

# George Amponis

Electronics & Computer Engineer

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## Education

Apr 2021 – Ongoing	<b>International Hellenic University</b> <i>Ph.D. Candidate: Drone swarms - Routing Techniques</i> Thesis: Cross-layer Techniques for UAV Ad Hoc IoT Networks with Emphasis on Efficient Routing
Oct 2016 – Dec 2020	<b>International Hellenic University</b> <i>B.Sc.: Electronics Engineering - GPA: 7.97/10</i> Thesis: Gesture-based quadcopter control

## Professional Experience

Dec 2020 – Present	<b>K3Y Ltd.</b> - <i>Software Engineer &amp; Research Associate</i> <ul style="list-style-type: none"><li>European research projects - technical developments &amp; software implementations</li><li>Development of networking &amp; cybersecurity simulation/modelling frameworks</li><li>DevOps engineering, dockerization and sand-boxing of software architectures.</li><li>Technical writing for proposals, deliverables, product documentation and partner support</li></ul>
Apr 2020 – Dec 2020	<b>ELPRA S.A.</b> - <i>Hardware &amp; Software Engineer</i> <ul style="list-style-type: none"><li>Firmware development: medical, industrial &amp; power electronics applications &amp; automations.</li><li>Application-specific hardware design: reliance on ESP32, STM32 and PIC</li></ul>

## Research Projects

**H2020 - SPIDER** Platform for testing new security technologies, training defenders, & supporting security decisions.  
**H2020 - RAINBOW** Fog computing platform allowing for scalability, heterogeneity & security in IoT services & applications.  
**H2020 - SANCUS** A software suite for security validation, risk assessment, AI/ML processing, security emulation/testing.  
**H2020 - 5G-INDUCE** Open 5G orchestration platform for the deployment of advanced 5G NetApps, based on MATILDA.  
**H2020 - DRYADS** A holistic fire management ecosystem for the prevention, detection and restoration of disasters.

## Technical Skills

Level		Average	Advanced	Proficient	
Programming Languages		Java, Go	Python	C/C++	
Frameworks & Technologies	Development & Computing		AWS, OpenStack	Helm, Docker Swarm	Docker, Docker-Compose, Kubernetes, Linux Scripting
	Modelling, Simulations & Signal Processing		INET, VEINS, SUMO	OMNET++, Simulink	MATLAB, OCTAVE, NS3
	Documentation & Version Control			TortoiseSVN	Git, LaTeX
	CAD	Electrical/Electronic Design			KiCAD, Pulsonix, Eagle
		Mechanical Design	Solidworks	Fusion360	

## Soft Skills

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### Languages

1. **German:** C1 - Goethe Zertifikat
2. **English:** C2 - University of Michigan Certificate
3. **Greek:** native language

### Business

1. **Technical Leadership:** leading development efforts in numerous tasks of EU-funded H2020 research projects.
2. **Project Management:** overseeing and guiding technical projects since my undergraduate studies.
3. **Multi-tasking:** capable of compartmentalizing tasks effectively, and achieving optimal resource allocation.
4. **Persistence and Passion:** responsibility-driven, working with fervor to achieve the desired result and document the pathway.

## Publications

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| 2022 | <ul style="list-style-type: none"><li>[1] G. Amponis, T. Lagkas, M. Zevgara, G. Katsikas, T. Xirofotos, I. Moscholios, and P. Sarigiannidis, "Drones in B5G/6G Networks as Flying Base Stations," <i>Drones</i>, 2022.</li><li>[2] V. Li, G. Amponis, J.-C. Nebel, V. Argyriou, T. Lagkas, S. Ouzounidis, and P. Sarigiannidis, "Super Resolution for Augmented Reality Applications," <i>IEEE INFOCOM WKSHPS: A4E 2022: AI/ML for Edge/Fog Networks - A4E 2022: AI/ML for Edge/Fog Networks</i>, 2022.</li></ul>  |
| 2021 | <ul style="list-style-type: none"><li>[3] G. Amponis, T. Lagkas, P. Sarigiannidis, V. Vitsas, and P. Fouliras, "Object recognition for augmented reality applications," <i>Azerbaijan Journal of High Performance Computing</i>, 2021.</li><li>[4] G. Amponis, T. Lagkas, P. Sarigiannidis, V. Vitsas, P. Fouliras, and S. Wan, "A survey on FANET routing from a cross-layer design perspective," <i>Journal of Systems Architecture</i>, 2021.</li><li>[5] C. Zarakovitis, D. Klonidis, Z. Salazar, A. Prudnikova, A. Bozorgchenani, Q. Ni, C. Klitis, G. Guirgis, A. Cavalli, N. Sgouros, E. Makri, A. Lalas, K. Votis, G. Amponis, and W. Mallouli, "SANCUS: Multi-Layers Vulnerability Management Framework for Cloud-Native 5G Networks," <i>ARES 2021: The 16th International Conference on Availability, Reliability and Security</i>, 2021.</li></ul> |
| 2020 | <ul style="list-style-type: none"><li>[6] G. Amponis, T. Lagkas, P. Sarigiannidis, V. Vitsas, and P. Fouliras, "Inter-UAV Routing Scheme Testbeds," <i>Drones</i>, 2020.</li></ul>   |