Research fellowship on Computer Vision for videosurveillance with stereo camera networks - 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). 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 Department of Environmental Sciences, Informatics and Statistics at Università Ca’ Foscari Venezia invites applications for a post-doc fellowship in:
**TITLE:** Computer Vision for videosurveillance with stereo camera networks  
**SSD:** INF/01  
**Tutor:** Proff. Andrea Albarelli Agostino Cortesi

**Abstract:** Video surveillance, even when carried out using Computer Vision, is almost exclusively done through cameras or networks of cameras with a traditional sensor. The introduction of stereoscopy, at the level of single sensor or network, can allow to obtain superior performances both in terms of the discriminability of the elements of the scene, which would be placed in a three-dimensional spatial context, and at an informative level, allowing to associate accurately to each object its orientation, position, speed and to reconstruct detailed spatio-temporal trajectories. Although studies have already been done in this sense, with this research we seek to advance the state of the art on three aspects. The first is the definition of trackable features that are particularly suitable for being reidentified both between stereo cameras, in the same temporal instant, and in the same camera, at successive temporal instants. The second is to define a general framework for the simultaneous matching in the spatial and temporal domain of specific features. The third is the use of machine learning techniques specifically developed to discern distinct objects in the spatio-temporal domain and to reconstruct coherent trajectories of the same object, even among multiple sensors in the network.

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 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 by 30/04/2018 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.

**Duration of contract:** 12 months approximately starting: **July 2018**

**Stipend:** The research fellowship amounts to **23.367,00** Euros per year, including taxes and social charges.

**Deadline for submission of applications:** 19/06/2018, 12.00 noon.
How to apply:
Candidates should submit:
1. The application form;
2. A CV in European format, duly dated and signed;
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. All documents, qualifications and publications relevant for the selection procedure (please, see the notice [link]).

All the schemes of the quoted documentation are available on the website [link].

How to submit your application
Applications should be submitted by the online procedure, available on the notice webpage [link]
Or submit here: http://static.unive.it/domandeconcorso-en/accesso/42618albarelli2018

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 19/06/2018, 12.00 noon.
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 held in any case on 21/06/2018, h. 12,00 a.m. (Rome CET) at the Department of Environmental Sciences, Informatics and Statistics, Ca’ Foscari University of Venice, - Scientific Center, Zeta Building - floor 1- Prof. Andrea Albarelli office, Via Torino, 155 – Mestre (Venice).
The short-list of the candidates admitted to the interview will be available on 21/06/2018, h. 11,00 a.m. (Rome CET) office Prof. Andrea Albarelli .
Any postponement, will be published on the University’s webpage [link].

Candidates will be required to demonstrate the following skills, knowledge and expertise:

The interview:
- Experience in research on topics related to the 3D data processing
- Experience in research on topics related to Machine Learning
Experience in technology transfer projects
- Good knowledge of English
- Good knowledge of Italian (in case of foreign candidates)

Candidates living farther than 200 Kms from Venice may ask to hold a telematic interview.

Information and contacts
Candidates may find further details about the application process and the research project in the official call published on the following (link)
For further information please contact Prof. Andrea Albarelli - email: albarelli@unive.it

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Prot. 30511/III-13
Venice, 29/05/2018

Il Direttore del Dipartimento di
Scienze Ambientali, Informatica e Statistica
Prof. Antonio Marcomini