

## ΑΝΑΡΤΗΤΕΑ ΣΤΟ ΔΙΑΔΙΚΤΥΟ



ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ  
ΥΠΟΥΡΓΕΙΟ ΑΝΑΠΤΥΞΗΣ ΚΑΙ ΕΠΕΝΔΥΣΕΩΝ  
ΓΕΝΙΚΗ ΓΡΑΜΜΑΤΕΙΑ ΕΡΕΥΝΑΣ ΚΑΙ ΤΕΧΝΟΛΟΓΙΑΣ  
ΙΔΡΥΜΑ ΤΕΧΝΟΛΟΓΙΑΣ ΚΑΙ ΕΡΕΥΝΑΣ  
ΙΝΣΤΙΤΟΥΤΟ ΠΛΗΡΟΦΟΡΙΚΗΣ  
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Αρ.Πρωτ. : 37273  
Ηράκλειο : 17/09/2020

**Call for expression of interest for one (1) position – Research Assistant  
in the Institute of Computer Science (ICS)  
Foundation for Research and Technology – Hellas (FORTH)**



**Position:** one (1) position – Research Assistant

**Project:** CALCHAS

**Desired starting date:** 01/11/2020

**Duration:** 3 months

**Location:** Heraklion, Crete, Greece

**Opening date:** 17/09/2020

**Closing date:** 02/10/2020

**Ref. :** RA\_1

### **Description**

CALCHAS aims to develop cutting edge technologies targeting three major factors towards the fully automated analysis of multi-source Earth observation data, specifically, (i) the fusion of observations from different sources and modalities, (ii) the efficient aggregation of the sampling scales associated with spaceborne and in-situ measurements, and (iii) the analysis of time-series of dynamic observations. To that end, the paradigm shifting signal processing and learning framework of Deep Learning will be utilized and extended through powerful mathematical tools and appropriate methodologies like supervised learning, generative modeling, and physics-based modeling, dramatically extending the current scope of single source data analysis. The developed framework will be employed for analyzing time-series of measurements from active and passive microwave and multispectral spaceborne imaging instruments and in-situ sensor measurements, targeting the high-accuracy spatial and temporal resolution enhancement for observations and soil moisture estimation.

The candidate will investigate and develop novel theoretical models of physics-driven machine learning algorithms for the analysis of Earth Observation time-series focusing on (i) the prediction of future observations based on historical data and (ii) the fusion of measurements from different modalities. The candidate is expected to employ modern libraries such as TensorFlow for realizing the developed methods in software. Furthermore, the candidate is expected to demonstrate the potential of the developed method of relevant datasets which may need to be compiled, including time-series of geophysical parameters like surface temperature and soil moisture.

**Required qualifications:**

- MSc in Physics.
- Prior experience in the machine learning.
- Knowledge of python programming
- Excellent knowledge of English.
- Excellent ability to work as a part of a team.
- Professional behavior.

**Desired qualifications:**

- Expertize in deep learning model for time-series analysis.
- Experience in programming environments (tensorflow and matlab).
- Experience in working with satellite-based Earth Observation data.
- Excellent organizational and inter-personal communication skills.
- Ability to work under pressure, attaining short and long-term objectives.
- Pleasant, discreet personality.

**Application Submission**

Interested candidates can submit their applications via <http://www.ics.forth.gr/jobs/en/> using the link “Apply for the position” under the announcement. Applications must include:

- Detailed CV
- Scanned copies of academic titles
- Scanned copies of any document referring to the required qualifications

**Contact Information:**

- For information and questions regarding the application and selection procedure, please contact Prof. Panagiotis Tsakalides (tsakalid@ics.forth.gr).

**Selection Announcement**

The result of the selection will be announced on the website of ICS-FORTH. Candidates have the right to appeal the selection decision, by addressing their written objection to the ICS secretariat within five (5) days since the results announcement on the web. They also have the right to access (a) the files of the candidates as well as (b) the table of candidates’ scores (ranking of candidates results). All the above information related to the selection procedure will be available at the secretariat of ICS-FORTH in line with the Hellenic Data Protection Authority. Access to personal data of co-candidates shall be limited to personal data (and relevant data) and supporting documents which have been the basis of the evaluation of the candidates for the specific post(s). Prior to the announcement of the personal data and/or documents of the co-candidates to the applicant, FORTH will inform the data subjects in an appropriate way.

**GDPR Disclaimer**

FORTH is compliant with all legal procedures for the processing of personal data as defined by the regulation EU/2016/679 on the protection of natural persons with regard to the processing of personal data.

FORTH processes the personal data and relevant supporting documents that you have submitted to us. Processing of that data is carried out exclusively for the needs and purposes of this specific call. Such data shall not be transmitted to or communicated to any third party unless required by law.

FORTH retains the above data up to the announcement of the final results of the call, unless further process and reservation is required by law or for purposes of exercise, enforcement, prosecution of certain one's legitimate legal rights' as defined in the Regulation EU/2016/679 and/or in national law.

We inform you that under the Regulation EU/2016/679 you have the rights to be informed about your personal data, access to, rectification and erasure, restrictions of process and objection to as provided by applicable regulation and national laws.

We acknowledge also to you, that you have the right to file a complaint to the national Data Protection Authority. For any further information regarding exercise of your personal data protection rights, you may contact the Data Protection Officer at FORTH at [dpo@admin.forth.gr](mailto:dpo@admin.forth.gr).

You have the right to withdraw your application and consent for the processing of your personal data at any time. We inform you that, in this case, FORTH shall destroy such documents and/or supporting documents submitted and shall delete the related personal data.