



2019-IPR-E2-FGIV-013348

FG IV – Project Officer - Security and Resilience of Critical Systems using AI and machine learning techniques

<p>Position for:</p> <p>FGIV- Project officer</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: https://ec.europa.eu/jrc/</p> <p>JRC Directorate for Space, Security and Migration – deals with emergency preparedness, response, disaster risk management critical infrastructure protection, and resilience. It assists the fight against crime and terrorism and deals with cyber security, data protection and space infrastructures. It studies the implications of demographic change and analyses the root causes, like scale, timing and impact of migrations.</p> <p>The vacancy is in Technology Innovation in Security Unit. Its mission is to increase European competitiveness and resilience by research in technologies, standardization and harmonisation to enhance the protection of European networked infrastructures and to prevent hazards in industrial installations. Special emphasis to be given to the protection of large scale European infrastructures, including the smart grid, the internet, mobile telecommunications networks and the European space assets.</p> <p>The successful candidate should join a team providing scientific / technical support to the Commission Services in charge of Resilience and Protection of Critical Infrastructures and Systems as well as resilience to Hybrid Threats.</p> <p>Modern societies rely more and more on the services provided by critical infrastructures and systems with the pervasion of ICT across all sectors. Such complex systems (smart interconnected systems) need to be secure and resilient in order to reassure a high standard of living to citizens. In this framework the JRC executes a multi-annual research programme. These systems are becoming more and more interconnected, interdependent and as a consequence, they exhibit emerging behaviour.</p> <p>The scientist/engineer should be able to produce high-quality technical / scientific work in a flexible, fast-evolving environment. The tasks will cover the following areas: Resilience of Critical Systems and Services, analysis of interconnected networked systems, implementation of AI, data analytics and machine learning techniques.</p> <p>The successful candidate will work in a team and carry out technical studies based on modelling and simulation, and develop demonstration tools where applicable. The successful</p>
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	<p>candidate will conduct scientific research in the domain of interdependencies of critical systems and services applicable at different levels of granularity (local, national, international). Currently the links and service level dependencies between critical systems are identified on the basis of expert knowledge. However, this approach has limitations and it is applicable only to a limited amount of infrastructures and at a limited geographical scale. To this end, the successful candidate should contribute to the development of AI, data analytics and machine learning algorithms in order to extract from OSINT (open source intelligence) datasets the links and service level dependencies between such critical systems (e.g. electricity, transport, ICT, banking, etc.). This will allow the coverage of large geographical areas and also an increased number of sectors.</p> <p>Qualifications:</p> <p>Essential:</p> <ul style="list-style-type: none"> • PhD degree - or a minimum of 5 years of full-time research/relevant professional experience after the first University degree in the field of Engineering, Mathematics or equivalent. • Expert knowledge in the domain of AI • Scientific know-how in the development machine learning techniques • Software development experience with MATLAB, R or equivalent <p>Asset:</p> <ul style="list-style-type: none"> • A good record of relevant publications in peer reviewed journals • Dynamic, motivated, adaptable to the JRC's specific role in EU policy support • Good knowledge of English (B2)
<p>Directorate Unit</p>	<p>Space, Security and Migration Technology Innovation in Security</p> <p>Further information: https://ec.europa.eu/jrc/</p>
<p>Indicative duration</p>	<p>36 months initial contract with possible renewals up to maximum 6 years</p>
<p>JRC Site Country</p>	<p>Ispra Italy</p>
<p>Rules and eligibility</p>	<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</p>

or to the permanent JRC Call for researchers.

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

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>

Only then you can apply for this specific position, through <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.