native
Turkish	Fluent
Azeri	Native