Research fellowship on: “Modelling a trout farm using dynamic models and data assimilation methodologies” - 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: Modelling a trout farm using dynamic models and data assimilation methodologies.
SSD: BIO/07
Tutor: Roberto Pastres
Duration: 12 mesi
Abstract: The main goal of the research is the identification, calibration and assessment of the performance of a dynamic model of a typical Italian trout farm. The model will include the simulation of the individual growth of rainbow trout (Oncorhynchus mykiss) and of the processes which affect the dynamic of dissolved oxygen and dissolved nutrients, in relation to the input water quality and feed quantity/quality. The model will have to include data assimilation algorithms for recursive estimation of key parameters, on the basis of high-frequency data, concerning farm water quality and fish size distribution. The required data set will be provided by a trout farm, participating to the H2020 project, GAIN Green Aquaculture Intensification in Europe as end-user.

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
1. Prospective candidates are expected to hold a master’s degree in Computer Science, Environmental Science, Environmental Engineering, Mathematics, Physics, Statistics 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: January 2019

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

Deadline for submission of applications: 07/12/2018, 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: [https://static.unive.it/domandeconcorso-en/accesso/dais9118pastres3](https://static.unive.it/domandeconcorso-en/accesso/dais9118pastres3)

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 **07/12/2018, 12.00 local time**

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 **12/12/2018, h. 12,00 (Central European Summer Time)** at the Department of Environmental Sciences, Informatics and Statistics, Ca' Foscari University of Venice, - Scientific Center, Alfa Building - 3 floor - Prof. Roberto Pastres office, Via Torino, 155 – 30172 Mestre (Venice).

The short-list of the candidates admitted to the interview will be available on **12/12/2018 at the office** Prof. Roberto Pastres before the interview.

Any postponement, will be published on the University’s webpage ([link]).

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

<table>
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<tr>
<th>The interview:</th>
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<tr>
<td>- Dynamic Systems and their application in modelling ecological processes;</td>
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<td>- Calibration and recursive estimation methodologies;</td>
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<td>- Coding;</td>
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<td>- Good knowledge of English;</td>
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<td>- Good knowledge of Italian (in case of foreign candidates).</td>
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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. Roberto Pastres - email: pastres@unive.it

Rep. 1025/2018
Prot. 61744/III-13
Venice, 09/11/2018

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