

Position Title: Radar Systems Analyst Engineer Trainee
Reports to
Department
Location

Applied Electromagnetics BU –
Radar Systems Team

Pisa – San Piero a Grado

Position Mission

The Applied Electromagnetics Business Unit of MerMec Engineering is looking for a trainee to be included in the Radar Systems team. The team is active in the following fields: Radar Systems Analysis, Simulation, Design and Test, Radar Signal and Image Processing Algorithms and Radar-based Railway Products Maintenance.

Activities

The successful candidate will collaborate with the MerMec Engineering staff in carrying out the following activities:

- Design of radar signal and image processing algorithms and development of prototypal code in a MatLab environment;
- Analysis of radar data collected during the measurement campaigns on different radar systems, identifying possible improvements in the processing algorithms to optimize system performance;
- Writing of technical documents including: Requirements and Architecture specification documents, Test description and Test report documents, Radar algorithms design documents and system/subsystem design documents.
- Definition and execution of radar systems tests and measurement campaigns, analyzing the system performance and the compliance with the requirements, identifying the causes of failed tests when needed;

Technical Skills, Qualifications

The following qualifications and technical skills are required:

- Graduating student in Telecommunications Engineering, Electronics Engineering or Physics;
- Good proficiency in both spoken and written English language;
- Basic knowledge of radar systems performance analysis and of signal and image processing techniques;
- Basic knowledge of systems engineering techniques (mathematical modeling, analysis and simulation of complex systems) and specification of system requirements and architecture;
- Basic knowledge of the Matlab development and prototyping environment (signal processing toolbox and fixed point toolbox);
- The following are considered value-added skills:
 - Master's Degree or doctoral student in Telecommunications Engineering, Electronics Engineering or Physics;
 - Experience in the definition and in the execution of tests on radar or electronic systems;
 - Knowledge of laboratory equipment (Oscilloscope, Spectrum Analyzer, VNA etc.);
 - Knowledge of C/C++, C#, Python, Java, Fortran and experience in programming;
 - Experience in Simulink, LabView or similar tools;
 - Experience in RAMS analyses and with Relex, Isograph Reliability Workbench or similar tools;
 - Experience with systems in the railway sector;
 - Knowledge of other foreign languages besides English, both written and spoken.

The following personal skills are required:

- Good analytical skills and problem solving skills;
- Ability to communicate effectively and efficiently, including through the drafting of technical documentation;
- Ability to work in a team;

Required Soft Skills (select the skills the candidate must have from the list below)

- ☒ Results Orientation
- ☒ Initiative
- ☒ Innovation
- ☒ Partnering
- ☐ Planning and organization
- ☐ Leadership and development of others
- ☒ Efficient communication