



2018-PTT-C-000-9849

**GAS TRANSMISSION NETWORK
SIMULATION**

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| <p>Position for:</p> <p>Trainee</p> | <p>As the science and knowledge service of the Commission, the mission of 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: http://www.jrc.ec.europa.eu</p> <p><u>Short description of activity:</u> JRC C.3 (Energy Security, Distribution and Market) is involved in the simulation of gas transmission networks to support the implementation of Regulation 2017/1938 on security of gas supply and Directive 2008/114 on the identification of critical infrastructures. Risk Assessment is an essential tool for the implementation of both pieces of legislation. Having the capacity of developing full Risk Assessments demands addressing uncertainties systematically and using hydraulic models. The propagation of uncertainties in a gas transmission network can only be done adequately implementing Monte Carlo simulation. JRC C.3 uses as simulation tool the model EUGas (developed on the commercial platform SYNERGI)</p> <p>The selected trainee will have to develop the following tasks:</p> <ul style="list-style-type: none">• Learn to use the EUGas model to simulate the transport of gas in an EU regional gas transport network under steady state, isothermal conditions.• Collaborate within JRC C.3 to identify parameters, effects of events (i.e. changes in network topology produced by accidents) and actions (i.e. changes in operational conditions of some facilities after the occurrence of an event / accident) that need to be automated to implement efficiently Monte Carlo simulation.• Study the script language of SYNERGI and collaborate to develop the scripts needed to automate Monte Carlo simulations in EUGas. |
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| | <p>The selected trainee will be guided and supervised by a senior JRC C.3 researcher.</p> <p><u>Qualifications:</u></p> <p><u>Essential:</u> The successful candidate should have completed his/her university studies (at least Bachelor level) in the area of engineering, physics, applied mathematics, informatics or similar. A good oral and written knowledge of English is required (level B2).</p> <p><u>Advantage:</u> Good understanding of the physics of transport, good programming skills, and a good statistical background will be considered as relevant assets in the selection procedure</p> <p><u>For general eligibility requirements, please read the rules governing the traineeship scheme of the JRC:</u></p> <p>https://ec.europa.eu/jrc/en/working-with-us/jobs/temporary-positions/jrc-trainees</p> |
| Unit / Directorate | <p>Energy Security, distribution and Market (JRC C.3)</p> <p>Further information: https://ec.europa.eu/jrc/en</p> |
| Indicative duration | 5 months |
| Preferred starting date | As soon as possible |
| JRC Site | Petten |
| Country | THE NETHERLANDS |
| <u>JRC contact details</u> | <p>For any technical problems with your application, please contact:</p> <p>HR-AMC8-RECRUITMENT-TOOLS-SUPPORT@ec.europa.eu</p> |