Global@Venice
Post-doc Fellowship at Ca' Foscari University of Venice

"Expression of Interest" for Global at Venice - call 2021

1. Interested institution (legal person):
Ca' Foscari University of Venice

2. Department/Centre:
Department of Environmental Sciences, Informatics and Statistics

The Software and System Verification group at Ca' Foscari University of Venice (https://ssv.dais.unive.it/) is a research team focused on static analysis and its applications. The group (https://ssv.dais.unive.it/people/) comprises a full professor (Agostino Cortesi), two tenure-track assistant professors (Pietro Ferrara and Stefano Calzavara), a researcher (Alvise Spano'), and several postdocs (Vincenzo Arceri, Mohammad Imran Alam) and PhD students (Gianluca Caiazza, Martina Olliaro, Luca Negrini, Zubair Ahmad).

The group is currently active in several projects (https://ssv.dais.unive.it/projects/) applying and extending static analysis to various contexts such as blockchain smart contracts, IoT systems, robotic software, and string values.

One of the main projects of this group is the design, formalization, development and maintenance of LiSA (Library for Static Analysis - https://github.com/UniVE-SSV/lisa), a library aiming 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.

3. Position, scientific requirements, topic, scientific panel:
Position:
Post-doc Position

Scientific requirements:

PhD in Computer Science
The fellow should have experience in software engineering, static analysis and its application to the detection of security vulnerabilities and privacy leakages.
The fellow should have leadership abilities and international experience in research.

Topic(s):
We are interested in proposals in one of the following Scientific Panels covering the following topics:
1) Static Analysis
2) Software Engineering
3) Cybersecurity
4) Formal Methods

Università Ca'Foscari Venezia

Scientific Panel:

X PE - Physical Sciences and Engineering
□ LS - Life Sciences
□ SH - Social Sciences and Humanities

4. Contact person:

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