



Università  
Ca' Foscari  
Venezia

Dipartimento di Scienze Ambientali,  
Informatica e Statistica

Dipartimento di Scienze Ambientali, Informatica e Statistica  
Università Ca' Foscari Venezia  
Campus Scientifico – Via Torino 155, 30170 Mestre (VE)  
P.IVA 00816350276 - CF 80007720271  
www.unive.it/dais

**Research fellowship on LiSA - Library for Static Analysis - Università Ca' Foscari Venezia**  
(Italian law 30 December 2010, n.240, art. 22)

The present document in English is to be considered as a mere summary of the main provisions of the notice of competition which is available in Italian at the following ([link](#)) The text in Italian is the official text of the notice of competition for all legal intents and purposes and, in the event of non-conformity with the present document, it shall prevail.

**Description**

The Department of Environmental Sciences, Informatics and Statistics at Università Ca' Foscari Venezia invites applications for a fellowship in:

**Title:** LiSA - Library for Static Analysis

**SSD:** INF701

**Tutor:** Prof. Agostino Cortesi - co-proponente dott. Pietro Ferrara

**Duration:** 12 months

**Abstract:** LiSA (Library for Static Analysis) aims to ease the creation and implementation of static analyzers based on the Abstract Interpretation theory. LiSA provides an analysis engine that works on a generic and extensible control flow graph representation of the program to analyze. Abstract interpreters in LiSA are built for analyzing such representation, providing a unique analysis infrastructure for all the analyzers that will rely on it.

Building an analyzer upon LiSA boils down to writing a parser for the language that one aims to analyze, translating the source code or the compiled code towards the control flow graph representation of LiSA. Then, simple checks iterating over the results provided by the semantic analyses of LiSA can be easily defined to translate semantic information into warnings that can be of value for the final user.

The research may be carried out in English.

The fellowship is intended to provide the successful candidate with the opportunity to pursue his/her own research while benefiting from the range of expertise at Università Ca' Foscari Venezia.

**Who can apply**

Prospective candidates are expected to hold a master's degree in **computer Science**

**It is also required:**

Research experience (at least three years) on security of robotic systems.

Ca' Foscari encourages applications from researchers with positive evaluation in all the criteria in individual proposals such as Marie Skłodowska Curie Actions - Individual Fellowships/ERC Starting Grants/FIRB (Italian Fund for basic research investments)/SIR (Scientific Young Independence Research) or similar. Researchers having successfully completed Marie Skłodowska Curie Actions - Individual Fellowships/ERC Starting Grants/FIRB (Italian Fund for basic research investments)/SIR (Scientific Young Independence Research) or similar funded projects are warmly encouraged to apply.

**Duration of contract:** 12 months approximately starting: **December 2020.**

**Stipend:** The research fellowship amounts to **19.367,00** Euros per year, including taxes and social charges.

**Deadline for submission of applications:** 19/11/2020 h 12.00 Central European Summer Time.

**How to apply:**

Candidates should submit:



1. The application form;
  2. A motivation letter (max 1 page) along with their CV in European format, duly dated and signed, both to enclosed as a one single.pdf file. ([link](#))
  3. A copy of a valid identity document (either Identity Card or Passport);
  4. (If available) Evaluation Summary Reports of Marie Skłodowska Curie Actions - Individual Fellowships/ ERC Starting Grants/FIRB (Italian Fund for basic research investments)/SIR (Scientific Young Independence Research) individual proposals having passed all the evaluation thresholds;
  5. (If available) Details of Marie Skłodowska Curie Actions - Individual Fellowships, ERC Starting Grants, FIRB (Italian Fund for basic research investments)/ SIR Scientific Young Independence Research funded projects;
  6. Declaration on availability to held the interview in remote ([Link](#)) to be send via email at the following address: [roxi@unive.it](mailto:roxi@unive.it)
  7. All documents, qualifications and publications relevant for the selection procedure (please, see the notice [link](#)).
- All the schemes of the quoted documentation are available on the website ([link](#)).

### How to submit your application

Applications should be submitted by the online procedure, available on the notice webpage ([link](#))

**Or submit here:**

**Link:** <https://apps.unive.it/domandeconcorso-en/accesso/dais2020cortesiferrara>

The candidate, after the uploading, will receive a submission number and an e-mail acknowledging receipt of his/her application.

The candidate, if necessary, could access the procedures for updating any data and materials by the link provided by the e-mail, in any case any updates must be made no later than the deadline **19/11/2020 h. 12.00 Central European Summer Time.**

Please note that the University can be contacted for any support needs by the candidate until 24 hours prior to the deadline.

Please note that in case of an high number of applications and / or weight of the materials loaded by the candidates the system might become slower, Therefore it is suggested not to start the process close to the deadline.

**NB:** the University does not take on responsibility for wrong or late communication of addresses, nor for any communication problem not depending on the University.

### Evaluation

Up to 100 points, specifically:

For qualifications, publications and possible tests, from 0 to 60;

For interview, from 0 to 40.

### Selection procedure

Short-listed candidates will be invited for interview on **24/11/2020 h. 17,30** Central European Summer Time. The interview will be held in remote only. Further details on how to connect online will be published alongside the convocation notice on **23/11/2020** ([link](#)).

### The interview:

The interview questions will cover:

- Static Analysis
- Formal Methods



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- Abstract Interpretation
- Good knowledge of Italian (in case of foreign candidates)
- Good knowledge of English

### Information and contacts

Candidates may find further details about the application process and the research project in the official call published on the following ([link](#))

For further information please contact Prof. Cortesi Agostino [cortesi@unive.it](mailto:cortesi@unive.it) - dott. **Pietro Ferrara**  
[pietro.ferrara@unive.it](mailto:pietro.ferrara@unive.it)

Venice,

The head of the Department of  
Scienze Ambientali, Informatica e Statistica  
Prof. Salvatore Orlando

Digitally signed