

Critical Systems Engineer

Location: **Giugliano in Campania, Naples, Italy**

Available positions: **1**

Description

SESM, a private research centre part of Finmeccanica Group, is looking for **one researcher** to recruit in the framework of the Marie Curie IAPP "CRITICAL-STEP" project. Marie Curie fellows enjoy good salaries and working conditions, career development opportunities and work-life balance.

Work activities will be agreed between the researcher and SESM, they will last **24 months** beginning September 2010.

CRITICAL-STEP project aims at developing strategies and methods for evaluating and assessing the dependability of large-scale dependable software systems, based on the use of Off-The-Shelf (OTS) software components, especially oriented to the aerospace and SOA based systems. The work will be carried out jointly with experienced researchers at SESM.

Long-term strategic objectives and challenges are the followings:

- Developing tools (e.g. fault-injection, qualitative and quantitative analyses) for evaluating the robustness and dependability levels of OTS components in Safety Critical Systems (SCSs), to improve the processes of OTS selection/integration and assessment within a complex system or as a basis for system qualification/certification;
- Developing appropriate techniques/mechanisms and tools for on-line monitoring, diagnosis and dynamic reconfiguration of SCSs in order to assure a defined and standardised safety level during the SCSs' operational phase;
- The safety/dependability properties assessed shall ensure development of highly competitive, dependable, robust and certifiable safety critical software systems for both public and private end-users worldwide.

Essential Skills & Experience

The ideal candidate has a PhD/MBA in Computer or Telecommunication Engineering.

Candidates should have proven experience in software design, development and testing.

Also, it is desirable to have:

- Knowledge on on-line diagnosis of faulty software behaviors;
- Knowledge on dynamic system reconfiguration strategies (in the presence of faults);
- Knowledge on on-line monitoring of embedded systems considering fault detection and characterization;
- Knowledge on embedded system design.

Desire to learn, research and keep updated on the state-of-the-art on these fields is fundamental.

Programming experience using Java and C/C++ is valued.

Knowledge on Software Engineering practices will be valued, as well as practice with Linux and cluster systems.

The candidate must be able to work independently, must have excellent documentation skills and master of the English language.

Eligibility criteria

According to Marie Curie rules, to be eligible the researcher must simultaneously fulfil the following criteria at the time of appointment by SESM:

a) Nationality

The researcher may be a national of a Member State of the Community, of an Associated State or of any other third country.

b) Mobility

The researcher shall not be Italian. In the case of a researcher holding more than one nationality, he/she will be able to be hosted by SESM if (s)he has not resided in Italy during the previous 5 years.

At the time of appointment, the researcher may not have resided or carried out his/her main activity in Italy, for more than 12 months in the 3 years immediately prior to his/her appointment under the project. Short stays such as holidays are not taken into account.

c) Qualifications and research experience

To be eligible, the researcher must be an experienced researcher.