

**Fixed-term contract under public law
Research Engineer or Young Researcher
12 months with possible extension to 36 months
LEOST (<https://leost.univ-gustave-eiffel.fr/>)**

Channel sounding and modelling in Railway environments – 900 and 1900 MHz

Job environment: The LEOST laboratory of the Component and Systems Department of University Gustave Eiffel is well known at European and international level in the domain of Wireless communications for Railways. The position is open in the framework of a national collaborative research project for the development of as the Future Railway Mobile Communication System (FRMCS) based on 5G but operating in the railway bands around 900 and 1900 MHz. The project focuses on the development of realistic 5G railway radio channel models based on measurements along railway lines. The project will be in strong collaboration with IMT-Atlantique, SIRADEL, CEA.

Missions: During the 36 months, the candidate will be in charge of:

- 1) the definition of test cases;
- 2) the implementation of experiments in real railway environments with a 4x4 MIMO channel sounder using SDR cards, taking into account various constraints (safety, energy, short time, installation in the train, speed...);
- 3) development of the algorithm to treat the measured data in collaboration with IMT-A to extract space time channel properties
- 4) channel modelling based on the measurements in collaboration with IMT-A, SIRADEL and CEA. The work will be under supervision of Dr Marion Berbineau
- 5) writing reports and publications

Knowledge & Skills

Ability and interest in experimental works such as radio propagation measurements
Experience in software defined radio appreciated (USRP, Gnuradio, Labview...)
Experience in scientific programming (Python, C, C++, Matlab)
Ability to communicate and disseminate scientific results
Knowledge in radio propagation and signal processing
English written and spoken.
Rigor and Autonomy team spirit, good organization and adaptability

Education and experience required

Engineering or Master2 or PhD degree in the domain of wireless communications with experience in experimental work.

Practical information

Application deadline: ASAP
Start of contract: 01/03/2023
Type of contract: Fixed-term contract under public law
Duration of the contract: 12 months with possible extensions to 36 months maximum
Geographic location:
Université Gustave Eiffel, Campus de Lille, 20 Rue Elisée Reclus , 59650 Villeneuve d'Ascq France

Application documents :

- Resume
- Covering letter
- Copy of your degree
- National identity card or passport

Contact : marion.berbineau@univ-eiffel.fr