Stellenausschreibung: EGNOS V3 Junior Performance Engineer

EGNOS is a satellite based European augmentation system for GPS signals and the upcoming European Navigation system Galileo. Currently the next generation EGNOS V3 is under development. In this frame Airbus Defence and Space GmbH in Ottobrunn near Munich is looking for a Junior Performance Engineer:

**Context:** The performance engineers are responsible to define, verify, maintain and eventually qualify the overall performance of EGNOS V3 at system level. This requires understanding of the relevant system core algorithms (e.g. Orbit and Clock determination, ionosphere modelling, error bounding algorithms) and their interplay. In addition, the performance engineer masters the performance budgets of the contributing sub-systems (e.g. ranging performances of GNSS monitoring stations (so-called RIMS) and be able to derive relevant system and/or sub-system specification. The required Junior Performance Engineer will work as a member in the EGNOS V3 performance team thereby supporting the EGNOS performance and qualification activities.

**Tasks:** The Junior Performance Engineer is responsible for contributing to:

- Analysis of signal in space performance and functionality in contribution to the consolidation of the system level design.
- Analysis of error budget contributors of GNSS signals (ODTS error, troposphere, ionosphere (including scintillations)) as input data for service volume analysis and raw data generation.
- Definition of data analysis methods
- Specification of system algorithms (calculation of orbit and clock corrections, ionosphere corrections and associated error bounds (integrity parameters)
- Execution of system simulations, performance assessment and analysis
- Determination of system state probabilities and availability of system elements
- Troubleshooting and determination & analysis of anomalies using system performance tools (e.g. service volume simulators, end-to-end testbeds)
- Enhancement of system performance analysis tools and Software

In that role the junior performance engineer has to pro-actively interface with the various stakeholders of the system, e.g. sub-system (e.g. central processing facility, GNSS ground stations (so-called RIMS)) developers. For successful working the junior performance engineer must be able to anticipate the system performance needs and translate them into system / sub-system performance requirements.

The junior performance engineer will participate in system reviews and shall be able to present results in front of the customer.
Qualifications:

The position is pointing to junior performance engineers providing the possibility of growing experience in that field. On the other hand, the project EGNOS V3 now entering implementation stage (phase C/D) will require some relevant background for successful working. Therefore:

- A record of two years of experience in engineering of GNSS navigation systems and the development of engineering tools (or comparable experience demonstrating ability to work on system level) is of great advantage for this position.

Add-ons (ideal candidate):

- Experience in GNSS/SBAS data analysis e.g. for characterization of GNSS-data performances (e.g. ranging performance, signal quality, signal performance incl. characterization of relevant Rx environment)
- Background in GNSS/SBAS Systems and GNSS/SBAS System Performance
- Background in Aviation Standards for SBAS (e.g. RTCA L1 MOPS DO-229)
- Background on frequency normal technology used in GNSS ground systems (e.g. Rubidium, Cesium, Maser frequency standards)