Stavros Spyridopoulos

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EDUCATION

Aristotle University of Thessaloniki
Integrated MSc in Electrical and Computer Engineering

Thessaloniki, Greece
2021 – 2026

Eindhoven University of Technology
Erasmus+ Exchange Studentship – Electrical Engineering

Eindhoven, The Netherlands
Sept 2024 – Feb 2025

EXPERIENCE

SpaceDot
Embedded Software Engineer

AUTh, Thessaloniki
Nov 2023 - Present

Software Lead on ADCS of AcubeSAT, an open-source nanosatellite part of ESA's "Fly Your Satellite! 3" Program Project Goal: AcubeSAT will sustain fungal Saccharomyces cerevisiae cultures, in order to probe the effects of cosmic radiation and microgravity conditions in Low Earth Orbit.

* Developed and tested sensor drivers used in satellites (gyroscope, magnetometer, sun sensor, etc.), while implementing industry-standard communication protocols (SPI, I²C, UART, etc.).
* Developed software for ARM-based microcontrollers using the FreeRTOS operating system.
* Proficient in utilizing the Conan package manager for library and dependency management.
* Conducted extensive testing and operations in cleanroom environments.
* Verification of C/C++ algorithms using SIL and HIL applications.

Links: SpaceDot
AcubeSAT

PROJECTS

- **8-bit Adder IC**: 8-bit Brent-Kung Adder VLSI designed on *Cadence Virtuoso* using FreePDK45 45nm technology.
- **RISC-V Processor Pipeline**: Project on Digital Hardware Systems course focused on creating a functional RISC-V processor pipeline using Verilog on Quartus FPGA design software.

TECHNICAL SKILLS

- **Programming**: C, C++, Python, Java, FreeRTOS
- **Technologies**: Conan, Docker
- **Simulation Software**: MATLAB, Ansys STK, LTspice
- **Hardware Design**: Verilog, System Verilog, KiCAD, VLSI Design

LANGUAGE SKILLS

- **Greek**: Native
- **English**: C2 Certification – Proficiency

CONFERENCES AND SEMINARS

ESA Academy - Concurrent Engineering Workshop 2024
Communications and Data Handling

ESEC-Galaxia, Transinne, Belgium
16/09/2024 - 20/09/2024

Participated in a Phase-0 Satellite Design Project using the Concurrent Engineering methodology, collaborating closely with industry experts.

* Calculated and verified the data transmission plan to fetch data from Venus orbiter and transmit them to Earth.
* Assisted in designing and validating mission requirements.

Link: Workshop Details

ECESCON Workshop Presenter
Presenter of CubeSat Hands-On Workshop

Xanthi - Thessaloniki, Greece
2024 - 2025

Presented and organized SpaceDot's CubeSat Hands-On Workshop in the National Electrical and Computer Engineering Student Conference