

ANGELOS ZACHARIA

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EDUCATION

Norwegian University of Science and Technology

Doctorate of Philosophy in Engineering Cybernetics

· Supervisor: Prof. Kostas Alexis

Trondheim, Norway

Jan. 2024 - Present

National Technical University of Athens

Master of Science in Automatic Control Systems and Robotics

9.7/10 - Distinction

- Key Modules: Control Systems for Robotics, Intelligent Systems for Robotics and Sensors
- Thesis: “*Event-Triggered Distributed Control for Optimal Consensus of Unknown Nonlinear Agents in Normal Form*”
- Supervisor: Dr. Haris E. Psillakis

Athens, Greece

Oct. 2020 - Jun. 2022

University of Cyprus

Bachelor of Science in Electrical Engineering

8.27/10 - Very Good (Ranked 3rd in the class)

- Thesis: “*Sensor Fault Accommodation for UAV Altitude Control: Virtual Sensor Approach*”
- Supervisor: Prof. Marios M. Polycarpou

Nicosia, Cyprus

Sept. 2015 - Jul. 2019

WORK EXPERIENCE

Autonomous Robots Lab, NTNU

PhD Candidate

- Conducting research as part of an ongoing PhD program in Engineering Cybernetics, in the field of multi-robot search and rescue autonomy.

Trondheim, Norway

Jan. 2024 - Present

KIOS Research & Innovation CoE, University of Cyprus

Research Engineer I

- Researched and developed cooperative control algorithms of multi-drone systems for 3D inspection. (Funded project: “GLIMPSE: Intelligent Multi-drone Emergency Response System”)
- Conducting hardware-in-the-loop simulations using multi-drone systems.
- Member of Emergency Response Technologies team at KIOS CoE.

Nicosia, Cyprus

Sept. 2022 - Dec. 2023

Research Engineer I

- Designed and developed ICARUS, a power distribution network inspection platform utilizing UAVs. This platform incorporates a vision-based artificial intelligence toolkit specifically created to detect, track, and identify infrastructure components. (Funded project by the Electricity Authority of Cyprus)
- Conducted real-world field tests and demos of the integrated platform.
- Member of Emergency Response Technologies team at KIOS CoE.

Jan. 2020 - Oct. 2020

YTM Stavrides Ltd

Assistant Engineer

- Designed electrical circuits for electrical installations in AutoCAD.

Nicosia, Cyprus

Jun. 2016/17 - Aug. 2016/17

- Worked on tender documents and was responsible for measuring the requirements of circuits, control panels, and structured cabling.

Cyprus National Guard

Second Lieutenant of Artillery Division

Larnaca, Cyprus

Sept. 2013 - Sept. 2015

- Ranked among the top 150 recruits out of 5,000 in both intellectual and fitness tests and underwent a 4-month training at the Reserve Officers School of Artillery in Nea Peramos, Greece.

PUBLICATIONS

A. Zacharia, S. Papaioannou, P. Kolios, and C. Panayiotou, Distributed Control for 3D Inspection using Multi-UAV Systems, 31st *Mediterranean Conference on Control and Automation*, Jun. 2023.

A. Savva, **A. Zacharia**, R. Makrigiorgis, A. Anastasiou, C. Kyrkou, P. Kolios, C. Panayiotou, and T. Theocharides, ICARUS: Automatic Autonomous Power Infrastructure Inspection with UAVs, *International Conference on Unmanned Aircraft Systems*, Jun. 2021.

N. Souli, R. Makrigiorgis, A. Anastasiou, P. Petrides, **A. Zacharia**, A. Lazanas, P. Valianti, P. Kolios, and G. Ellinas, HorizonBlock: Implementation of an Autonomous Counter-Drone System, *International Conference on Unmanned Aircraft Systems*, Jun. 2020.

ACHIEVEMENTS

Cooperative Aerial Robots Inspection Challenge, 62nd IEEE Conference on Decision and Control

First Place, Singapore 2023

Designed a cooperative inspection algorithm utilizing multi-UAV systems for infrastructure inspection.

2nd CASS Student Design Competition, IEEE Circuits and Systems Society

Finalist at the world finals held in Florence, Italy in May 2018.

Designed a versatile and low-cost, two layer PCB for soil quality monitoring.
(Project: “A Versatile Electronic Interface for Soil Quality Monitoring”)

University of Cyprus Student Innovators Competition (SINN 2018)

The team project was distinguished by the Climate Launchpad 2018 Competition in Athens, Greece.

Designed a smart kitchen device able to provide information on the availability of products within the boxes. (Project: “Kouzinbox”)

State Scholarship Foundation of Cyprus

Scholarships were awarded due to the yearly grade scores during the undergraduate and graduate studies.

TECHNICAL SKILLS

Programming Languages: C, C++

Simulation and Modeling: MATLAB, Simulink

Operating Systems and Tools: Linux, ROS, Android Studio, AutoCAD, Fusion 360

Technical Documentation: LaTeX, Microsoft Office

Languages: Greek (Native), Romanian (Fluent), English (Fluent)