

## **AllTeK Innovation S.r.l.**

All Technologies And Knowledge for Innovation

Project: ESN-STM  
FP7 - Marie Curie Actions  
Industry-Academia Partnerships and Pathways (IAPP)

Trieste, July 22, 2014

### **Open position**

#### **Envisaged recruitment period:**

1 September 2014 – 1 September 2015

#### **Description**

A postdoctoral position is available in the laboratory of Alltek Innovation S.r.l., Italy, a R&D company in the fields of measurement methods, instrumentation and sensors.

The research will be conducted in the electronic and software development laboratory ( In Trieste, Italy) with advanced instrumentation for R&D in the field of new sensors, instrumentation and signal acquisition and processing (including RF).

The activity is framed in the project FP7-IAPP ESN-STM. The objective of the ESNSTM ( Electron Spin Noise - Scanning Tunneling Microscopy) project is to develop an SPM technique which is capable of identifying the type of atom which is under the tip while tunnelling. ESN-STM is an emerging technique that is capable of single spin detection through modulation at the Larmor frequency of the tunnelling current. The purpose of the studies proposed is to further develop the technique of (ESN-STM) to the level that it will provide chemical contrast at the single atom and at the single molecule levels. For more information, please go to <http://in.bgu.ac.il/en/Labs/esn-stm/Pages/default.aspx>

The researcher will be asked to collaborate in the development of new techniques and methods for the detection of radiofrequency signals and in the design of new control systems for a Scanning Tunneling Microscope, supporting the STM prototype development.

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*Type of contract:* temporary ( 1 year), Full time (40 hours per week)

#### **Required skills**

The qualified applicant will be an Electronic Engineer, with a Ph.D. or research experience of more than 4 years and less than 10 years in Electronic Engineering or Physics, or related fields, not working in Italy more than 12 months in the previous 3 years.

Experience in analog electronics, in research and design of electronic systems and circuits (in particular in RF field), ability in the use of measurement instrumentation, strong experimental skills

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are required.

The ideal candidate is an experienced post-doc with strong motivation to work in a multidisciplinary field in a continuous collaboration with engineers and scientists. Knowledge on STM systems will be appreciated.

*Languages:* fluent English, Italian is a plus

### **Required documents**

Interested applicants are required to submit:

- Curriculum Vitae - Include list of publications
- Cover Letter - Indicate interest in postdoctoral position
- Proof of Ph.D. (if owned ) - Attach copy of diploma

For information or to apply for the position, please email questions or requested documents to:  
[info@alltekinnovation.com](mailto:info@alltekinnovation.com)