



Faculty Exchange Program Final Report

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Host: David Garlan, Full Professor, ISR - Institute of Software Research, Computer Science School, CMU

Period: April, 2014 to July, 2014

“Better would be impossible!”

If I had to summarize my experience in USA in a couple of words, these would accurately reflect my stay from April to July.

My visit to Carnegie Mellon was a great opportunity to grasp the best practices of a top research group and understand the key factors necessary to achieve such success.

In this short report I briefly summarize the work developed and the experience gained during my stay in CMU. First of all I would like to thank Prof. David Garlan for supporting my visit and all the elements of Institute of Software Research: Bradley Schmerl, Javier Moreno, Gabriel Moreno, TJ Glazier, Jeffrey Gennari and many others. I would also like to thank the fantastic staff Margaret Gasdick, Sharon Blazevich, and Hellen Higgins for their support.

The objectives foreseen for this visiting period encompassed the following components: 1) Learning about Research Activities in the Institute of Software Research; 2) Researching; 3) Preparing common projects, collaborations and other activities; and 4) Attending lectures and Seminars. All those objectives were fulfilled during the visit because as part of Institute of Software Research, I was able to contact with several PhD and Post-Doc researchers, as well as other Professors from Computer Science School. I participated in research activities, meetings and brain storming. I learnt about research in software architectures, self-adaptive systems, data privacy and security. I learnt best practices concerning research, understanding the topics and research and how they are organized to achieve top results. I also planned for joint participation in future research projects.

To illustrate the fulfillment of the objectives, some of the activities that I take part during this period were:

- I attended the meetings of ABLE – Architecture Based Languages and Environments group, SAM – Self Adaptative Meetings and SEAMS practice.
- I presented the seminar “An Ideal Strategy to Improve Data Warehousing Performance” on May, 1.
- I attended various of seminars: “Compositional Analysis of Android Inter-Application Vulnerabilities”, “Enterprise Architecture Alternative Roadmaps: A cost/benefit flexibility perspective”, ...
- I attended a lecture on “Database Applications” by Andy Pavlo.
- I attended a thesis defense “Modeling Large Social Networks in Context” and a thesis proposal “Experience Graphs: Leveraging Experience in Planning”.
- I prepared three master thesis proposals.
- I wrote a paper “Applying Self-Adaptive Techniques to Big Data Systems” which will be submitted to a conference.

During my stay, I kept my activities as reviewer of many conferences and journals and also as a graduate students supervisor.

Furthermore, I was invited by Prof. Drew Davidson, Director of the Entertainment Technology Center (ETC) at Carnegie Mellon University to attend the week of students’ final projects presentations. I was also invited to give a seminar in Concordia University, Montreal, Canada.

In summary, my staying at CMU was a very fruitful and enriching experience that offered me the opportunity to get an insight on different teaching and research methodologies, allowing me to grow as a human being, professor and researcher. The rich and dynamic environment at Carnegie Mellon will certainly influence my future activities. In this vibrant environment I would like to highlight the spaces designed to discuss ideas with whiteboards everywhere, lounges, etc. and the experience to participate at Carnegie Mellon University's 117th Commencement Ceremony.

Now, in Portugal my goal is to incorporate some of the best practices that I found interesting in my classes and in the supervision of my students. This faculty exchange program had a strong impact on my activities and as future perspectives I will collaborate in projects and PhD, masters co-supervision, and internships with CMU.

Finally, I would like to acknowledge ISEC for my sabbatical license, CMU, and CMU Portugal program for supporting my visit and providing me with the opportunity for further research cooperation.

Coimbra, October, 2014