

# Georgios P. Kontoudis

Graduate Research Assistant  
Department of Mechanical Engineering  
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Updated: September 20, 2017

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**Research interests:** Robotics, Bio-Inspired Design, Mechanisms and Motion Planning.

## EDUCATION

**PhD, Virginia Tech, USA** *2016-Present*  
Department of Mechanical Engineering  
Advisor: Prof. Tomonari Furukawa  
Co-advisor: Prof. Kyriakos G. Vamvoudakis  
Current GPA: 4.0/4.0  
Coursework: Advanced Experimental Robotics, Optimization Techniques, Bayesian Robotics, Cyber-Physical Systems & Distributed Control, Motion Planning Analysis

**Diploma (MSc), National Technical University of Athens, Greece** *2012-2016*  
School of Mechanical Engineering  
Advisor: Prof. Kostas J. Kyriakopoulos  
Co-advisor: Prof. Minas Liarokapis  
Grade: 7.76/10 (*top 20%*)

**BSc, Piraeus University of Applied Sciences, Greece** *2005-2010*  
Department of Mechanical Engineering

## RESEARCH EXPERIENCE

**Graduate Research Assistant** *May 2017 - Present*  
Computational Multiphysics Systems Laboratory  
School of Mechanical Engineering, Virginia Tech, USA

**Member & Research Associate** *September 2014 - Present*  
The OpenBionics Initiative

**Research Assistant** *April 2014 - March 2016*  
Control Systems Laboratory  
School of Mechanical Engineering, National Technical University of Athens, Greece

## TEACHING EXPERIENCE

**Graduate Teaching Assistant** *August 2016 - May 2017*  
School of Mechanical Engineering, Virginia Tech, USA

- Lectured 80 students in a senior level, control systems lab. *Fall 2016*
- Guided 20 students in a series of 8 junior level, mechanical engineering labs. *Spring 2017*

## AWARDS & HONORS

NTUA Thomaideion Award *Greece 2016*  
Hackaday Prize, 2<sup>nd</sup> place (among 900) *USA 2015*  
Robotdalen Innovation Award, 1<sup>st</sup> place *Sweden 2015*  
IEEE/RAS Student Travel Award (IROS) *Germany 2015*

## PROFESSIONAL EXPERIENCE

### Senior Mechanical Engineer

March 2016 - June 2016

Heliix Inc., Athens, Greece

➤ Worked on product design & development of a waste heat recovery device.

### Site Supervisor

September 2013 - August 2015

Sychem S.A., Athens, Greece

➤ Provided guidance to industrial maintenance crew of 6 people for a desalination plant.

### Mechanical Engineer

October 2010 - September 2013

Sychem S.A., Athens, Greece

➤ Monitored and commissioned desalination plants.

### Aircraft Maintenance Engineer Trainee

May 2008 - January 2010

Olympic Aviation, Athens, Greece

➤ Performed engineering work of maintenance and modifications on aircrafts.

## PUBLICATIONS

### Peer-Reviewed Conference Publications

[2] Kyriakos D. Tsoukalas, **George P. Kontoudis**, and Kyriakos G. Vamvoudakis, “Active-Bayesian Learning for Cooperation Connectivity in Dynamic Cyber-Physical-Human Systems,” *IEEE Symposium on Adaptive Dynamic Programming and Reinforcement Learning (ADPRL)*, Hawaii, USA, 2017. **(invited paper)**

[1] **George P. Kontoudis**, Minas Liarokapis, Agisilaos G. Zisimatos, Christoforos I. Mavrogiannis and Kostas J. Kyriakopoulos, “Open-Source, Anthropomorphic, Underactuated Robot Hands with a Selectively Lockable Differential Mechanism: Towards Affordable Prostheses,” *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, Hamburg, Germany, 2015.

### Technical Reports

[2] **George P. Kontoudis**, Minas Liarokapis, Agisilaos G. Zisimatos, Christoforos I. Mavrogiannis and Kostas J. Kyriakopoulos, “How to Create Affordable, Anthropomorphic, Light-Weight Prosthetic Hands,” *Control Systems Lab, School of Mechanical Engineering, National Technical University of Athens*, Athens, Greece, October 2015.

[1] Agisilaos G. Zisimatos, Minas Liarokapis, Christoforos I. Mavrogiannis, **George P. Kontoudis** and Kostas J. Kyriakopoulos, “How to Create Affordable, Modular, Light-Weight, Underactuated, Compliant Robot Hand,” *Control Systems Lab, School of Mechanical Engineering, National Technical University of Athens*, Athens, Greece, January 2015.

### Theses

[1] **George P. Kontoudis** “Design and Development of an Underactuated, Anthropomorphic Robot Hand,” *Diploma Thesis, National Technical University of Athens (NTUA)*, Athens, Greece, March 2016. (In Greek)

## SKILLS

**Languages:** English, Greek(native)

**Operating Systems:** Linux, ROS, Windows

**Design and Simulation Software:** Solidworks, AutoCAD, ANSYS, Slic3r, ProCAST, PSpice, Cura

**Programming:** Python, C/C++, Matlab, HTML/CSS, L<sup>A</sup>T<sub>E</sub>X

**Other Skills:** Laser cutting, 3D printing

## SERVICE ACTIVITIES

**Reviewer:** International Journal of Advanced Robotic Systems

## MEMBERSHIPS & SOCIETIES

**Memberships**

IEEE - Student Member

*2015 - Present*

ASME - Student Member

*2016 - Present*

**Societies**

IEEE - Robotics and Automation (RAS)

*2015 - Present*

IEEE - Control Systems (CSS)

*2017 - Present*