Panos Tsilivis

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PERSONAL STATEMENT

An Autonomous Vehicles Engineer with ultimate professional goal being oriented in the field of Autonomous Drivingresearch and development. The innovative and progressive thinking is one of the leading personal characteristics, along with strong organizational and communicational abilities. An experienced C++, MATLAB/Simulink and Robot Operating System (ROS) developer, with applications directed to Control Systems design and Motion Planning development. A fluent English and native Greek speaker who is eager to take on performance demanding projects. A passionate autonomous systems developer who constantly seeks to combine ingenious ideas and creative research teams.

KEY ACHIEVEMENTS

- Technical lead in 3 funding-projects for ADAS-focused sensor evaluation methodology and test-bench facility in Roding, Germany.
- Technical lead role in creation of C++ development, testing, integration and review process, focused on ADAS development.
- Participation in 3 customer projects with key role of functional developer, vehicle integrator and vehicle tester.
- Cooperation with Airbus Group concerning innovative Research and Development project as MSc Thesis.
- Researched on Guidance Control & Navigation and developed an innovative idea for autonomous inspection of multi-megawatt wind turbine blades with a use of a multirotor Unmanned Aerial Vehicle.
- Researched on Simultaneous Localization & Mapping algorithms oriented to UAVs and received opportunity to attend Electrical and Electronics Engineering Conference; authored and presented paper.
- Recognised for voluntary service to Special Olympics World Summer Games 2011 and acted as a Transportation Assistant located in the welcoming post of Athens International Airport.

EDUCATION

MSc in Autonomous Vehicle Dynamics & Control in Cranfield University (October 2016 – September 2017)

- **Modules:** Sensor Fusion, Decision Making for Autonomous Systems, Guidance & Navigation Systems, Air Vehicle Modelling & Simulation, Autonomous Vehicle Control Systems, Flight Experimental Methods, Modelling of Dynamic Systems, Control Systems, Flight Dynamic Principles.
- **Individual Research Project:** Research and Development of Airbus Group project, entitled as “Autonomous Indoor Inspection of Aircraft Wing Panel with the use of Unmanned Aerial Vehicle: Image Processing and Localisation”.

B. Tech in Automation Engineering in Piraeus University of Applied Sciences (2:1)
(September 2010 – September 2016)

- **Modules:** Advanced Control Systems Engineering, Intelligent Control Systems, Digital Control Systems, Robotics & Mechatronics, Computational Intelligence, Computer Programming, Technical Drawing, Signals and Systems, Management Information Systems, Electrical Engineering, Electronic Engineering, Automatic Control Systems, CAD/CAM, Hydraulic and Pneumatic Control Systems, Industrial Controllers.
- **Group Project:** RoCKIn@Home 2015 participation with University’s Research Team “ROSolution”. (November 2015) – Team Leader of 5.
- **Individual Thesis:** Research and Application concerning the ‘Autonomous Navigation for Flying Drones’ using Parrot AR Drone 2.0. quadcopter.

CAREER HISTORY

AVL Software and Functions GmbH – ADAS/AD Expert Development Engineer (November 2020 – Present)
AVL is the world's largest independent company for the development, simulation and testing of powertrain systems and ADAS/AD features.

- Technical lead role in creation of C++ development, testing, integration and review process, focused in ADAS development.
- Developement engineer in funding-project for ADAS-focused sensor evaluation methodology and test-bench facility in Roding, Germany.
- Expert functional and software developer of motion planning in C++.

AVL Software and Functions GmbH – ADAS/AD Development Engineer (February 2018 – November 2020)
AVL is the world's largest independent company for the development, simulation and testing of powertrain systems and ADAS/AD features.

- Responsible of functional and software development of motion planning and motion control in C++ and Simulink.
- Rapid prototype developer in C++ and MATLAB.
- Participant in 3 customer projects, focused on waypoint-based navigation, target following and point to point navigation
- Participant in 2 internal R&D projects for automated parking and intersection navigation.
- Practical experience in vehicle integration and testing of the corresponding function components to most of the projects, with the use of ROS.

eRA-11 International Scientific Conference – Publication (May 2016 - September 2016)
P. Tsilivis & G. Nikolaou: Simultaneous Localization & Mapping for micro–Unmanned Aerial Vehicles
An international scientific conference with primary goal of an annual forum for brainstorming and academic debate in critical areas of information technology and its applications to Science, Economy, Society and Education.

- Authored conference publication concerning the computational problem of Simultaneous Localization and Mapping (SLAM) in regards multirotor Unmanned Aerial Vehicles and its potential algorithmic solutions. Presented technical description of most important SLAM algorithms, which can be implemented in the development of an Autonomous Vehicle.

NOVASCIENTIA S.A.: Athens, Greece – 6-month Placement (October 2015 – April 2016)
Start-up company with background in the engineering and chemical - pharmaceutical sector with provided unique insight in the needs of modern industry. It develops cost effective applications that offer unique possibilities to users; also, designs and creates innovative software for large-scale industrial and business units

- Created and designed an innovative project, titled as “Autonomous use of multi-rotor drone for wind turbine visual technical inspection”. Responsible for the software development along with a practical implementation of it in an actual multirotor Unmanned Aerial Vehicle (UAV). Supervised by Dr. Georgios Pechlivanoglou Scientific Head of Wind Energy Research Group of TUB and collaborated with a lectures of Piraeus University of Applied Sciences, Dr. Grigoris Nikolaou.

SMART BLADE GmbH: Berlin, Germany – Independent Project Developer (September 2015 – November 2015)
SMART BLADE GmbH is committed to the development of highly innovative products and customized solutions as well as to high level research in the field of wind turbine aerodynamics and blade design.

- Designed and produced a hardware tool that supports rope access technicians while installing an improvement called “Rotor Blade Vortex Generator” on wind turbines. A performance improvement tool that increases the annual energy production of a wind turbine by 1.5 – 3.0%. Focused on developing a tool called ‘VG Tool’; a hardware device that stores various measurements in an SD card, during the installation of Vortex Generators, to evaluate the effectiveness of each installation.

SKILLS, INTERESTS & EXTRACURRICULAR ACTIVITIES

- **Languages:** Native Greek speaker with fluency in English and basic use of German.
- **Software Development Skills:**
    - Expert user of C++, Python, MATLAB/Simulink and ROS (Robot Operating System).
    - Proficient user of general systems and software such as Linux internals and associated tools, Integrity PTC, Git-based Version Control, Docker, Jenkins CI/CT, Vires VTD, dSpace & ControlDesk and CANalyser.
    - Experienced IT user of C, .NET Framework, Arduino Language, PLC Programmable Languages (FBD, LAD, STL), OpenCV, AutoCAD and CNC & Machine Code.
- **Individual Interests:** Scientific interest in Autonomous Vehicles, Orbital Mechanics, Artificial Intelligence and Robotics. Passionate about athleticism; two-year professional Greek basketball player and member of Cranfield Basketball team. Academy instructor of Tennis junior team and amateur snowboarder.