Position Title:	Radio Communication Engineer Trainee

Reports to	Department	Location
Rodolfo Guidi	Applied Electromagnetics BU	Pisa

Position Mission

The Applied Electromagnetics Business Unit of MerMec Engineering is looking for a Radio Communication Engineer trainee who will collaborate with the Unit by carrying out analysis and development tasks at both system-level and on the single algorithmic DSP component, within the context of MerMec Engineering's activities in the Radio-Communication and communication networking domains.

Responsibilities

The successful candidate will collaborate with MerMec Engineering staff in:
- Carrying out targeted system and component-level analyses of communication systems, devices and functions
- Analyzing and develop functional blocks and algorithms for radio communication, typically by Matlab/Octave prototyping and subsequent C/C++ development
- Contributing to system-level designs of radio communication systems and networks
- Carring out testing of communication systems or components
- Contributing to R&D activities in the field of both terrestrial and satellite communications

Technical Skills, Qualifications

- Master's degree in Telecommunication Engineering
- Knowledge of the currently most established radio communication standards both in the broadcast and Radio Access Network (RAN) domains (e.g. DVB-T/T2, DVB-S/S2/S2X/RCS2, GSM, UMTS, LTE, IEEE 802.11x) with special focus on their OSI PHY-layer DSP functions, as well as of the most common digital formats for radio transmission
- Knowledge of the key components and functions of a transmission system, with specific focus on Digital Signal Processing (DSP) for radiocommunication and on the most widely established modulation and coding schemes
- Architectural knowledge of the currently active standards for Radio Access Networks (RANs), namely GSM, LTE, NR, with special focus on OSI L1 (PHY) and L2 (MAC) functions
- Good understanding of IP-based communication networks
- Good knowledge of Unix/Linux OS (experience with a few different Linux distributions is a plus)
- Basic or intermediate understanding of the most common network security principles and practices (e.g. symmetric and asymmetric key encryption, message authentication, OTP-based MFA, intrusion detection)
- Good proficiency in both spoken and written English language
- Knowledge of the Windows operating system and office automation tools
- Preferable basic knowledge of Visual Studio Suite, .Net Framework and other technologies (C, C++, C# language, Microsoft Azure, WPF)

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