

ANNOUNCEMENT OF PUBLIC SELECTION FOR 1 RESEARCH GRANT

(ITALIAN LAW N. 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 named *“Mathematical Finance on Market Microstructure, networks and systemic risk”* as part of the research project entitled *“Finanza Matematica su Microstruttura dei Mercati Finanziari - Reti e rischio sistemico. Laboratorio di ricerca dedicato alla Finanza Quantitativa”* funded by Fondazione Cassa di Risparmio di Firenze.

The research activity will be focused on the mathematical and quantitative modeling and on the empirical analysis of financial markets of standard and of crypto-assets. Among the topics of interest there are: analysis of the sources of market instability at high and low frequency, the price formation process and efficiency also in DeFi markets, the propagation of systemic risk in systems modeled by financial networks, and the development of scenario generators with statistical and machine learning tools.

Duration of the contract: 2 years

Total gross remuneration, inclusive of all taxes: € 63,000

Deadline for applications: 18 January 2023 at 04:00 PM (Italian time)

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 meet the following requisites, which are both mandatory:

- a) to have completed a Master's degree in Banking, Finance and Insurance Economics; Economics of the Financial Markets and Institutions; Economics and Finance; Physics, Computer Sciences; Mathematics; Economic, Statistical and Social Sciences; Statistical and Economic Sciences; Statistics (in accordance with earlier Italian university regulations, or a second-cycle undergraduate degree as per the interdepartmental decree of 9 July 2009). Candidates who have completed the aforementioned degrees abroad may also apply, if said degrees are recognized as equivalent to Italian degrees;
- b) to have carried out at least 2 years of post-graduation research activity in the above-mentioned scientific fields.

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

Additional competence and/or experience relevant to the choice of the researcher: PhD in Mathematics, Applied Mathematics, Statistics, Physics, Financial Mathematics, Computer Sciences, Economics, Finance.

HOW TO APPLY

Applicants with all the aforementioned requisites who wish to participate in the selection process must submit their application exclusively online, using the online dedicated PICA procedure at the following link: <https://pica.cineca.it/sns>

The PICA app can be accessed via SPID, by choosing the institution “Scuola Normale Superiore” from the page of available federations; alternatively, the procedure will necessarily require an e-mail address in order to register into the system.

Once identified/registered and once procedure relating to this selection has been accessed, they must also upload as attachments, through the online PICA procedure, exclusively in PDF format:

- a) a non-authenticated photocopy of a valid identity document;
- b) an up-dated curriculum vitae containing a detailed description of their educational career and professional experience;
- c) publications, including their PhD thesis, and any other document that they believe may be useful to the assessment of their application. Each publication must occupy a space of not more than 30 megabytes. 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 A);
- d) a list of the submitted publications.

Until the deadline for the submission of applications, the procedure can save any data inserted in draft mode, enabling their modification and/or integration.

By the established deadline, applications for participation in the selection must be filled in definitively in all their parts, signed, on pain of exclusion, in one of the modes indicated by the online procedure, and submitted – together with all the attachments – by means of the same online procedure.

No signature will be required when submitting the application only if the SPID is used to access procedure.

The date of online submission will be certified by the PICA procedure; candidates will be notified of the receipt of their applications and their subsequent registration by means of two separate e-mail messages. Each application will be attributed a separate identification number (application ID) and a registration number, both visible inside the application; the application ID must be used, together with the call code **22-AR-SECSS06-FL-48**, for any subsequent communications.

Once applications have been submitted online and the confirmation of the online PICA procedure has been received, it will no longer be possible to access them in order to modify them; they may only be withdrawn using the function “ritira/withdraw” on the initial page of the procedure. Candidates can, however, submit a new application. After the deadline for submission, the online procedure will no longer permit access or the online transmission of applications. Please note that the online procedure may undergo temporary suspensions for technical reasons.

No other form of transmission of applications and/or documentation for participation in the selection is allowed other than those indicated above. Solely in the case of proven and certified technical unavailability of the online PICA procedure, the Scuola reserves the right to accept

admission applications and/or supporting documentation submitted in other modes, provided they are transmitted before the call deadline.

[Technical instructions](#) for completing the application form are available on the Scuola's website.

Reference Letters: In the online application, applicants may also indicate up to 3 experts in the field of research, to whom the Scuola Normale Superiore will ask to send a letter of reference to be received within 4 days following the application deadline.

INTERVIEW

The Committee can decide to conduct face-to-face interviews or online interviews with the admitted applicants. In any case, the online interview will be permitted to applicants who live permanently outside Italy or are domiciled abroad for work, study or research and request to conduct an online interview instead of a face-to-face interview. Applicants who are unable to carry out an on-site interview for further different reasons can request an online interview and the Committee will decide whether or not to permit it.

In case of online interview, candidates will have to comply with the [Guidelines](#) on how to conduct online interviews available on the website of the Scuola Normale, under penalty of exclusion.

The interview will focus on the the applicants' qualifications, on the scientific topics related to the research to be carried out, on the applicants' proficiency in English and on the following scientific issues: statistical and econometric models and their estimation, time series, financial networks, systemic risk, quantitative finance issues.

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.

CONTACT DETAILS FOR FURTHER INFORMATION

- a) For further administrative information about the application procedure and the relative documentation, or about the selection process itself, please contact the Servizio Personale a contratto (e-mail job.opportunities@sns.it).
- b) For any technical problems, candidates must use exclusively the link "[Per problemi tecnici contatta il supporto](#)" - "For technical problems contact the online help desk" - visualised in the section at the foot of the page of the web site <https://pica.cineca.it/sns/>