

## Faculty Exchange Program: Report

Period of visit: Fall 2010; Host: Jonathan Aldrich

**Rui Maranhão**

Dept. of Informatics Engineering  
Faculty of Engineering  
University of Porto  
rui@computer.org

This visit was not only overly enriching professionally but also socially and culturally. From all the experiences, the most important one as a Visiting Faculty at the Carnegie Mellon University both experience, *in loco*, the excellent, vibrant, and overwhelming research environment as well as the cultural events offered by CMU (for instance, plays of the School of Arts and Drama).

One of my main goals was to develop a professional relationship with renowned academics that would lead to joint participation in future research projects as well as co-advise PhD students. This goal was fulfilled completely. Ultimately, together with Professor David Garlan, a proposal to National Science Foundation's Trustworthy Computing Program on software architecture-based fault diagnosis. A topic for a dual PhD in Computer Science (or Software Engineering) has also been defined, and we currently seek a suitable candidate to work on this topic. We have also delineated possible future projects, and we hope to submit another project proposal to, e.g., CMU|Portugal and/or the Luso-American Foundation. Moreover, and still as far as research is concerned, I have also participated in seminars, colloquia, and group meetings. In particular, I presented my work at the ISR's research seminar on November 29.

As far as teaching is concerned, I joined the teaching team of the undergraduate course 15-313 - Foundations of Software Engineering, led by my host at CMU, Jonathan Aldrich, and Bill Scherlis. I would like to stress a fundamental difference between teaching at CMU and in Portugal. In general, there is a low teaching load for the CMU research faculty: CMU supports this load by hiring teaching assistants (faculty also give teaching assistants a high degree of flexibility to make important decisions concerning the course). In addition, I have also followed other courses (e.g., from the Professional Masters of Software Engineering) in order to refresh my knowledge as well as understand the dynamics of these courses/programs. I hope to be able to use many of the good practices back at FEUP.

The faculty exchange program also gave me the opportunity to meet other Portuguese professors. In this respect, I would like to mention I met here in Pittsburgh José Maria Fernandes, Assistant Professor with University of Aveiro. We would like to materialize our common interests by organizing a seminar on Managing Software Development, featuring CMU experts. Hopefully, CMU|Portugal will support organizing such seminar, which we believe is of great interest for both academia and industry.

Being at CMU also provided me with the opportunity to learn more about many other interesting research topics. This is mainly due to the fact the large number of research talks in various fields that happen weekly at CMU.

In summary, this was overall a truly valuable, fruitful, and prolific experience. I would like to make the following suggestion for further improve the program. There is little – if not none whatsoever – interaction between people in different departments/areas. A way to improve the awareness among the CMU|Portugal members as well as alumni would be to organize a week seminar both in Pittsburgh and in Portugal (e.g., each week in a different university). Future perspectives are: (1) collaborating in projects and PhD candidate co-supervision and (2) sporadically visit CMU to further strengthen the relationships built during the faculty exchange.

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