**Subject:** Directorial Decree extending the call for applications for Research fellowship **Neural networks models for pooled cross-sectional financial data across time, with application to housing pricing in Italy** - Università Ca' Foscari Venezia (Italian law 30 December 2010, n.240, art. 22)

The present document in English is to be considered as a mere summary of the main provisions of the notice of competition which is available in Italian at the following link: http://www.unive.it/data/12137/ The text in Italian is the official text of the notice of competition for all legal intents and purposes and, in the event of non-conformity with the present document, it shall prevail.

**THE DIRECTOR**

**OF THE DEPARTMENT OF ECONOMICS**

HAVING REGARD TO the call for applications for Research fellowship on **Neural networks models for pooled cross-sectional financial data across time, with application to housing pricing in Italy**, Tutor Prof.ssa Antonella Basso, published on the University's web pages and on the web pages required by the regulations;

WHEREAS no applications to participate in the selection process had been received by the deadline of the call for applications, at 2023-06-26;

WHEREAS, therefore, it is necessary to proceed with the postponement of the call for applications in order to select a researcher to carry out the activity in question;

**DECREE**

Art. 1 - to approve the extension of the deadline for the call for applications for Research fellowship on **Neural networks models for pooled cross-sectional financial data across time, with application to housing pricing in Italy**, to: **2023.07.17, h. 12:00 noon – local time**

Applications should be submitted by the online procedure, available on the notice webpage [http://www.unive.it/data/28825/](http://www.unive.it/data/28825/)


Art. 2 - The interview will be on **2023/07/24, at 10.00 AM.**

The short-list of the candidates admitted to the interview, or any postponement, will be published on the University's webpage on **2023/07/21** ([http://www.unive.it/data/28899/](http://www.unive.it/data/28899/)).

Art. 3 - All other provisions contained in the call for applications remain unchanged.
Research fellowship on *Neural networks models for pooled cross-sectional financial data across time, with application to housing pricing in Italy* - Università Ca' Foscari Venezia (Italian law 30 December 2010, n.240, art. 22)

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**Description**

The Department of *Economics* at Università Ca' Foscari Venezia invites applications for a fellowship in:

- **Title:**

*Neural networks models for pooled cross-sectional financial data across time, with application to housing pricing in Italy.*

- **Academic Discipline or disciplines specifically identified by the call** SECS-S/06
- **scientific coordinator and tutor:** Prof.ssa Antonella Basso
- **duration:** 12 months

**abstract:**

The main goal of the project is to study the adaptability of appropriate neural network models to a dynamical context which considers longitudinal data instead of time series data.

In finance, as well as in economics, several examples of cross-sectional data evolving over time can be found. For these data there exist observations related to different times (generally, with predefined periodicity) but not necessarily they concern the same observation units as, for example, over time some units can exit the sample and others can enter. In this regard, an important case study is given by the minimum and maximum prices of houses observed in the various Italian municipalities for different areas and real estate typologies. We intend to investigate a neural network model that can appropriately explain both the longitudinal data with their evolution over time and the dependence of the dynamics on the main macroeconomic factors.

It is believed that the study of such a neural network model, based on dynamical cross-sectional data, can be also usefully employed for other important types of economic and financial data that are characterized by an open sample "population" whose dynamics is influenced by external factors.
Who can apply

Prospective candidates are expected to hold a master's degree in the subjects of the research, or related disciplines.

Ca' Foscari encourages applications from researchers with positive evaluation in all the criteria in individual proposals such as Marie Skłodowska Curie Actions - Individual Fellowships/ERC Starting Grants/FIRB (Italian Fund for basic research investments)/SIR (Scientific Young Independence Research) or similar. Researchers having successfully completed Marie Skłodowska Curie Actions - Individual Fellowships/ERC Starting Grants/FIRB (Italian Fund for basic research investments)/SIR (Scientific Young Independence Research) or similar funded projects are warmly encouraged to apply.

Preferred qualifications

- doctoral degree;
- The completion of attending a doctoral program while awaiting the award of the degree;
- Knowledge of Machine Learning techniques;
- Good knowledge of one of the following programming environments: Python, Matlab, R;
- Postgraduate diplomas and certificates of attendance at postgraduate courses with research topics relevant to the subject of the check, obtained both in Italy and abroad; the performance of documented research activities at public and private entities with contracts, scholarships or assignments both in Italy and abroad with research topics relevant to the subject of the grant

Duration of contract: 12 months (approximately starting on September 2023).

Stipend: The research fellowship amounts to **Euro 20,267.00** per year, gross to the recipient, net of the expenses to be sustained by the Provider. The amount may be subject to adjustment in the event of variations in the law.

Deadline for submission of applications: by and no later than 2023.06.26, h. 12:00 noon – local time.

If the deadline is on Saturday or on holidays, the deadline is extended to the first working day thereafter.

How to apply:

Candidates should submit:

1. The application form;
2. A motivation letter (max 1 page) along with their CV in European format, duly dated and signed, both to enclosed as a one single.pdf file. (http://www.unive.it/pag/28830)
3. A copy of a valid identity document (either Identity Card or Passport);
4. If available, Evaluation Summary Reports of Marie Skłodowska Curie Actions - Individual Fellowships/ ERC Starting Grants/FIRB (Italian Fund for basic research investments)/SIR (Scientific Young Independence Research) individual proposals having passed all the evaluation thresholds;
5. If available, Doctoral degree;
6. Declaration on availability to held the interview in remote (https://www.unive.it/pag/28830) to be send via email at the following address: simar@unive.it;
7. (If available) Details of Marie Skłodowska Curie Actions - Individual Fellowships, ERC Starting Grants, FIRB (Italian Fund for basic research investments)/ SIR Scientific Young Independence Research funded projects;
8. All documents, qualifications and publications relevant for the selection procedure (please, see the notice http://www.unive.it/data/28825/).

All the schemes of the quoted documentation are available on the website http://www.unive.it/pag/28830.

How to submit your application

Applications should be submitted by the online procedure, available on the notice webpage http://www.unive.it/data/28825/

Or submit here:

https://apps.unive.it/demandeconcorso-en/accesso/dec-bassocallldip2023-05062023

The candidate, after the uploading, will receive a submission number and an e-mail acknowledging receipt of his/her application.
The candidate if necessary could access the procedures for updating any data and materials by the link provided by the e-mail, in any case any updates must be made no later than the deadline 2023.06.26, h. 12:00 noon – local time.

If the deadline is on Saturday or on holidays, the deadline is extended to the first working day thereafter.

Please note that the University can be contacted for any support needs by the candidate until 24 hours prior to the deadline.
Please note that in case of an high number of applications and / or weight of the materials loaded by the candidates the system might become slower, Therefore it is suggested not to start the process close to the deadline.

NB: the University does not take on responsibility for wrong or late communication of addresses, nor for any communication problem not depending on the University.

Evaluation

Up to 100 points, specifically:
For qualifications, publications and possible tests, from 0 to 60;
For interview, from 0 to 40.
Selection procedure

The interview will be on 2023/07/05, at 10.00 AM.

The short-list of the candidates admitted to the interview, or any postponement, will be published on the University’s webpage on 2023/06/30 (http://www.unive.it/data/28899/).

The interview will be held in remote only. Further details on how to connect online will be published alongside the convocation notice.

The interview will focus on knowledge of the following topics:

- Fundamentals of economics or finance, candidate's choice
- Machine Learning techniques
- Elements of coding in a language of the candidate's choice.

During the interview, the commission will check the candidate's proficiency in ENGLISH.

Information and contacts

Candidates may find further details about the application process and the research project in the official call published on the following webpage http://www.unive.it/data/28825/

For further information please contact: Segreteria Amministrativa del Dipartimento di Economia, phone number: 041-2349173; e-mail: simar@unive.it