

CHARALAMPOS VOURTSIS

Ph.D. Student in Aerial Robotics

Lausanne, Switzerland

<http://www.harryvourtsis.com> | [+41 78 261 3585](tel:+41782613585) | harry.vourtsis@epfl.ch

Passionate Ph.D. student with **4 years of experience in Aerial Robotics** and an interdisciplinary background, having worked both as a **researcher** to implement core technologies for aerospace systems in a combination of aircraft design, rapid prototyping, unconventional manufacturing, virtual reality, and robotics as well as a **technical leader** to leverage an innate ability to communicate complex topics, make practical rapid decisions and action plans, analyze data and collaborate with top-tier universities and companies such as Airbus, Fiat, KIT and OPTIS

RESEARCH EXPERIENCE

ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL) – LABORATORY OF INTELLIGENT SYSTEMS, SWITZERLAND

2018 – Current

Doctoral Researcher

- Currently working on developing a semi-autonomous autopilot for a morphing VTOL platform
- Designed, developed and flight-tested a bioinspired VTOL platform for negotiating diverse operational requirements by utilizing wing shapeshifting strategies
- Designed and developed a biplane platform featuring variable-sweep high cambered wings for investigating the aerodynamics of hybrid morphing wing configurations in wind tunnel experiments

UNIVERSITY OF PATRAS – LABORATORY FOR MANUFACTURING SYSTEMS AND AUTOMATION, GREECE

2014 – 2016

Research Associate / Technical Project Leader

- Responsible for the technical developments of i-VISION; a 3-year, aeronautics, European funded, research project consisting of 7 companies and institutions (<http://www.ivation-project.eu/>)
- Managed a team of 4 software developers and collaborated with over 20 professionals from diverse fields and technical backgrounds
- Evaluated each partner's working results and reported to the Senior Management & European Commission

UNIVERSITY OF PATRAS – LABORATORY FOR MANUFACTURING SYSTEMS AND AUTOMATION, GREECE

2013 – 2014

Research Assistant

- Designed a platform architecture for human-aircraft cockpit operations analysis in virtual environments
- Designed and manufactured prototype devices for laboratory and research applications using 3D scanning and 3D printing technologies
- Developed an aircraft cockpit database model that served as an early functional prototype and a basis to build a semantic cockpit model
- Researched and developed a method for measuring the aspect of coupling complexity in different aircraft-cockpit variants

UNIVERSITY OF PATRAS – LABORATORY OF AERODYNAMIC DESIGN OF AIR VEHICLES, GREECE

2012 – 2013

Research Assistant

- Designed parametric models for the aerodynamic study and computational analysis of turbomachinery blades
- Analyzed the geometric structure and identified critical design parameters for centrifugal impellers and auxiliary turbine blades

EDUCATION

ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL), SWITZERLAND	2018 – Current
Doctorate (Ph.D.) in Aerial Robotics under a Marie-Curie Fellowship Topic: Collision resilient drones for long-range operations Thesis Advisor: Prof. Dario Floreano	
UNIVERSITY OF PATRAS, GREECE	2009 – 2016
Diploma (5-year / BSc & MSc) in Mechanical and Aeronautics Engineering Dissertation Title: A VR Method for the Measurement of Complexity in Product Design Thesis Advisor: Prof. George Chryssolouris	
SENIOR HIGH SCHOOL – LYKEION KATO KASTRITSIU, GREECE	2006 – 2009
Apolytirion Lykeiou, GPA: 19.15/20 – Top 5%	

SKILLS & INTERESTS

<u>Programming:</u> C/C++, Python, JavaScript, CSS, HTML	<u>Software – Environments:</u> Linux, Windows, MATLAB, Octave, 3DVIA Virtools
<u>Tools – Frameworks:</u> Microsoft Office, CATIA, SOLIDWORKS, AutoCAD, Inventor, OpenCV, Robot Operating System (ROS)	<u>Manufacturing:</u> Rapid Prototyping, 3D Printing, CNC Machining, Laser Cutting, Composite Layups
<u>Online Courses:</u> <i>Machine Learning by Stanford University on Coursera</i> Certificate: coursera.org/verify/XEZQXL499TZC <i>The Complete Web Development Course 2.0 on Udemy</i> Certificate: ude.my/UC-H75D1WDS	<u>Languages:</u> Greek (Native), English (Professional) <u>Interests:</u> Painting, Mountain Biking, Chess, RC Piloting, <u>Projects:</u> https://www.harryvourtsis.com

SCHOLARSHIPS – AWARDS – ACHIEVEMENTS – VOLUNTEERING

EPFLINNOVATORS FELLOWSHIP, SWITZERLAND	2018 – 2022
♦ <i>Selected as one out of 7 from 538 applicants for an industry-oriented doctoral programme co-funded by Marie Skłodowska-Curie for 48months</i>	
OTHONOS & ATHINAS STATHATOU FOUNDATION SCHOLARSHIP, GREECE	2009 – 2015
♦ <i>Ranked 3rd out of 144 admitted students in the Department of Mechanical Engineering & Aeronautics at the University of Patras</i>	
GREEK STATE SCHOLARSHIPS FOUNDATION AWARD	2009
♦ <i>For exemplary performance in the University of Patras</i>	
1ST AWARD IN THE TECHNOLOGY & SCIENCE COMPETITION OF THE INSTITUTE OF CHEMICAL ENGINEERING SCIENCES, GREECE	2006
♦ <i>Participated in, with the design and construction of a homemade 2-stage rocket</i>	
VOLUNTEER IN THE OLYMPIC GAMES 2004 IN ATHENS, GREECE	2004
♦ <i>Participated with Polyfoniki Choir of Patras to perform the Olympic Hymn in the Opening Ceremony</i>	
RANKED 4TH IN YOUTH CHESS TOURNAMENT OF ACHAIA STATE, GREECE	2003
♦ <i>Qualified and participated in the Nationals</i>	

PUBLICATIONS

Stanton N., Plant K., Rentzos L., Vourtsis C. , Antoniou S., Smparounis K., " The development and testing of a semi-automated Hierarchical Task Analysis process ", Proceedings of the "Ergonomics and Human Factors 2016 – EHF 2016, April 19 – 21, Northamptonshire, UK, http://programme.exordo.com/ehf2016/delegates/presentation/22/ , (2016) – Conference Proceeding	2016
Rentzos L., Vourtsis C. , Mavrikios D., Chryssolouris G., " Using VR for Complex Product Design ", In: Virtual, Augmented and Mixed Reality. Applications of Virtual and Augmented Reality, Lecture Notes in Computer Science, R. Shumaker and S. Lackey (Eds.), Volume 8526, pp. 455–464, http://dx.doi.org/10.1007/978-3-319-07464-1 , (2014) – Journal	2014