



2016-IPR-F-20-000-7307

**Doctorate Research Fellow – Vehicle  
modelling for hybrid configurations**

<p><b>Position for:</b> GRANTHOLDER CATEGORY 20</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>With 7 Scientific Institutes, 3 Corporate Directorates and the DG/DDG Office, the JRC is located in 5 Member States (Belgium, Germany, Italy, the Netherlands and Spain). Further information is available at: <a href="http://www.jrc.ec.europa.eu">http://www.jrc.ec.europa.eu</a>.</p> <p>The current vacancy is in the Sustainable Transport Unit (STU) of the Institute for Energy and Transport, comprising more than 50 staff, provides scientific and technical support on clean and efficient fuels and vehicles for sustainable mobility.</p> <p>In particular, the STU has developed a state-of-the-art vehicle simulation model, CO2MPAS, to support the introduction of the Worldwide harmonized Light-duty vehicles Test Procedure (WLTP), in the European Type Approval Process. The model is used to calculate CO2 emissions of a vehicle during its type-approval.</p> <p>For the time being the model is only able to simulate fuel consumption and CO2 emissions of vehicles with internal combustion engine. Since vehicle powertrains are quickly evolving towards higher degrees of hybridization, developing a simulation model able to reproduce the behaviour of the electrical components in the vehicle becomes crucial.</p> <p>The STU is therefore looking for a researcher who will extend CO2MPAS towards the simulation of hybrid and plug-in hybrid vehicles for what concerns in particular fuel consumption and CO2 emissions.</p> <p>He/She will investigate different type of hybrid vehicle configuration with particular attention to future technology developments in this field.</p> <p>The researcher will also design and follow test campaigns of hybrid vehicles in the VELA labs with the objective to gather sufficient data to support the development and validation of the model.</p> <p>The work will be carried out in close collaboration with colleagues within the Institute and other Institutes of the JRC.</p> <p><u>Required - Qualifications:</u></p> <p>The candidate shall have a university degree giving access to doctoral studies in the field of Engineering, Physics, Chemistry or a similar technical field.</p> <p><u>Other</u></p> <p>Requirements: A very good knowledge (level B2) of spoken and written English is mandatory.</p>
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	<p>Advantages:</p> <p>Knowledge of mechanical/electrical/aerospace engineering is an advantage.</p> <p>Knowledge of programming languages and experience in script development (in particular for scientific computing) are also an advantage as well as knowledge of methods for data analysis and statistical data treatment.</p> <p>This position offers a number of varied and interesting tasks in a friendly and well integrated Unit to a motivated, flexible and reliable colleague.</p>
<p><b>Directorate Unit</b> <b>Project/Task force</b></p>	<p>Institute for Energy and Transport Sustainable Transport Unit</p> <p>Further information: <a href="https://ec.europa.eu/jrc/en/institutes/iet">https://ec.europa.eu/jrc/en/institutes/iet</a></p>
<p><b>Indicative duration</b> <b>Preferred starting date</b></p>	<p>36 months ASAP</p>
<p><b>JRC Site</b> <b>Country</b></p>	<p>Ispra Italy</p>
<p><b>Rules</b></p>	<p>Grantholders: <a href="https://ec.europa.eu/jrc/sites/default/files/jrc_granholder_rules.pdf">https://ec.europa.eu/jrc/sites/default/files/jrc_granholder_rules.pdf</a> <a href="https://ec.europa.eu/jrc/en/working-with-us/jobs/temporary-positions/granholders/contract-and-working-conditions">https://ec.europa.eu/jrc/en/working-with-us/jobs/temporary-positions/granholders/contract-and-working-conditions</a></p>