

Id 4216- CALL: *Analyzing and tuning energy conversion and charging processes on artificial and biological surfaces*

Position and grant

Scuola Superiore Sant'Anna announces a call to assign a Research Fellowship to perform research activities related to the scientific field CHEM-02/A - Physical Chemistry, at the Institute of Biorobotics. The gross amount of the fellowship is €19.367,00. The present fellowship cannot be cumulated with other fellowships and grants except those aimed at financing a period of stay abroad necessary within the research activity. The duration of the research fellowship is 12 months, renewable in case of positive evaluation of the research activities performed.

Research Activity

Analyzing and tuning energy conversion and charging processes on artificial and biological surfaces.

The winning candidate will analyse charging processes via liquid-solid and solid-solid contact electrification on functional artificial and biological surfaces. The research is part of the ERC Consolidator project EpiC that tackles electrification phenomena and their impact across disciplines of materials science, energy harvesting, robotics, and biology. The call's specific task is using ultra-precise current measurements, surface chemical analytics, atomic force microscopy, and high-speed videos to analyze how dynamic charging events occur on living plant leaves exposed to water droplets and how chemically functionalized artificial materials can be used to tune and exploit them. The ideal candidate has experience in one or more of the following fields: materials science, surface physics, electronic engineering, robotics with interest in material properties, or analysis of plant surfaces and is highly motivated to work in a multidisciplinary team at the forefront of science.

Admission Requirements

Applicants must hold a Master Degree in Biomedical Eng, Electronics Eng., Material Science Eng, Physics, Biology, Chemistry or equivalent.

Application and attachments

The candidate is requested to apply online at <https://www.santannapisa.it/it/assegni-di-ricerca-e-selezioni-incarichi-esterni/istituto-di-biorobotica-analizzare-i-processi-di> by writing his/her email address in the field "Proceed to enrollment"; the candidate will be redirected to the registration page and have the possibility to apply following an English form after selecting "Read this page in English".

In case of difficulties, please contact the Administration Office (Tel. +39-050-883.254/575, e-mail assegniricerca@santannapisa.it).

Required attachments (pdf format):

- copy of a valid identity document (Passport);
- copy of the scientific-professional Curriculum Vitae, signed and dated (please use the EU format);
- copy of all academic titles (MSc/MA Degree, PhD ...) and copy of the MSc and or PhD thesis and of all publications and other elements which can be useful for the evaluation (these documents must be saved in a zip folder);
- Substitute declarations (attachment B and C) to be downloaded during online application, filled, signed and uploaded;
- A list of all the attached documents, signed and dated.

The candidate must indicate his/her status, personal information and qualities in the curriculum vitae. Particularly, he/she must also analytically indicate studies completed, qualifications earned, publications and/or patents, services provided, functions performed, the positions held and any other scientific, professional and educational activities that may have been performed, listing exact references for each qualification indicated.

Academic and professional qualifications must be self-certified by the form at Attachment B or submitted in copy accompanied by a declaration of conformity to the original, pursuant to Presidential Decree no. 445 of 28 December 2000, using the form at Attachment C. Other qualifications, theses and/or publications may be submitted in their original form or in copy accompanied by the declaration in lieu of notarized affidavit using the form at Attachment C.

Selection method and ranking list

The selection is based on the assessment of qualifications and an interview for a total of 100 points, of which 50 points are for the assessment of qualifications and 50 points are for the interview.

Assessment of qualifications:

- 1) Academic qualifications: 30 points
- 2) Scientific publications: 5 points
- 3) Research activity related to the topic of this Call in public or private organizations: 15 points

The candidate will be admitted to the interview if he/she obtains at least 30 points in the evaluation of the titles and will pass the interview by obtaining at least 30 points.

A ranking list of eligible candidates will be drawn up by the examination committee at the end of the selection.

Deadline for applications: 30.09.2024, **12:00 p.m. CEST.**

Interview: 10.10.2024.

Resident abroad applicants may also ask to hold their interview in their country of residence via conference call.

Formalization of the fellowship and contract termination

Scuola Superiore Sant'Anna will contact the winner at the email address provided for the selection, offering him/her the fellowship and asking to reply before the beginning of the fellowship.

In case you need information or help in submitting your application, please contact the Personnel Office, +39.050.883.254/258, email assegniricerca@santannapisa.it.

The official version of this Call is available only on the Italian page.