

ANNOUNCEMENT OF PUBLIC SELECTION FOR 1 RESEARCH GRANT **(Italian law No.240, Art.22, 30 December 2010)**

Description

The Scuola Normale Superiore announces a selection, based on work to date and interview, for 1 research contract, as part of the research project MUR_PRO3_2021-23_CONG_RIC_BENZI “*Numerical STability of Neural Dynamical Systems*”, within the programme PRO3 2021-23.

The research is centered on the analysis and training of stable neural dynamical systems. The successful candidate will collaborate with faculty members at GSSI and SNS, developing novel techniques and algorithms for neural networks defined via nonlinear systems of ODEs and PDEs, combining techniques from Numerical Analysis, Network Science and Machine Learning. The successful candidate will carry on the research activity the first year at GSSI in L’Aquila and the second year at SNS in Pisa.

Duration of the contract: 2 years

Annual gross remuneration, inclusive of all taxes: € 30,000

Application deadline: 12 September 2022.

Information about the selection procedure can be found below. Applicants are advised to read the official announcement (*Bando*) and to follow exclusively its detailed instructions should they decide to apply.

Requisites

Applications are invited from candidates who have completed a PhD in Mathematics, Computer Science, Physics who will complete it by the effective date of the contract or, in any case, by 30 September 2022. Applicants who have completed the aforementioned degrees abroad (or who will complete it by 30 September 2022) may also apply, if that degree is recognized as equivalent to the corresponding Italian degree.

Knowledge of English language is also required to carry out the research activity.

Research experience in one or more of the following areas is also relevant, but not mandatory:

- numerical linear algebra and matrix theory;
- numerical methods for dynamical systems;
- numerical optimization and applications;
- matrix methods in systems theory and data science;
- mathematics of machine learning and compressed sensing;
- graph theory and network science.

How to apply

Applicants with all the aforementioned requisites who wish to participate in the selection process must submit:

- a) their application, using the attached form (**Att. A - Application form**), written on paper with their original signature under penalty of exclusion (unless applicants choose to send their application form using a PEC e-mail address);
- b) a copy (non-authenticated) of a valid identification document;
- c) a signed and up-dated curriculum vitae containing a detailed description of their educational career and professional experience;
- d) publications, including their PhD thesis, and any other document that they believe may be useful to the assessment of their application (it is mandatory to attach all publications that applicants

intend to submit for assessment by the Commission). The publications must be provided exclusively on a digital storage device (cd, USB flash drive etc.), in pdf format. For those unpublished texts accepted for publication, applicants must include the relative document in its final form and the publisher's certificate or a detailed substitute statement of affidavit confirming that the relative text has been accepted for publication (please use Attachment B);

- e) a signed list of the submitted publications.

If the application is presented directly to the “Ufficio Protocollo” [Documents Registry Office] of the Scuola Normale or sent by registered mail or courier, the digital storage device must contain also a scanned copy of the application, the curriculum vitae and the list of publications.

In order to submit the application and documentation listed above, applicants must use one of these options:

- a) applicants can present the application form and documentation directly, during office hours (for information on opening hours please contact protocollo@sns.it), to the “Servizio Archivio, Protocollo e Posta” [Documents Registry Office] of the Scuola Normale, located at Via del Castelletto, n. 11, 56126 Pisa (Italy);
- b) applicants can send the application form and documentation by registered mail with acknowledgment of receipt or courier to the following address: Ufficio Protocollo della Scuola Normale Superiore, Via del Castelletto n. 11, 56126 Pisa (Italy). In this case, it is recommendable to write on the envelope “*Application to research grant Numerical STability of Neural Dynamical Systems*”;
- c) applicants can send the application form using the electronic mail only if they possess a personal certified e-mail address (the Italian PEC - Posta Elettronica Certificata). In this case, they should send the application form to the address protocollo@pec.sns.it.

If applicants send their application via PEC - Posta Elettronica Certificata, the presentation of documents and publications on paper, CD or USB flash drive is not requested.

Any candidature sent from a simple e-mail address, different from the one described above, will not be accepted.

No other delivery method will be accepted.

In the online application, applicants may also indicate up to 3 experts in the field of research, that they will contact asking them to send a letter of reference to the following e-mail address: job.opportunities@sns.it by 23.59 (Italian time) on 16 September 2022.

Interview

The Committee can decide to conduct face-to-face interviews or online interviews with the admitted applicants. In this second case, the Committee will indicate also the video conferencing software platforms to be used (for instance Skype or Google Meet).

Anyway, even if the Committee chooses to conduct face-to-face interviews, applicants in the following conditions can request an online interview: applicants who live permanently outside Italy or are domiciled abroad for work/study or research, or who are unable to carry out an on-site interview for other different reasons.

Applicants in aforementioned conditions who wish to carry out the interview via video conference have to request it in the application form and they shall be equipped with the necessary and appropriate technical means for the online audio/video connection.

For the interview, applicants must show a valid identification document, otherwise they will not be permitted to take part in it.

Applicants who submit the wrong contact details, miss the connection at the date and time communicated by the Administration or fail to submit an identification document forfeit their right to participate in the interview and consequently in the selection process.

The Scuola Normale is not responsible for any technical problems that may arise during the interview.

For further information or questions about the application procedure and the relative documentation, or about the selection process itself, applicants can write an email to job.opportunities@sns.it