

Call for Collaborative Doctoral Programme between JRC Ispra and Faculty of Computer and Information Science, University of Ljubljana

April 2020

The European Commission's [Joint Research Centre](#) (JRC) at Ispra, Italy, and the Faculty of Computer and Information Science of the University of Ljubljana (UL FRI), Slovenia, are calling for applications for two fully funded doctoral research positions in the research areas that require the application of machine learning (ML) and computer vision (CV) methods, in particular:

Machine learning for IoT security, which potentially includes:

- ML modelling and analysis of sensory data and wireless network traffic, with the goal of deducing activities and interactions in the smart environment, profiling users, inferring private and sensitive information.
- Developing possible countermeasures and mitigation techniques to the identified security threats.
- Devising an automated system for security policy adaptation governing the behaviour of the smart devices.

Mentor's contact: [Assist. Prof. dr. Veljko Pejović](#)

Biometrics for digital image forensic trace investigations, which potentially includes:

- Unconstrained recognition challenges, such as detection, reconstruction and disentanglement of feature space.
- Developing ML and CV algorithms for local and global-level feature detection and extraction from forensic trace with dimensionality reduction for robust feature selection.
- Developing methods for performance prediction of comparison algorithms in forensic investigations.
- Developing methods for presentation attack detection, with emphasis on reconstruction of 3D targets from forensic trace evidence for presentation attacks on latest generation sensors.

Mentor's contact: [Prof. dr. Peter Peer](#)

Call for Applications

The doctoral degree programme is conducted in English and lasts four years, starting from October 1, 2020, during which the student will be jointly supervised by UL FRI and JRC, and will spend up to two years at JRC, Ispra, Italy (the remaining time at UL FRI). The call for applications provides funding for up to 4 years. After successfully completing the programme, the candidate will be awarded the doctoral degree by the University of Ljubljana.

The doctoral degree research position covers the tuition fees, competitive salary for the research work carried out at JRC (approximately 2200€ per month), and a researcher position at UL FRI for 1000+€ per month (candidates are expected to participate in teaching activities as well). The position includes daily travel and lunch allowance at UL FRI, travel and family allowance at JRC, as well as the administrative support at both institutions.

For more detailed information about the monthly allowances, salaries and taxes at JRC please visit the [Guide for Grantholders \(employed at the Ispra site\)](#). For the same information at UL FRI, please contact international.office@fri.uni-lj.si

Eligibility

The call is open for candidates that have the nationality of an EU Member State or a [country associated to the Research Framework Programmes](#)¹, and who are applying for the Computer and Information Science doctoral programme at UL FRI in the 2020/2021 academic year, and who fulfil all enrolment requirements as stated in the call for enrolment for doctoral degree studies. The application can also be submitted by candidates who do not meet all enrolment requirements at the time of applying. They should enclose a statement declaring that they will complete these requirements before the actual enrolment, which is September 20, 2020.

Selection Criteria

Candidates will be selected according to:

- Rank of GPA – 20%
- Committee's evaluation – 80%
 - CV
 - Research experience related to machine learning, cybersecurity, and/or biometrics
 - Interview
- Willingness to move for approximately two years from Slovenia to Ispra, Italy, in order to conduct research work, is a must

The selection process is defined by two phases:

- Pre-selection of candidates by UL FRI
- Selection of the final candidate by JRC

Deadline

The deadline for applications is June 1, 2020. Selected candidates will be invited for a video interview at UL FRI within 14 days after the process of receiving applications is completed. They will be notified of the decision within 7 days after the interview. Another interview will be conducted in person at JRC Ispra.

Selected candidates will begin work on October 1, 2020.

How to apply:

Candidates have to apply online and alongside send scanned documents as described below to the following email international.office@fri.uni-lj.si:

1. CV with short chronological description of the entire education
2. Motivation letter
3. Two recommendation letters (from supervisors at university or work/traineeships)
4. Original or the duplicate of the final certificate, representing general requirement for access to higher education in the country of issue, legalized on the basis of:

¹ Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Albania, Armenia, Bosnia and Herzegovina, Faroe Islands, Georgia, Iceland, Israel, Moldova, Montenegro, North Macedonia, Norway, Serbia, Switzerland, Tunisia, Turkey, Ukraine

- the 1961 Hague Convention (at the court with territorial jurisdiction where the certificate or diploma has been issued); with properly filled in apostille form affixed or
 - the Authentication of Documents in International Traffic Act.
 - States Parties to the 1961 Hague Convention can be found on [webpage](#)
 - Countries for which no legalization is required:
 - Austria, Bulgaria, Bosnia and Herzegovina, Cyprus (for documents issued by public higher education institutions and universities), Czech Republic, France, Greece, Croatia, Hungary, Republic of Macedonia, Romania, Serbia
5. Photocopy of the original certificate(s) referred to in No 4
 6. Certified Slovene or English translation of the certificate(s) referred to in No 4
 7. Annual report cards, transcripts, a diploma supplement or some other evidence on the contents and duration of education.
 8. Certified Slovene or English translation of the certificate(s) referred to in No 7

Candidates must also apply for the [Doctoral study programme](#) via [eVŠ web](#) portal and follow the application process. Deadline is June 1, 2020.

Contact details:

For any additional information about the call for applications or doctoral studies at UL FRI, please direct your enquires to [International Office FRI](#).

For more information visit:

[University of Ljubljana](#)

[Faculty of Computer and Information Science](#)

[Study in Slovenia](#)

[Joint Research Centre](#)

Notice:

UL FRI and JRC reserve the right to not select any candidate.