

## CALL FOR AWARDING RESEARCH FELLOWSHIPS WITHIN PROJECT GRANTS AND R&D INSTITUTIONS

### 1 Post-Doctorate Fellowship (Bolsa de Pós-Doutoramento)

1 Post-Doctorate Fellowship is opened at the **Fundação da Faculdade de Ciências da Universidade de Lisboa**, in the project *ERA-CLIM2/IDL, FP7 – contract nr. 607029*, co-financed by the European Commission under the Seventh Framework Programme, under the following conditions:

1. **Scientific Area:** Meteorology – Geophysical Sciences

2. **Requirements for admission:** PhD in Geophysical Sciences (priority given to Meteorology), Physics, Geographical Engineering, other courses with strong background in computing and physics.

Significant capability to program in HTML, XML, JavaScript, PHP, SQL and one of these languages: Fortran, C(++), Matlab or Python. Frequent use of both Windows and Linux operating systems is required. Previous ability to use DHTMLX or DHTMLXGrid is an advantage. Experience in working with large datasets is also required and knowledge of data formats NetCDF, HDF5.

Very good knowledge of written and spoken English is also an important asset.

Availability to remain until the end of the project ERA-CLIM2 (31<sup>st</sup> December 2016) is a priority.

Availability to perform meteorological observations and digitisation of old meteorological records.

3. **Work plan:** The ERA-CLIM2 project (2014-2016), the continuation of the ERA-CLIM project (2011-2013), coordinated by the European Centre for Medium-Range Weather Forecasts (ECMWF), and financed by EU's Program FP7 aims to build a new global reanalysis for the 20<sup>th</sup> century. The Instituto Dom Luiz (IDL), one of the project partners, has been recovering its meteorological archive started in 1854 which includes historical data in hardcopy format for the IDL station of Lisboa/Geofísico (the oldest Portuguese station operating continuously) and for several other posts in Portugal, adjacent Isles (Madeira, Azores) and former colonies. During the project, IDL is responsible for supplying ERA-CLIM2 with these datasets from 1900 onwards, already digitised, formatted and submitted to quality control tests. In ERA-CLIM2, IDL has expanded its activities by being also responsible for supplying digitised data for Chile (1950-1958). Currently other datasets are being digitised and formatted by IDL, such as the Spanish upper air data from 1912, the South China Sea (1900-1942) surface data, the maritime data for Chile (1955-1957), among others. Other groups in and outside the project are also recovering data at a Global scale. It has been deemed necessary to develop a global registry that would include all sources of historical data that can potentially be used as input in future reanalyses, and this task has been assigned to IDL. The aim is to build a website with the global registry that would be maintained by IDL and that would potentially be one of the Climate Change services of Copernicus managed by the ECMWF.

For this purpose the researcher will build the global registry, for surface, upper air and maritime data, using the appropriate web languages and tools indicated as requirements for this position. The starting point is the online metadata base already developed for ERA-CLIM by the University of Bern, which has supplied a copy of the code.

The researcher will also participate in the digitizing activities of IDL, by starting to recover Spanish upper air data for 1912-1960. Further work in this area will include surface and maritime data, according to the digitizing priorities defined by ERA-CLIM2.

The researcher will also be trained as an observer to join a team of 5 people that perform observations at the meteorological classical surface station of Lisbon/Geofísico, where the work will take place. During ERA-CLIM it was concluded that a training in meteorological observations helps to develop the recovery work of historical data, not only for Portuguese stations, but also for other foreign stations.

## CALL FOR AWARDING RESEARCH FELLOWSHIPS WITHIN PROJECT GRANTS AND R&D INSTITUTIONS

4. **Legislation framework:** A fellowship contract will be celebrated according to the regulations defined by FCT “Regulations for Advanced Training and Qualification of Human Resources”, in accordance with Law 40/2004, of 18 August, as amended and republished by Decree-Law No. 202/2012 of 27 August, and as amended by Decree-Law No. 233/2012 of 29 October and by Law No. 12/2013, of January 29, and Decree-Law No. 89/2013 of 9 July. And also by the FCT, I.P. Fellowships Regulation of 2013 approved by Regulation No. 234/2012, of June 25, as amended by Regulation No 326/2013 of 27 August 2013, in force ([www.fct.pt/apoios/bolsas/regulamento.phtml](http://www.fct.pt/apoios/bolsas/regulamento.phtml)).

5. **Place of work:** The work will be developed at *Instituto Dom Luiz* da Faculdade de Ciências da Universidade de Lisboa under the scientific guidance of Doctor Maria Antónia Valente.

6. **Fellowship duration:** This position is initially opened for 12 months and will begin on February of 2015. The grant contract may be renewed to 11 more months, until one total duration of 23 months, or eventually until the end date of the project, in accordance with the provisions of Regulation of Research Fellowships from the Foundation for Science and Technology, I.P. – 2013.

7. **Monthly allowance:** The fellowship amounts to € 1495, according to table values of the fellowships awarded directly by the FCT, IP. (<http://www.fct.pt/apoios/bolsas/valores>).

The grant holder will have a personal accident insurance and, if not covered by any social protection scheme can ensure the right to social security through adherence to the voluntary social insurance scheme, pursuant to Código dos Regimes Contributivos do Sistema Previdencial de Segurança Social.

The fellowship will be paid monthly by bank transfer

8. **Selection method:** Candidates will be assessed by the quality of their CV (60%) and possibly also an interview (40%).

The Selection Committee reserves itself the right not to award the grant if none of the candidates presents an adequate profile for the job.

Applications will be evaluated according to the following criteria:

		Weight to apply to marks from 0 to 20
Curricular Evaluation	Academic evaluation	0.25
	Professional evaluation	0.25
	Programming and computing knowledge	0.4
	Spoken and written English capabilities	0.1
Total		1
Interview	Motivation to work on the proposed subject	0.4
	Team Integration capabilities	0.2
	Availability to develop the proposed work	0.4
Total		1

## CALL FOR AWARDING RESEARCH FELLOWSHIPS WITHIN PROJECT GRANTS AND R&D INSTITUTIONS

9. **Selection Committee:**

President: Maria Antónia Valente, Instituto Dom Luiz

1st Secretary: Ricardo Trigo, Instituto Dom Luiz

2nd Secretary: Célia Gouveia, Instituto Dom Luiz

*Substitute Secretaries: Carlos Pires, Instituto Dom Luiz, Departamento de Engenharia Geográfica, Geofísica e Energia, e Carlos da Câmara, Instituto Dom Luiz, Departamento de Engenharia Geográfica, Geofísica e Energia.*

10. **Publication/notification of results:** The final results of the evaluation will become public, through classification ordered list which will be posted at the entrance hall of the **Fundação da Faculdade de Ciências da Universidade de Lisboa**, located at the Faculdade de Ciências da Universidade de Lisboa, C1 bldg – 3<sup>rd</sup> floor, Campo Grande, 1749-016 Lisboa, and the selected candidate will be notified by e-mail.

11. **Deadlines:** This call for applications is open from 17 December 2014 to 21 January 2015.

12. **Application:** Applications may be sent via e-mail to [mavalente@fc.ul.pt](mailto:mavalente@fc.ul.pt), by attaching the following documents:

Letter stating the motivation for applying to the grant;

Curriculum Vitae;

Copies of First Degree and PhD degree Certificates, plus other additional degrees (Master);

Copies of certificates with the academic subject courses and respective marks;

Two recommendation letters and/or reference contacts;

Other certificates with additional training in computing, English or other courses relevant to the proposed work.

Applications may also be sent by mail to

Maria Antónia Valente  
Instituto Geofísico do Infante D. Luiz  
Rua da Escola Politécnica, 58  
1250-102 Lisboa  
Portugal