

NOTICE OF POST-DOCTORAL SCHOLARSHIP AWARD

Reference 01_2014_DSC

ICP-ANACOM has opened a competition to award a **Post-doctoral scholarship** in the context of the research project "Availability and Resilience of Electronic Communications Networks and Services", funded directly by ICP-Autoridade Nacional de Comunicações (ICP-ANACOM). Award of the scholarship will be governed by the following conditions:

Scientific Area: Electrical Engineering and Computer Science / Telecommunications.

Application Requirements: The scholarship is to be awarded to a holder of a PhD degree in Electrical Engineering, Computing or Information Technology, or in an equivalent area, with specialisation in networking, preferably obtained in the last six years from a reputed national or foreign academic institution. Operational proficiency in English is required.

Preferred Condition: The work plan will involve consultation of material that is considered classified, so that, all else being equal, the ability and willingness of the candidate to be accredited shall be considered a preferential selection condition.

Objectives and Work plan:

The research project will have the following objectives:

- To develop knowledge and tools to support decision-making at ICP-ANACOM, in the context of its remit;
- To promote the development of scientific and technological knowledge;
- To continue studies previously undertaken by ICP-ANACOM

The work plan shall form part of the activities undertaken by ICP-ANACOM's Communications Security Department, to characterise and evaluate the availability and resilience of electronic communications networks and services in Portugal. The elements considered relevant to this work include, in particular, physical components (e.g., interconnection circuits, active network elements, and physical installations), logical components of the communications infrastructure (e.g. DNS and BGP subsystems) and

electronic systems of services considered as critical (e.g. websites and logistical support services, such as email).

The work plan involves the completion of activities comprising:

- Development of methodologies and tools to characterise and assess the availability and resilience of electronic communications networks and services, including infrastructure and systems;
- Structuring of systems for the compilation and management of information on the physical components of Portuguese electronic communications networks and services and their deployment;
- Development of methodology and implementation of systems for monitoring resilience indicators of DNS and BGP subsystems with relevance to national electronic communications networks and services;
- Development of methodology and identification of electronic systems and services considered critical and for the study and monitoring of their availability and resilience, including connectivity.

Since this is an area that has only recently received systematic attention, the following references may be consulted (non-exclusively) as giving indication of the type of problems that may be considered:

- F. Alizadeh, R. Oprea, "Discovery and Mapping of the Dutch National Critical IP Infrastructure", NLnet Labs, August/2013.
- Wählisch, M., Schmidt, T. C., Meiling, S., de Brün, M., & Häberlen, T. (2010), "Towards a nation-centric understanding of the Internet," Proceedings of the ACM CoNEXT Student Workshop (p. 7).
- M. Wählisch, T. Schmidt, M. de Brün, T. Häberlen, "Exposing a nation-centric view on the German internet – a change in perspective on the AS level", Proc. 13th Passive and Active Measurement Conference (PAM2012), Mar/2012.
- F. Contat *et al.*, "Résilience de l'Internet français 2012", Agence nationale de la sécurité des systèmes d'information, Association Française pour le Nommage Internet en Coopération, Jun/2013.

Applicable legislation and regulations: The scholarship will be awarded pursuant to Law no. 40/2004 of 18 August (Estatuto do Bolseiro de Investigação Científica - Portuguese Statute of the Scientific Research Scholarship Holder) as amended and republished by Decree-Law no. 202/2012 of 27 August and in accordance with ICP ANACOM Regulation on the award of Research and post-doctoral scholarships.

Place of work: The work will be carried out, mainly, on the premises of ICP-ANACOM and may involve occasional travel.

Duration of the scholarship: The scholarship will be for a period of 12 months, commencing on 6 October 2014. The scholarship contract may be renewed up to a maximum of one or two semesters where a favourable opinion is given in the assessment at the end of the first semester.

Monthly value: The value of the scholarship is 1,495 euros, in accordance with the table of ICP-ANACOM scholarship values, which table is an integral part of the ICP-ANACOM Regulation on the award of Research and post-doctoral scholarships. Payment of the scholarship shall be made monthly by bank transfer.

Selection method: The base selection factor will be the quality of the candidate's curriculum, with a focus on work accomplished within the scope of this competition. Furthermore, the Selection Board may, at its discretion, require an interview with the candidate, which will be conducted in person or by videoconference or equivalent means.

These elements below will be valued on a scale from 0 to 100, as follows:

- a) evaluation of the candidate's curriculum and suitability of the candidate's profile to the work plan - 75%
- b) assessment of the candidate's letter of motivation in terms of the type of work to be performed - 25%
- c) in the event that it is considered necessary to conduct an interview with the candidate, this will have a total weight of 20%, and the weight of a) and b) shall be reduced proportionately, i.e. reduced to 60% and 20%, respectively.

Composition of Selection Board:

The candidate selection board shall have the following members:

- Professor Hélder Vasconcelos and Professor João Confraria (ICP-ANACOM);
- Professor José Brázio.

Dissemination/notification of results: The final results of the evaluation will be published in an alphabetically ordered list on ICP-ANACOM's website, and the selected candidate will be notified by email.

Application deadline and submission of applications: The competition is open from **25 August to 15 September 2014.**

Applications should include a letter of motivation accompanied by the following supporting documents:

- a) copy of the candidate's identification document, as well as residence permit, permanent residence certificate or certificate of status as long term resident, as applicable;
- b) certificate of further education qualifications obtained, with final classification,
- c) work plan to be developed;
- d) detailed Curriculum vitae
- e) list of publications and copies of the most relevant works.
- f) email address and contact telephone number

Applications which do not include all these items will not be considered.

Applications must be delivered and formalized by e-mail to the following address:

Bolsas@anacom.pt

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Lisbon, 21 August 2014