

FILOTHEOU, Alexandros

Thessaloniki GR · alexandros.filotheou@gmail.com · (+30) 693 8787 677 · [linkedin.com/in/alexandros-filotheou](https://www.linkedin.com/in/alexandros-filotheou)
github.com/li9i · Portfolio

Robotics and Electrical Engineer specialising in the full product lifecycle, from concept and simulation to continuous system integration and field deployment. With 9+ years of experience in [integration](#), state estimation, sensor fusion, SLAM, [localisation](#), [autonomous navigation](#), [control](#), perception, [computer vision](#), and troubleshooting on real hardware. Delivered 50% boost in localisation accuracy for fleet of RFID-based inventory robots, achieving centimeter precision. Proven ability to work independently and materialise research into real-world development and deployment, bridging the two worlds to deliver cutting-edge systems with repeatable behaviours.

Skills

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|--------------------|---|
| English | Native / Fluent (IELTS 8.5 - C2 Proficiency) |
| Languages | C/C++, Python, shell, MATLAB/Octave |
| Robotics/OS | Linux, ROS/ROS 2 |
| Tools/Frameworks | git, Docker, Eigen, Behavior Trees, Gazebo, CI/CD, Qt/Tkinter, OpenCV |
| Control Techniques | MPC, PID, LQR |

Experience

Robotics Software Engineer · ITI-CERTH, Thessaloniki GR Sep 2023 – Present

- Owner of software integration, DevOps, and git repository maintainer of R&D project [RoBétArmé](#)
- Engineered development and deployment principles for 9 partners and >50 Dockerised ROS packages
- Orchestrated fleet of concrete- and metal-additive manufacturing robots with Behaviour Trees
- Identified bottlenecks and reduced deployment time >10x across fleet by utilising advanced tmux features
- Ensured code quality via googletest and cplint, continuous integration/deployment via CI/CD pipelines
- Achieved robust ROS-ROS 2 interoperability and communication across multiple machines using Zenoh

Robotics & Control Engineer · ECE Dept., Aristotle University of Thessaloniki GR Sep 2018 – Mar 2023

- Technical Leader of robotics division in large-scale R&D projects [RELIEF](#) and [CultureId](#)
- Developed and deployed autonomous ground and aerial platforms in [libraries](#), [museums](#), and [outdoors](#)
- Boosted RFID-tag localisation accuracy by >2x by robustifying LiDAR-based filtering via Fourier analysis
- Engaging 2,000+ visitors annually since 2023 at the [AMTh](#) museum by deploying [human-robot applications](#)
- Delivered production-grade 2D/3D SLAM and collision-avoiding navigation pipelines with intuitive user GUIs using Qt, teb planner, rtabmap, and karto
- Developed and integrated codebases for 18+ publications in top-tier IEEE journals/conferences, enabling multi-team experiments, translating novel robotics and RFID research to real-world opportunities

Teaching Assistant · KTH Royal Institute of Technology, Stockholm SE Sep 2016 – Nov 2016

- *DD2380 - Artificial Intelligence* under [Prof. Patric Jensfelt](#)

Volunteering

Computer Vision Engineer · [PANDORA Robotics](#), Thessaloniki GR Oct 2013 – Jul 2014

- Increased survivor rescue probability and gained 2nd place in the 2015 International RoboCup Rescue competition by developing a [C++ wall-hole detection system](#) using a Microsoft Kinect RGB-D camera sensor

Links

| | |
|-------------------|--|
| Software packages | Global Localisation · LiDAR Odometry · ros2-utils · lama-odom · pandora-hd |
| Demos/Videos | Global Localisation · LiDAR Odometry · Robust Path-tracking · RELIEF · CultureId |
| Publications | [Global Localisation] · [LiDAR Odometry] · [Multi-agent navigation] · [Navigation survey] |

Education

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|--|---------------------|
| Doctorate · Electrical & Computer Engineering · Aristotle University of Thessaloniki | Sep 2018 – Jun 2023 |
| Master of Science · Systems, Control, and Robotics · KTH Royal Inst. of Technology | Sep 2015 – Jun 2017 |
| Diploma · Electrical & Computer Engineering · Aristotle University of Thessaloniki | Sep 2005 – Jul 2013 |

References

- [Antonis Dimitriou](#) · Coordinator of R&D projects · (+30) 697 88 96 350 · antodimi@auth.gr
- A complete list of professional references comprising supervisors and colleagues may be found at

github.com/li9i/cv/tree/master/references