

# George P. Kontoudis

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## EDUCATION

<b>PhD, Virginia Tech, USA</b> Kevin T. Crofton Department of Aerospace and Ocean Engineering Advisor: Prof. Daniel Stilwell Co-advisor: Prof. Kyriakos G. Vamvoudakis Current GPA: 4.0/4.0	<i>Present</i>
<b>MSc, Virginia Tech, USA</b> Department of Mechanical Engineering Advisor: Prof. Tomonari Furukawa Co-advisor: Prof. Kyriakos G. Vamvoudakis GPA: 4.0/4.0 ( <i>Course work completed</i> )	<i>Present</i>
<b>Diploma (MSc), National Technical University of Athens, Greece</b> School of Mechanical Engineering Advisor: Prof. Kostas J. Kyriakopoulos Co-advisor: Prof. Minas Liarokapis Grade: 7.76/10 ( <i>top 20%</i> )	<i>2016</i>
<b>BSc, Piraeus University of Applied Sciences, Greece</b> Department of Mechanical Engineering	<i>2010</i>

## RESEARCH EXPERIENCE

<b>Graduate Research Assistant</b> Autonomous Systems and Control Laboratory Virginia Tech, USA	<i>August 2018 - Present</i>
<b>Graduate Research Assistant</b> Computational Multiphysics Systems Laboratory Virginia Tech, USA	<i>May 2017 - August 2018</i>
<b>Member &amp; Research Associate</b> The OpenBionics Initiative	<i>September 2014 - Present</i>
<b>Research Assistant</b> Control Systems Laboratory National Technical University of Athens, Greece	<i>April 2014 - March 2016</i>

## TEACHING EXPERIENCE

<b>Graduate Teaching Assistant</b> Department of Mechanical Engineering, Virginia Tech, USA	<i>August 2016 - May 2017</i>
· Lectured 80 students in a senior level, control systems lab.	<i>Fall 2016</i>
· Guided 20 students in a series of 8 junior level, mechanical engineering labs.	<i>Spring 2017</i>

## AWARDS & HONORS

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

## PROFESSIONAL EXPERIENCE

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### Senior Mechanical Engineer

Heliix Inc., Athens, Greece

March 2016 - June 2016

- Worked on the product design & development of a waste heat recovery device

### Site Supervisor

Sychem S.A., Athens, Greece

September 2013 - August 2015

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

### Mechanical Engineer

Sychem S.A., Athens, Greece

October 2010 - September 2013

- Monitored and commissioned desalination plants

### Aircraft Maintenance Engineer Trainee

Olympic Aviation, Athens, Greece

May 2008 - January 2010

- Performed engineering work of maintenance and modifications on aircrafts

## PUBLICATIONS

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### Referred Conference Publications

- [C1] **George P. Kontoudis**, Minas Liarokapis, Kyriakos G. Vamvoudakis, and Tomonari Furukawa “A Modular Actuation Mechanism for Adaptive Robotic Fingers,” *IEEE International Conference on Cyborg and Bionic Systems (CBS)*, Shenzhen, China, 2018.
- [C2] 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)*, Honolulu, USA, 2017. **(invited paper)**
- [C3] **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.

### Other Publications

- [O1] **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, National Technical University of Athens*, Athens, Greece, October 2015.
- [O2] 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, National Technical University of Athens*, Athens, Greece, January 2015.

### Theses

- [T1] **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)

## TALKS & PRESENTATIONS

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- “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.

## SERVICE ACTIVITIES

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### Reviewer

- International Conference on Robotics and Automation (ICRA) 2018
- American Control Conference (ACC) 2018
- International Conference on Intelligent Robots and Systems (IROS) 2018
- International Conference on Biomedical Robotics and Biomechatronics (BioRob) 2018
- Mediterranean Conference on Control and Automation (MED) 2018
- International Journal of Advanced Robotic Systems (IJARS) 2015 - 2016

## SKILLS

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### 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,  $\LaTeX$

### Other Skills

Laser cutting, 3D printing

## RELEVANT COURSEWORK

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### Robotics

Advanced Experimental Robotics, Bayesian Robotics, Motion Planning Analysis

### Control Theory

Optimization Techniques, Cyber-Physical Systems & Distributed Control, Nonlinear Systems Theory, Linear Control Theory, Adaptive Control Systems

## MEMBERSHIPS & SOCIETIES

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### Memberships

- IEEE - Student Member 2015 - Present
- ASME - Student Member 2016 - Present

### Societies

- IEEE - Robotics and Automation Society (RAS) 2015 - Present
- IEEE - Control Systems Society (CSS) 2017 - Present