

Feasibility Study of Near-field Antenna Measurements based on Quadsat UAS

Keywords: Near-field Measurements, Unmanned Aerial Systems (UAS), Antenna Measurements

Context: The proliferation of UAS technology is contributing to the rapid expansion of new types of antenna measurement systems. In this regard, UAS-based measurements introduce different flexibilities that ultimately allow several previously challenging tests to be implemented in in-situ outdoor scenarios. UAS-based systems developed by QuadSAT offer a different range of tests from beam-finding, polarization alignment, raster scans, satellite emulation, multibeam verification, and are increasingly playing a significant role in the Satellite industry.

Objectives: Electrically large antenna systems can create a challenging measurement setup since the drone's flying path may be restricted by local policies, drone flying altitude, flight time, etc. In this case, near-field measurement techniques can become a viable solution to enable UAS-based measurements of very large antenna systems.

The main project activities will deal with the feasibility analysis of a near-field measurement solution based on the QuadSAT UAS. The main tasks will include numerical studies of different near-field techniques, the study of drone-based phaseless near-field measurement solutions, and relevant experimental characterization.

Expected Profile: The candidate must have a degree in Electrical Engineering or related fields, with a solid background in electromagnetism, antenna theory, and measurements. The candidate is also expected to have good knowledge of MATLAB and be fluent in English.

Research Environment: At Quadsat, you will join a diverse team of innovative colleagues who are impacting the future by changing the game of antenna testing. We have the freedom to make decisions - and the room to innovate, meaning you can make a big impact with your work. As we continue to experience high growth, there are ample opportunities for career advancement and skill development as the company expands.

In the R&D department, you will join a team of driven and innovative engineers with specialties in robotics, software, and RF. Our passionate team of dedicated engineers is looking to drive innovation in the antenna test and measurement industry.

Duration: 4 months

Starting date: As soon as possible.

Location: Odense N, Denmark.

Contact:

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