

**Research fellowship on: Computer vision for monitoring of passenger flow in private and public spaces, PNRR iNEST Project, Interconnected North-East Innovation Ecosystem - Implementing Entity: University of Padua, - CUP: H43C22000540006**

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](#)) 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.

### Description

The “Centro temporaneo Progetto Ecosistema dell’Innovazione” at Università Ca' Foscari Venezia, in charge of the administrative management of the above mentioned project, invites applications for a fellowship in:

**Title:** Computer vision for monitoring of passenger flow in private and public spaces

**SSD or Research sector:** ING-INF/05

**Scientific coordinator or supervisor:** Prof. Andrea Albarelli

**Duration:** 24 months

**Abstract:**

Passenger flow (pax flow) scan is a relevant topic in the tourism field. Through this kind of analysis, several insights about terminal areas can be extracted, for instance, waiting times of passengers during queueing phases and their staying time in terminal areas.

This kind of data can help transport companies to increase the number of served passengers during crowded time slots and improve the efficiency of their service by reducing the amount of workforce during empty time slots. In literature, machine learning models have successfully been applied to the task of multiple object tracking (MOT) which can be specialised in the area of person tracking.

This kind of data allows us to build a history map of the movements of passengers. Moreover, when passengers are seen from a different point of view, person reidentification techniques can be applied to enrich the former data.

The research may be carried out in English.

The fellowship is intended to provide the successful candidate with the opportunity to pursue his/her own research while benefiting from the range of expertise at Università Ca' Foscari Venezia.

### Who can apply

Prospective candidates are expected to hold a Master's Degree in Computer Science or equivalent title obtained abroad and a professional scientific curriculum suitable for carrying out research activities.

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.

The following are considered preferential qualifications:

- the PhD;
- the completion of attendance at a doctorate course pending the award of the qualification;
- specialization diplomas and certificates of attendance at postgraduate specialization courses, obtained both in Italy and abroad; the performance of documented research activities carried out with public and private entities both in Italy and abroad;
- Competences in machine learning systems training and development;
- Experience in the field of computer vision techniques applied to people detection and tracking in crowded environments;
- Competence in data analysis and forecasting based on historical data.

**Duration of contract:** 24 months (approximately starting in February 2023)

**Stipend:** The research fellowship amounts to 21.401,93 Euros per year, gross percipient net of charges to be borne by the institution.

**Deadline for submission of applications: January 09, 2023, 12.00 noon CET.**

### How to apply:

Candidates must submit:

1. The application form
2. A motivation letter (max 1 page) along with their CV in European format, duly dated and signed, both enclosed as a one single.pdf file. ([link](#))
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) 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;
6. A declaration of availability to hold the interview online (template available at this [Link](#)), which is to be emailed to: [inest\\_pnrr@unive.it](mailto:inest_pnrr@unive.it)
7. Any other documents, qualifications and publications deemed relevant for the selection procedure (See the notice at this [link](#)).

Templates for the above-mentioned documentation are available on the University's website ([link](#)).

### How to submit your application

Applications must be submitted online, exclusively through the procedure that can be entered at the following link:

<https://apps.unive.it/domandeconcorso-en/accesso/inest09012023visione>

After submitting the application, the candidate will receive a submission number and an e-mail acknowledging receipt of his/her application.

The candidate can, if necessary, access the procedures and update uploaded data and materials via the link provided by the e-mail. Updates are only accepted before the deadline of **January 09, 2023, 12.00 noon CET**. Please note that the candidate can contact the University for any support needs until 24 hours prior to the deadline.

In case of a high number of applications and / or weight of the materials uploaded by the candidates the system might become slower, therefore it is suggested not to start the application 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 and publications, from 0 up to 60 points (42 points is the minimum score for admission to the interview)

For the interview, from 0 up to 40 points (28 point is the minimum score for passing the interview)

### Selection procedure

**Interviews will take place on January 19, 2023, at 10.00 am CET.**

The list of candidates admitted to the interview, the timetable, the venue of the interview, together with notice of any postponements, or changes in the time of the interview, will be announced on **January 12, 2023**, by means of a notice that will be published at the following [link](#). **It is the candidate's responsibility to check the admission results and, if admitted, to show up at the required date and time.**

The interview may ascertain knowledge of the following topic:

- Tourism and cultural policies
- Destination Recommended Systems
- Machine learning techniques

### **Information and contacts**

Candidates may find further details about the application process and the research project in the official call published at the following ([link](#))

For further information please contact CESA, email: [inest\\_pnrr@unive.it](mailto:inest_pnrr@unive.it) (please note that from 27/12/2022 to 02/01/2023 included, the Offices will be closed for Christmas).