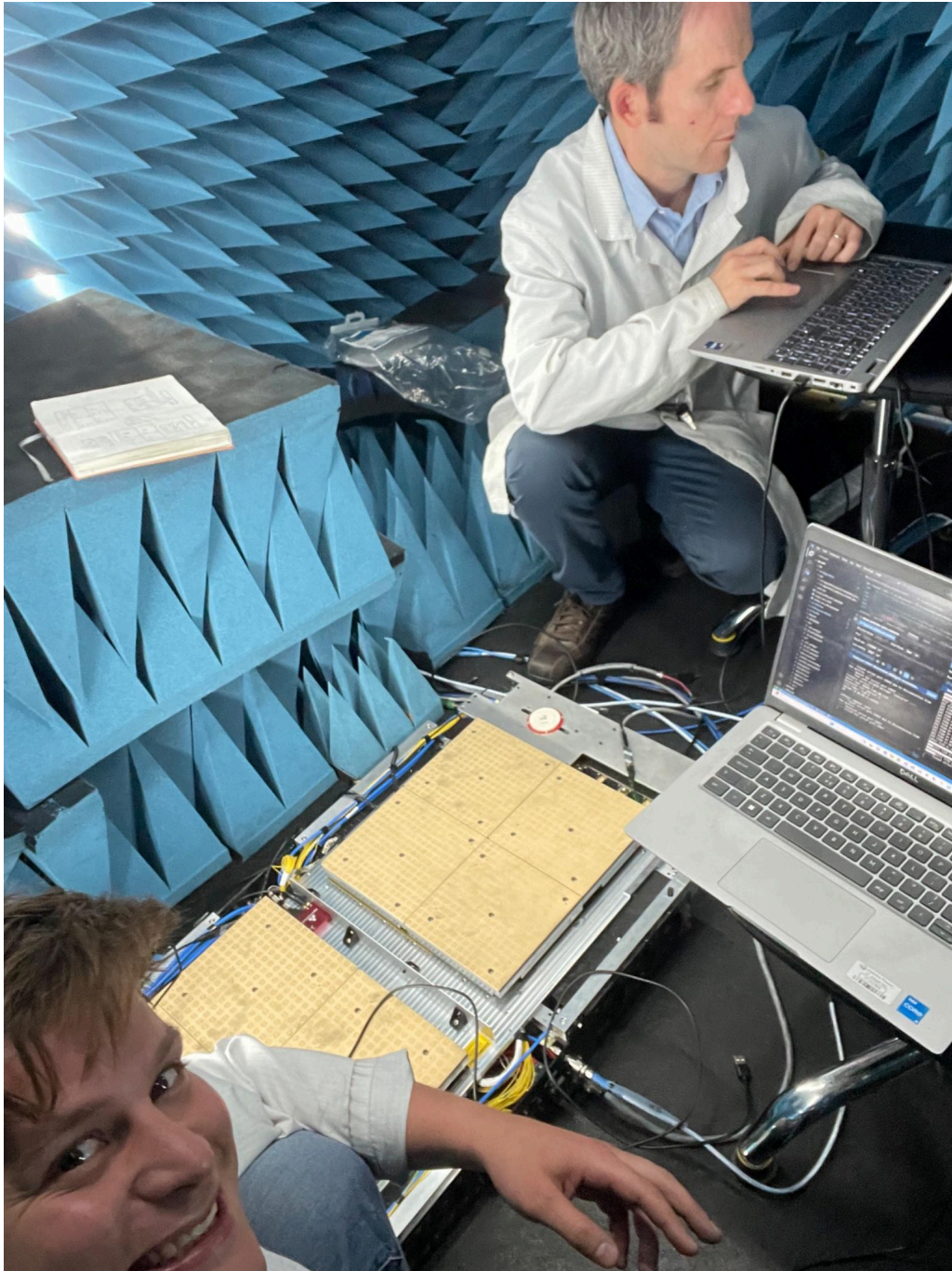


Phased Array Antennas

Nicholas Antoniadis

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Project Summary

I have extensive experience developing phased array antenna technologies for advanced applications in military, automotive, and aerospace sectors. My work spans algorithm design, hardware integration, and system-level testing to deliver high-performance and reliable solutions.

At Hanwha Phasor, I played a key role in the development of phased array antennas for LEO and GEO satellites. This involved designing software architecture, developing production firmware, and creating hardware drivers for critical components such as antenna ICs, shift registers, SDRAM, and Ethernet switches. I also implemented and tested phased array control algorithms, ensuring optimal system performance and reliability.

In collaboration with Renesas, I focused on algorithm development, system integration, and PCB schematics reviews using Altium. These systems were tailored for high-speed, on-the-move applications, enhancing communication reliability in dynamic environments.

Additionally, I integrated and controlled the Vectornav Inertial Sensor within phased array systems. This required designing precise interfaces to ensure orientation and stability under varying conditions, a critical factor in achieving consistent performance.

My technical expertise includes STM32H7 multi-core microcontrollers, programming in C and C++, and using tools such as Altium for PCB design and Jenkins for CI/CD pipelines. I also developed bootloaders, conducted extensive hardware and software integration tests, and managed development workflows using Jira and Git. These skills have been instrumental in delivering phased array systems that meet demanding operational requirements.

