

## Research Fellowship (BI) in Integration of Humans in Cyber-physical Systems

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**Anúncio/Announcement:** A Research Fellowship (BI) is now available at Instituto Politécnico de Bragança, Portugal aiming the development of activities regarding the integration of humans in cyber-physical systems.

**Áreas científicas/Scientific Areas:** Industrial automation, human-machine interfaces

**Requisitos de admissão/Admission requirements:** Candidates will be admitted to the competition when demonstrating: (i) a PhD title in Electrical Engineering, Informatics Engineering or related fields; (ii) experience in human-machine interfaces; (iii) experience in user interface and mobile application design; and (iv) autonomy, accountability, oral and written communication capacities in a scientific context.

**Plano de trabalhos/Work plan:** The successful candidate will support tasks related to the integration of humans in cyber-physical systems, namely the development of proper mechanisms, e.g. based on augmented virtual reality. The developed tasks will allow the users to interact with the system in a seamless and transparent manner, e.g. to have access to the system/device information (e.g. the maintenance engineer verifying the historical data and recover procedures or a customer verifying the data measured and stored during a logistics task) using tablets, smart phones or other similar devices.

Such tasks will include (1) Elaboration of a state-of-the-art for integration of humans in cyber-physical systems; (2) Definition of relevant information to be handled in these processes (the use of ontologies may be required); and (3) Implementation of a test system for the small-scale production system hosted at IPB. The successful candidate is expected to collaborate in writing technical reports and scientific publications, as well as to explore novel approaches and tools related to the integration of humans in cyber-physical systems.

**Legislação e regulamentação aplicável/Legislation and regulations:** Research Grants Regulation of IPB, approved by FCT (Fundação para a Ciência e Tecnologia, I.P.).

**Local de trabalho/Workplace:** The work will be carried out at Laboratório de Controlo, Automação e Robótica, Polytechnic Institute of Bragança, in Bragança, under the scientific supervision of Prof. Paulo Leitão.

**Duração da bolsa/Grant duration:** The grant will be awarded for a period of 5 months (nonrenewable), due to start in October 1st, 2015.

**Valor do subsídio de manutenção mensal/Value of monthly maintenance allowance:** Monthly allowance will be 1495 euros, according to FCT grant regulations (<http://alfa.fct.mctes.pt/apoios/bolsas/valores>).

**Métodos de selecção/Selection methods:** Candidates will be assessed by the quality of their CV, mainly the academic evaluation, professional evaluation, expertise and knowledge in the areas of multi-agent systems and design of human-machine interfaces, motivation and spoken and written English capabilities.

The jury may not award the scholarship if the quality of candidates is lower than desired.

**Composição do Júri de Selecção/Composition of the Selection Panel:** Prof. Paulo Leitão (Chair), Prof. José Lima (Vogal), Dr. José Barbosa (Vogal), and Prof. José Augusto Carvalho (substitute member).

**Forma de publicitação/notificação dos resultados / Form of advertising/notification of results:** The final evaluation results will be published and the winning candidate will be notified by e-mail or telephone.

**Prazo de candidature e forma de apresentação das candidaturas / Deadline for application and presentation of applications:** The application period will be from 7th July to 20<sup>th</sup> July, 2015. Applications must be formalized by sending a letter of application/motivation together with the following documents: Curriculum vitae in English, copies of degree certificates (in the original language if Portuguese, Spanish, French, or English; in English otherwise), and other documents considered relevant by the candidate.

**Applications should be mailed to:**

Instituto Politécnico de Bragança  
A/c Prof. Doutor Paulo Leitão  
Departamento de Eletrotecnia  
Campus Sta Apolónia, Apartado 1134  
5301-857 Bragança  
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