



2020-IPR-C-000-014771

**Automatic Web Reporting of Air Pollution  
Sensor Performance**

<p><b>Position for:</b></p> <p>Trainee</p>	<p>As the science and knowledge service of the Commission, the mission of the 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: <a href="http://www.jrc.ec.europa.eu">http://www.jrc.ec.europa.eu</a></p> <p><b>Short description of activity:</b></p> <p>The “Air and Climate Unit” (C05) of the Directorate for Energy, Transport and Climate offers a Trainee position in Ispra, Italy, for a graduate or Master Student to be involved in research activities of the Unit, giving support to the evaluation of low-cost sensors for the monitoring of air quality. The Unit has developed:</p> <ul style="list-style-type: none"><li>- A database of characteristics of sensors and their performance using existing results found in the literature.</li><li>- An automated mechanism for reporting quantified comparisons of these sensors. These automated reports are of great interest for stakeholders interested in selecting the most appropriate low cost sensors for their own purpose.</li></ul> <p>The process needs further optimisation and automation, better description and the development of an easy procedure for updating the database with newly available information. The trainee will support the update of the database of sensor parameters with new publications and reports on sensor evaluation, contribute to write a user manual describing how to update the existing on-line database of performance characteristics of low-cost sensors for air pollution monitoring. The user manual shall allow guiding other research institutes to collaborate in filling this database on voluntary basis.</p>
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	<p>He/She will further supports the development/creation of templates that will allow possible users to get a rapid opinion on the suitability of low cost sensor or to decide what the most appropriate models/brands are based on quantitative assessment.</p> <p>The trainee will learn about:</p> <ul style="list-style-type: none"><li>• Air quality legislation in the EU,</li><li>• monitoring methods for air pollution,</li><li>• the fast rising field of Air Quality monitoring with low cost sensors,</li><li>• automatic reporting with RMarkdown/R/Shiny languages on the web,</li><li>• statistical assessment of the quality of monitoring methods of measurements of air pollution,</li><li>• extracting quantitative data from scientific publications.</li></ul> <p>At the end of the traineeship period the trainee will produce an internal report and present the results of his/her activities.</p> <p><b><u>Qualifications:</u></b></p> <p>This traineeship is suited for students with a university degree in computing sciences or environmental sciences, who are interested in data sciences related to the environmental field.</p> <p><b><u>Essential:</u></b></p> <ul style="list-style-type: none"><li>- University degree in computing sciences, or environmental sciences with substantial programming skills.</li><li>- Good knowledge of English (minimum level B2).</li></ul> <p><b><u>Advantage:</u></b></p> <ul style="list-style-type: none"><li>- Knowledge in RMarkdown/ R/ Shiny languages.</li><li>- Knowledge of advantages and shortcomings of low-cost sensors for monitoring pollutants. Such knowledge is beneficial in other fields of activities as construction/ workplace/industrial hygiene, indoor air pollution monitoring.</li><li>- Knowledge in statistical data treatment.</li></ul>
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	<p><b><u>For general eligibility requirements, please read the rules governing the traineeship scheme of the JRC:</u></b></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>Institute/Directorate Unit</b>	Directorate for Energy, Transport and Climate C05 – Air & Climate
<b>Indicative duration</b> <b>Preferred starting date</b>	5 months As soon as possible from October 2020 onward
<b>JRC Site</b> <b>Country</b>	Ispra Italy
<b><u>JRC contact details</u></b>	<p><b>For any technical problems with your application, please contact:</b></p> <p><a href="mailto:HR-AMC8-RECRUITMENT-TOOLS-SUPPORT@ec.europa.eu">HR-AMC8-RECRUITMENT-TOOLS-SUPPORT@ec.europa.eu</a></p>