



2020-IPR-C4-FGIV-013928

**FG IV - Scientific Policy Officer – Expert in automotive powertrain control systems**

<p><b>Position for:</b></p> <p><b>FGIV – Scientific Policy Officer</b></p>	<p>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.</p> <p>The JRC is located in 5 Member States (Belgium, Germany, Italy, the Netherlands and Spain). Further information is available at: <a href="https://ec.europa.eu/jrc/">https://ec.europa.eu/jrc/</a></p> <p>The Sustainable Transport Unit (STU) of the Directorate for Energy, Transport and Climate, is responsible for a series of activities aiming to characterize the energy performance and greenhouse gas emissions of heavy-duty road vehicles (HDV). The STU provides research for policy support to DG Climate Action for developing regulations and the tools necessary to support their implementation.</p> <p>In this context, the STU is scientific responsible for the Vehicle Energy Consumption calculation Tool (VECTO), the software tool introduced by regulation 2017/2400/EU for the certification of HDV CO<sub>2</sub> emissions in Europe.</p> <p>The STU conducts experimental and computational activities for validating the integrity and accuracy of VECTO, and for supporting its further development.</p> <p>New electric powertrains and performance optimization systems are under development for improving the efficiency of vehicles. VECTO and the HDV CO<sub>2</sub> certification methods will require substantial updates in order to incorporate them, and enable their seamless introduction in the EU fleet.</p> <p>The STU is therefore looking for a researcher with proven expertise in automotive powertrain and control systems to contribute in their future adaptation.</p> <p>The jobholder will be responsible for a series of activities related to the certification of different vehicle components primarily linked to non-conventional power trains and electric components.</p> <p>This will include contributing to the development of respective standards, designing new computer models to be included in the VECTO software family (eg batteries), adaptation of VECTO to match the respective needs in terms of in-service conformity and real world fuel consumption monitoring. The activity is expected to have a strong systems-analysis and control dimension, and be linked to other future VECTO developments such as the introduction of forward looking simulation architectures and software-in-the-loop approaches. The jobholder should be keen in systems modelling.</p> <p>The activity is likely to include tasks related to telematics, real time data acquisition, transmission and monitoring of data, and the development of necessary tools for their processing according to the VECTO methodology.</p>
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The researcher will be asked to design and follow test-campaigns in the VELA labs of the JRC, in real-world conditions or third party labs and proving grounds, with the objective to gather sufficient data to support the development and validation of VECTO.

The work will be carried out in close collaboration with colleagues within the STU, the Directorate, and other Directorates of the JRC and Directorates General of the European Commission.

The tasks of the successful candidate will be to:

- Contribute to the further development, support and validation of the VECTO simulator and the respective supporting software introduced by 2017/2400/EU
- Analyse powertrain and other relevant vehicle systems influencing the energy consumption of vehicles
- Propose new methods for modelling the operation and the control of vehicle components and steer their implementation into software code.
- Design, support, and steer the execution of ad-hoc test campaigns
- Collect, analyse data from the test campaigns, on-line sources, or data retrieved from the EU vehicle certification process
- Writing software code to support the development of the aforementioned tasks, and extend existing tools.

Qualifications:

We look for a person with strong interest and understanding of vehicle technologies.

The candidate shall have completed university studies of at least three years attested by a diploma in Science or Engineering and at least five years of professional experience in a field relevant to the position, or alternatively, shall have acquired a doctoral degree in one of the following: control science, electrical, electronics, mechanical, automotive, energy, vehicle, or similar engineering fields relevant to the position offered.

The candidate should exhibit proven experience in vehicle powertrain and energy systems control, systems analysis, and relevant research activity.

The candidate should have a good aptitude of taking initiative, developing new concepts and being a strong team player.

In addition, the following qualifications are considered as an asset:

- Knowledge of computer modelling languages or systems engineering software;
- Knowledge of python, R, or other computer language for data collection, handling, and analysis;
- Solid record of research activities relevant for the post including scientific publications and reports;
- Proven ability to work in a team and in a multi-cultural environment.

Very good oral and written communication skills in English

	<p>(B2) are essential.</p> <p>The Joint Research Centre is an equal opportunity employer and is committed to increasing the diversity of its staff. It welcomes applications from women and minority groups.</p>
<b>Directorate Unit</b>	<p>Energy, Transport and Climate Sustainable Transport Unit</p> <p>Further information: <a href="https://ec.europa.eu/jrc/">https://ec.europa.eu/jrc/</a></p>
<b>Indicative duration</b>	<p>36 months initial contract with possible renewals up to maximum 6 years</p>
<b>JRC Site</b> <b>Country</b>	<p>Ispra</p> <p>Italy</p>
<b>Rules and eligibility</b>	<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. <a href="https://epso.europa.eu/documents/2240_en">https://epso.europa.eu/documents/2240_en</a></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: <a href="https://ec.europa.eu/jrc/en/working-with-us/jobs/vacancies/function-group-IV-researchers">https://ec.europa.eu/jrc/en/working-with-us/jobs/vacancies/function-group-IV-researchers</a></p> <p>Only then you can apply for this specific position, through <a href="http://recruitment.jrc.ec.europa.eu/?type=AX">http://recruitment.jrc.ec.europa.eu/?type=AX</a></p> <p><b>Auxiliary contract staff:</b> <a href="https://ec.europa.eu/jrc/en/working-with-us/jobs/temporary-positions/contract-staff-members">https://ec.europa.eu/jrc/en/working-with-us/jobs/temporary-positions/contract-staff-members</a></p> <p>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.</p> <p><i>Please note that in case a high number of applications is received only shortlisted candidates will be contacted.</i></p>