



EUROPEAN COMMISSION  
DIRECTORATE-GENERAL  
HUMAN RESOURCES AND SECURITY  
Directorate HR.AMC - Account Management Centre  
Account Management Centre 8 - serving JRC

2020-IPR-E-000-014648

**Experimental Evaluation of Wireless  
Communications Technologies for Cooperative  
Intelligent Transport Systems (C-ITS)**

**Position for:**

Trainee

As the science and knowledge service of the European Commission, the mission of Joint Research Centre is to support EU policies with independent evidence throughout the whole policy cycle.

The JRC is located in 5 EU Member States (Belgium, Germany, Italy, the Netherlands and Spain). Further information is available at the JRC website: <http://www.jrc.ec.europa.eu>

**Short description of the activity:**

The Technology Innovation in Security Unit, part of the Directorate for Space, Security and Migration, is looking for a trainee to contribute to the experimental evaluation of wireless communications technologies for Cooperative Intelligent Transport Systems (C-ITS). C-ITS aims at providing uncompromised passenger safety by enabling vehicles, pedestrians and road infrastructure to exchange messages with each other using state-of-the-art wireless communications technologies.

The successful candidate will work closely with a team of experienced JRC engineers to design and conduct protocol analysis and radio-frequency experiments using a variety of commercial C-ITS On-Board Units (OBUs) and Road-Side Units (RSUs). Tests will be conducted in the JRC Radio Spectrum Laboratory and throughout the internal 36-km road infrastructure of the JRC campus in Ispra (Italy). The successful candidate will also contribute to the post-processing and analysis of experiments data to build a detailed understanding of C-ITS communications technologies and to evaluate their performance in laboratory and field test scenarios. The results of this research work will feed into academic publications, contributions to technical discussions in Standards Development Organisations and/or International Coordinating Bodies (e.g., ETSI, CEPT), and C-ITS policy

	<p>formulation at the European Commission level.</p> <p><b><u>Qualifications:</u></b></p> <p><b><u>Essential:</u></b></p> <ul style="list-style-type: none"> <li>• The candidate should have or be close to attaining a university degree in Electrical Engineering, Telecommunications, Computer Science or related discipline;</li> <li>• Good knowledge of wireless communications and networking protocols;</li> <li>• Excellent analytical and problem-solving skills, with an overall hands-on approach to technology;</li> <li>• Good knowledge of spoken and written English (level B2).</li> </ul> <p><b><u>Advantage:</u></b></p> <ul style="list-style-type: none"> <li>• Familiarity with radio-frequency laboratory equipment (spectrum analysers, power meters, signal generators) and testing procedures;</li> <li>• Familiarity with numerical analysis frameworks (Matlab, Octave);</li> <li>• Familiarity with protocol analysers (Wireshark, tcpdump);</li> <li>• Familiarity with 3GPP standards (knowledge of LTE and/or 5G physical layers is a plus);</li> <li>• Good programming skills (Python, C, C++);</li> </ul> <p><u>For general eligibility requirements, please read the rules governing the traineeship scheme of the JRC:</u></p> <p><a href="https://ec.europa.eu/jrc/en/working-with-us/jobs/temporary-positions/jrc-trainees">https://ec.europa.eu/jrc/en/working-with-us/jobs/temporary-positions/jrc-trainees</a></p>
<b>Directorate Unit</b>	E. Space, Security and Migration E.2
<b>Indicative duration</b>	5 months
<b>Preferred starting date</b>	01/10/2020
<b>JRC Site</b>	Ispra
<b>Country</b>	Italy

<b><u>JRC contact details</u></b>	<b>For any technical problems with your application, please contact:</b> <a href="mailto:HR-AMC8-RECRUITMENT-TOOLS-SUPPORT@ec.europa.eu">HR-AMC8-RECRUITMENT-TOOLS-SUPPORT@ec.europa.eu</a>
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