

FILOTHEOU, Alexandros

alexandros.filothou@gmail.com · (+30) 693 8787 677 · [linkedin.com/in/alexandros-filothou](https://www.linkedin.com/in/alexandros-filothou)
github.com/li9i · [google.scholar](https://scholar.google.com/citations?user=Li9i) · Portfolio · References

Robotics Software Engineer specialising in the full product lifecycle of ROS/ROS2 systems: from conception, design, coding, and simulation to continuous system integration, field testing, troubleshooting on real hardware, documentation, and delivery. Proven ability to work independently and materialise concepts and research into real-world results, bridging the two worlds to deliver cutting-edge systems with repeatable behaviours.

integration ROS 2 state estimation localisation autonomous navigation (1) (2) control computer vision

Skills

English Languages	Native / Fluent (IELTS 8.5 - C2 Proficiency) 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

Achievements so far

- Engaging 2,000+ visitors annually since 2023 at the [AMTh museum](#) by deploying [human-robot applications](#)
- Engineered 50% boost in localisation accuracy for fleet of RFID-inventorying robots, achieving cm accuracy
- Identified bottlenecks and reduced deployment time >10x across fleet of additive manufacturing robots
- Reliable and robust ROS-ROS 2 interoperability and communication across multiple machines using Zenoh
- One of only eighteen authors of single-authored papers presented at IEEE IROS'24 (1,587 total)

Representative work

Software packages	Localisation · Odometry · Estimation · ros2-utils · lama-odom
Demos/Videos	Localisation · Odometry · Estimation · Robust Path-tracking · RELIEF · CultureId
Publications	[Localisation] · [Odometry] · [Estimation/Control] · Navigation: [Multi-agent] [Survey]

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 ≈10 S/W teams and >50 Dockerised ROS packages	
• Orchestrated fleet of concrete- and metal-additive manufacturing robots with Behaviour Trees	
• Ensured code quality via googletest and cpplint, continuous integration/deployment via CI/CD pipelines	
Robotics & Control Engineer · ECE Dept., Aristotle University of Thessaloniki GR	Sep 2018 – Mar 2023
• Owner of everything robotics in large-scale R&D projects RELIEF and CultureId	
• Developed and deployed autonomous ground and aerial platforms in libraries , museums , and outdoors	
• Delivered 2D/3D SLAM and collision-avoiding navigation pipelines with intuitive user GUIs using Qt, teb planner, rtabmap, karto, and amcl	
• Developed and integrated modular 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
• <i>DD2380 - Artificial Intelligence</i> under Prof. Patric Jensfelt	

Volunteering

Computer Vision Engineer · PANDORA Robotics, Thessaloniki GR	Oct 2013 – Jul 2014
• Increased survivor rescue probability and gained 2 nd place in the 2015 International RoboCup Rescue competition by developing a C++ wall-hole detection system using a Microsoft Kinect RGB-D camera	

Education

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