Dr. Zisos Mitros

Dufaux Strasse 31 - Opfikon 8152, Switzerland
Email: zmitros@gmail.com— Tel: +41 767 242597
Date of Birth: 10.10.1992 — Residence Permit: B
Personal Webpage: www.zmitros.com—

OVERVIEW

- Test Engineer specializing in robotics and mechatronics for the semiconductor industry
- PhD in Surgical Robotics and Minimally Invasive Surgeries (MIS)
- Proven management and team leadership skills in robotics projects
- Expertise in Mechanical Design, Mathematical Modeling, and Systems Integration for medical mechatronic systems
- Extensive experience in theoretical understanding and lab-based manufacturing of mechatronic devices
- Skilled in collaborative communication through written, verbal, and visual formats formats
- Team-oriented personality with leading skills, able to work independently and as member of a team

WORK EXPERIENCE

Test Engineer March. 2022 - now
Beyond Gravity (formerly RUAG Space) *Zurich, Switzerland*

- Led mechatronic device test campaigns
- Conducted system modeling for a 9 Degree of Freedom mechanical system in the semiconductor industry
- Planned and executed development, qualification, and acceptance testing
- Debugged test equipment and software
- Devised assembly and test logic for complex mechanisms Prepared documents, test reports, and presented test results to internal and external stakeholders

Mechanical Engineer - PhD Candidate Sept 2017 - Feb. 2022
University College London - King's College London *London, UK*

- Designed and manufactured a multi-arm snake robot for Minimally Invasive Surgeries using SolidWorks and various fabrication methods (3D printing, CNC machines, electronics)
- Conducted mathematical modeling in Matlab and Python for a flexible continuum robot with coupled mechanics
- End-to-end design in SolidWorks and Matlab modeling for a hybrid actuated continuum robot
- Applied optimization methods in Matlab for the control of continuum robots
- Conducted experimental analysis on developed surgical robots
- Contributed SolidWorks design elements to a surgical robot for intraocular interventions
- Supervised and led multiple undergraduate students
- Documented protocols for robot development and machine usage (work instructions)

Postgraduate Teaching Assistant (PGTA) - Mentoring Oct 2018 - Feb. 2022
University College London - King's College London *London, UK*

- Engineering Challenges I & II 2018-2019: Facilitating during the course, Marking exam papers
- Design of Manufacture 2018: Teaching design elements, electronics and helping students into designing their prototypes. Marking design solutions
- How to Change the World 2019: Facilitating during the course providing mechanical engineering expertise, Examining project's solution
- Medical Robotics: Theory & Applications 2021: Leading the tutorial part of the module, preparation of coursework

Research Assistant (RA) Sept 2019 - Dec 2019
University of Edinburgh *Edinburgh, UK*

- Designed in SolidWorks and modelled in Matlab a novel continuum robot for thoracic interventions
- Controlled the robot using CAN BUS protocol

Research Assistant Feb 2017 - Sept 2017
National Technical University of Athens, Control Systems Lab *Athens, Greece*

- Project's Title: *"Control and Management of Robotics for Active Debris Removal"*
- Contributed to the design of several critical design elements and the execution of the required experiments
- Finite element analysis (FEA) of several components under various stress conditions
- Responsible for the documentation of the results and presentation to the European Space Agency (ESA)
- Designed in Matlab a novel impedance controller for landing mechanisms

Mechanical Engineer Sept 2016 - Dec 2016
Administration of Military Factories - Greek Armed Forces *Athens, Greece*

- Reduction of daily administrative reports regarding the daily production of the military factories

EDUCATION

- **University College London (UCL)** Sept 2017 - Feb 2022
  Ph.D. in Robotics
  PhD Title: "Design and Modelling of Multi-Arm Continuum Robots"
- **National Technical University of Athens (NTUA)** Oct 2010 - Jul 2016
  M.Sc. Mechanical Engineering
  Mechanical Design specialization
  Thesis: "Analysis, Dynamics and Control of Robotic System for Docking to Orbital Space Systems"

SKILLS

- Languages: English (Fluent), German (Beginner), French (Beginner), Greek (Native)
- Programming: Matlab/Simulink, Git, Python (beginner)
- Design Software: Solidworks – SolidCam, ANSYS Mechanical
- Other Software: Wolfram Mathematica, LaTeX, Various 3D printing softwares, CNC machines

PUBLICATIONS AND AWARDS

- **First Author:** 6 Peer-Reviewed Conference Papers, 3 Journal Papers, 1 Abstract Based Paper, 3 Peer-Reviewed Workshop Papers
- **Co-Author:** 1 Peer-Reviewed Conference Paper, 3 Journal Papers
- **Awards:** IMechE-Runner up, MESROB2021-Bronze Award, 3 times awarded with the Thomaidion Award for scientific publication

ONLINE COURSES

- **In progress:** Google Project Management: Professional Certificate.