



2019-IPR-A5-FGIV-011518

**FGIV – Scientist - Exploratory Research Project
MonItoring Transport Infrastructures with
Connected and Automated Vehicles (MITICA)**

Position for:

FG IV Scientist

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

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

The JRC offers a vacancy for a Contract Agent within the Exploratory Research Project MITICA - MonItoring Transport Infrastructures with Connected and Automated Vehicles.

The JRC Exploratory Research Programme (ER) is a strategic initiative characterised by ideas that might lead to novel results to qualitatively enrich current JRC scientific work.

The ER Project MITICA will investigate the feasibility of indirect Structural Monitoring (iSHM) from on-board sensors measurements of connected vehicles integrated with infrastructural monitoring systems (vehicle to Infrastructures V2I communication) to assess structural condition of infrastructural assets.

The successful candidate will be in charge of:

- Contributing to the design of the experimental tests (structural specimen set up, implementation of acquisition system and test campaign);
- Conducting the experimental campaign;
- Systems Integration of the acquisition systems (vehicle to infrastructure V2I);
- Signal data processing;
- Designing the algorithms for the indirect Structural Health Monitoring (iSHM) for the identification of structural damage from on-board sensor measurements;
- Coordinating activities with the team members;
- Drafting of technical reports and scientific publications, dissemination/publication of results.

Qualifications:

- Completed university studies of at least three years attested by a diploma and at least five years professional experience in a field relevant to the position (more years will be considered as plus), alternatively a doctoral diploma in Structural/Civil or Mechanical Engineering or related field with a formal content of practical mechanics;
- Extensive knowledge/experience in mechanics of materials and structural dynamics is essential;
- Broad knowledge in the area of engineering mechanics is essential;
- Knowledge of Structural Health Monitoring, signal processing, modal analysis (e.g. EMD, wavelet decomposition, OMA, Stochastic subspace Identification, frequency domain decomposition), FEA, CAD, computer

	<p>programming and databases, Wireless Sensor Networks is an advantage;</p> <ul style="list-style-type: none"> • Solid record of research activities relevant for the post including publications in international peer-reviewed journals is an advantage; • Good oral and written communication skills in English (B2) are essential, knowledge of other languages is an advantage. <p>In addition, the following competences will be considered as an advantage:</p> <ul style="list-style-type: none"> • Ability to work in a team and in a multi-cultural environment; • The candidate is expected to be creative and to be able to work independently.
<p>Directorate Unit</p> <p>Project</p>	<p>Space, Security and Migration Safety and Security of Buildings</p> <p>The Scientific Development Unit of the Directorate for Strategy and Work Programme Coordination is in charge of the overall JRC Exploratory Research Programme.</p> <p>The operational scientific research will take place in the unit Safety and Security of Buildings Unit in Ispra (Italy).</p> <p>Exploratory Research Project: MonItoring Transport Infrastructures with Connected and Automated Vehicles (MITICA)</p> <p>Further information is available at: https://ec.europa.eu/jrc/en/research-topic/improving-safety-construction</p>
Indicative Duration	24 months
<p>JRC Site</p> <p>Country</p>	<p>Ispra</p> <p>Italy</p>
Rules and eligibility	<p>The candidate must be on a valid EPSO reserve list for Function Group IV contract staff.</p> <p>If you are not in any valid EPSO reserve list for Function Group IV contract staff, you can still apply by following these steps.</p> <p>You express your interest by applying to the CAST Permanent or to the permanent JRC Call for researchers.</p> <p>1. CAST Permanent: open-ended selection procedure to create a pool of candidates from which the institutions, bodies, offices and agencies of the European Union (EU) can recruit contract agents. https://epso.europa.eu/documents/2240_en</p> <p>2. JRC Call COM/1/2015/GFIV – Research: open-ended selection procedure to create a pool of candidates from which mainly the JRC can recruit contract agents FGIV as researchers. Details available at the link below: https://ec.europa.eu/jrc/en/working-with-us/jobs/vacancies/function-group-IV-researchers</p> <p>Only then you can apply for this specific position, through</p>

<http://recruitment.jrc.ec.europa.eu/?type=AX>

Auxiliary contract staff:

<https://ec.europa.eu/jrc/en/working-with-us/jobs/temporary-positions/contract-staff-members>

Article 3b of the Conditions of Employment of Other Servants of the European Union applies: the actual period of employment within the Commission under this type of contract, including any period under renewal, shall not exceed 6 years.

Please note that in case a high number of applications is received only shortlisted candidates will be contacted.