

Georgios P. Kontoudis

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Updated: September 5, 2015

Research interests: Robot Hands Design, Prosthetics, Robot Kinematics, Mechanisms, Grasping and Manipulation.

EDUCATION

MSc, Mechanical Engineering 2012-2015

Diploma Thesis Title: “Anthropomorphic, Underactuated, Compliant Robot Hands with a Selectively Lockable Differential Mechanism: Towards Affordable Prostheses”

5-year Diploma Degree equivalent to MSc

Ranked at 5th Semester through qualifying examinations (*2nd out of 90 candidates*)

Degree Grade: 8.00/10

Mechanical Design Concentration

Control Systems Laboratory

School of Mechanical Engineering

National Technical University of Athens (NTUA), Greece

Advisor: Prof. Kostas J. Kyriakopoulos

Co-Advisor: Dr. Minas V. Liarokapis (Yale University - USA)

BSc, Mechanical Engineering 2005-2010

Thesis Title: “Analysis, Review and Optimization of Compression and Air-Conditioning System at Short Take Off and Landing (STOL) Aircrafts”

Energy Engineering Concentration

Department of Mechanical Engineering

School of Engineering

Piraeus University of Applied Sciences, Athens, Greece

RESEARCH EXPERIENCE

Graduate Research Assistant April 2014 - present

Research on Anthropomorphic Robot Hands under the Integrated Project no.248587, “THE Hand Embodied”, (supported by the European Commission) within the FP7-ICT-2009-4-2-1 program “Cognitive Systems and Robotic”.

NeuroRobotics Group

Control Systems Laboratory

School of Mechanical Engineering

National Technical University of Athens (NTUA), Greece

Advisor: Prof. Kostas J. Kyriakopoulos

Co-Advisor: Dr. Minas V. Liarokapis (Yale University - USA)

PROFESSIONAL EXPERIENCE

Site Supervisor

September 2013 - August 2015

Sychem S.A., Athens, Greece

Supervisor of Reverse Osmosis Desalination Plant with capacity 8000 m³/day, at the refineries of Motor Oil Hellas.

Responsibilities include:

- Managing projects using engineering principles and techniques
- Prepare material, cost and timing estimates, reports and design specifications for electromechanical systems
- Supervise, inspect the installation, modification and commissioning of electromechanical systems
- Develop maintenance standards, schedules & programs
- Provide guidance to industrial maintenance crew

Mechanical Engineer

October 2010 - September 2013

Sychem S.A., Athens, Greece

Responsibilities include:

- Investigate mechanical & electrical failures or unexpected maintenance problems
- Monitoring and commissioning of desalination plants
- Analyze vibrations of machines
- Handle deadlines, variable workloads, and being on call 24-hours

Aircraft Maintenance Engineer Trainee

May 2008 - January 2010

Olympic Airways, Athens, Greece

Apprentice as a Mechanical and Aircraft Engineer unlicensed part-66. Line and Base maintenance including A,B,C and D maintenance checks. Olympic Aviation Aircraft types: Dash 8-100 and ATR 42/72.

Responsibilities include:

- Perform engineering work of maintenance and modification of aircraft for flight
- Carrying out assigned work tasks under the supervision of the Senior LAME and independent inspections, according to the Maintenance System Manual and/or the Customer System of Maintenance requirements

PUBLICATIONS

Refereed Conference Papers

[1] **George P. Kontoudis**, Minas V. 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.

[BibTeX][PDF][Video]

Technical Reports

[1] Agisilaos G. Zisimatos, Minas V. 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, January 2015*.

[BibTeX][PDF]

AWARDS & HONORS

Robotdalen Innovation Award, 1st place

Sweden 2015

Robotdalen is a Swedish robotics initiative enabling commercial success of new ideas and research within robotics.

IEEE RAS Student Travel Award (IROS)

Hamburg 2015

To attend and present a paper in the 2015 IEEE/RSJ International Conference on Intelligent Robots and Systems.

SERVICE ACTIVITIES

Member

OpenBionics is an open-source initiative for the development of affordable, light-weight, modular, underactuated robot hands and prosthetic devices, that can be easily reproduced using off-the-shelf materials. More information can be found at the following url:

<http://www.openbionics.org/>

SKILLS

Languages: English, Greek(native)

Operating Systems: Windows, Linux

Design and Simulation Software: SolidWorks, SolidCAM, AutoCAD, ANSYS Mechanical, ANSYS Workbench, ProCAST, PSpice, Slic3r

Programming Languages: C, Matlab, Arduino, V+

Software Applications: L^AT_EX, Adobe Photoshop/Premiere Pro

Other Software: Ms Office

Other Skills: Laser cutting, 3D printing

MEMBERSHIPS & SOCIETIES

Memberships

IEEE - Student Member

2015 - present

Societies

IEEE - Robotics and Automation

2015 - present

Scientific Society of Technological Education Engineers

2010 - present

MEDIA COVERAGE

Robotdalen: "OpenBionics prosthesis winner of Robotdalen Innovation Award 2015" *September 4, 2015*

Dimokratia News: "Affordable Prosthetic Hands" *July 12, 2015*

GoodNews.gr: "The most Affordable Prosthetic Hands will be made in Greece" *May 8, 2015*

RoboHub: "OpenBionics prosthetic hands" *April 9, 2015*

Hackaday: "Hackaday - Prosthetics Projects" *April 3, 2015*

3D Print: "OpenBionics Open Source Robotic Prosthetic Hand" *March 18, 2015*

3ders: "Greek OpenBionics unveils affordable, light-weight 3D printed bionic hands" *March 18, 2015*

Other Interests & Hobbies: Kick Boxing, Basketball, Scouting, Reading, Travelling & Music.