Research positions at the Real-Time Systems Laboratory, Scuola Superiore Sant'Anna

The Real-Time Systems Laboratory of Scuola Superiore Sant'Anna (http://retis.sssup.it), one of the leading research groups in Europe in the field of real-time and embedded systems, is offering **1 post-degree** and **2 post-doc research positions** in the area of *Operating System support for time-sensitive applications on multi-core and many-core platforms*. We look for passionate researchers that wish to build a strong academic and industrial curriculum.

The position will be financially supported by the S(o)OS FP7 European Project (Service-Oriented Operating Systems, Grant Agreement n. 248465).

Why you should apply

These positions constitute an excellent opportunity for working at the Real-Time Systems Laboratory of the Scuola Superiore Sant'Anna, in an international highly competitive and innovative research environment. The post-doc will have the opportunity to work in an EU project, submit (and hopefully publish!) research papers in the area of Real-Time Systems and Operating Systems and build a strong research curriculum.

Required expertise

Potential candidates must possess a MSc or PhD degree (for the post-doc), or a Bachelor degree (for the post-degree) in *Computer Engineering* or *Computer Science*. Essential pre-requisites are:

- good knowledge of both written and spoken English;
- knowledge of Operating Systems, familiarity with the Linux OS;
- good expertise in C/C++ programming;
- knowledge of basic real-time scheduling techniques;
- knowledge of hardware architectures, caches, processor privilege levels, memory protection.

Good knowledge about (and expertise with) the following topics are optional (they constitute a plus):

- software design and programming;
- kernel-level programming (Linux or other OS);
- multi-core synchronization issues and parallel programming;
- OS virtualization mechanisms;
- formalisms for computing systems modeling;
- stochastic modeling of networks and systems;
- network protocols.

Also, research records, such as publications and participation to national or international research projects, constitute a plus for the evaluation.

Short description of the S(o)OS project

More and more cores are being integrated into one single chip and more and more machines of this type are getting connected with increasing bandwidth. Processors are becoming heterogeneous and reconfigurable, allowing for dynamic adaptation to specialized needs. Existing Operating Systems and programming models struggle to cope with this kind of platforms.

The Service-oriented Operating Systems (S(o)OS) Project addresses the needs of future terascale distributed systems by building on service-oriented architectures (SOA) and on the strengths of Grids. It investigates on new paradigms to make an efficient use of resources, across all layers: programming models, compilers, middleware, Operating Systems.

More information is available on the project website: http://www.soos-project.eu.

Where and When

The work will be carried on at the Real-Time Systems Laboratory of Scuola Superiore Sant'Anna, in Pisa (Italy), and it will span a 1-year time-horizon starting from (approximately) September 2010.

How to apply

In order to apply for this position, the candidate should send an e-mail of interest to Dr. Tommaso Cucinotta, including his own Curriculum Vitae and a 2-page research statement, describing his research interests, *before July, 31st 2010*:

e-mail: `t.cucinotta at sssup.it`

About the Scuola Superiore Sant'Anna

The Scuola Superiore Sant'Anna of Pisa (Italy) is a public university institute working in the field of *applied sciences*. The Social Sciences field includes Economic Sciences, Legal Sciences and Political Sciences. The Experimental Sciences field includes Agricultural Sciences, Medical Sciences, and *Industrial and Information Engineering*.

More information is available on the institution website: http://www.sssup.it.