



2016-IPR-E-000-7306

Mechanical Design of Ultrasonic Sealing & Authentication Systems

<p>Position for:</p> <p>Trainee</p>	<p><u>Short description of activity:</u></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: http://www.jrc.ec.europa.eu.</p> <p>The Nuclear Security Unit provides enabling research, technology, instruments, technical services and training for nuclear safeguards, non-proliferation, nuclear security and emergency preparedness to inspection agencies, States and operators. Activities range from nuclear non-destructive analysis and process monitoring to containment & surveillance, verification and detection technologies, including the proliferation assessment of new reactor systems, border monitoring and the specialist analysis of open-source information and satellite imagery. Inside the Nuclear Security Unit, the Seals & Identification Lab (SILab) develops innovative Identification & Sealing Systems for Safeguards application in use worldwide by Euratom and IAEA inspectors.</p> <p>The selected candidate will assist in the work for SILab, on the mechanical design of innovative solutions aimed at the identification & authentication of seals & containers.</p> <p>The tasks to be carried out under supervision of traineeship adviser will include:</p> <ul style="list-style-type: none">• Mechanical design, using Computer Aided Design tools• Mechanical dimensioning based on finite element analysis
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	<ul style="list-style-type: none"> • Production of technical drawings • Follow up development of prototypes • Run mechanical and environmental tests (vibration, fall down, temperature, ...) • Write technical reports <p><u>Qualifications and requirements:</u> <u>Essential.</u> Candidate must have:</p> <ul style="list-style-type: none"> ✓ a degree in Mechanical Engineering. ✓ practical use of a Computer Aided Design software, preferably SolidWorks. ✓ knowledge of finite element analysis and simulation software, preferably SolidWorks Simulation. ✓ excellent command of the English language, both oral and written (level B2) <p>The following represents <u>an advantage</u>:</p> <ul style="list-style-type: none"> • Good knowledge of Italian language <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>
Institute/Directorate Unit	<p>Institute for Transuranium Elements Nuclear Security Unit</p> <p>Further information: https://ec.europa.eu/jrc/en/institutes/itu</p>
Indicative duration	5 months
Preferred starting date	As soon as possible
JRC Site	Ispra
Country	Italy
<u>JRC contact details</u>	<p>For any technical problems with your application, please contact: JRC-ESRA@ec.europa.eu</p>