International Workshop on Distance Learning Support for Postgraduate Programs in Software Engineering (e-gradSE)

Itana M. S. Gimenes
Universidade Estadual de Maringá,
Departamento de Informática
Maringá (PR), Brasil, 87020-900
itana@din.uem.br

Leonor Barroca
Department of Computing
The Open University
Milton Keynes, MK7 6AA
l.barroca@open.ac.uk

Ellen Francine Barbosa
Universidade de São Paulo
Instituto de Ciências Matemáticas e de Computação
São Carlos (SP), Brasil, 13560-970
francine@icmc.usp.br

Abstract

This workshop aims at bringing together researchers and practitioners to present contributions and discuss strategies for distance learning software engineering postgraduate education.

1. Relevance

Distance learning is becoming a pervasive option in many traditional universities all over the world. For postgraduate programs in software engineering, in particular, there are opportunities created by distance learning that should be explored [2][7]. Software engineering is an area where theory and practice have to come together. However, industrial practice is not always in line with theory. Postgraduate programs in software engineering attract both young, and mature and experienced part-time students. Thus, the strategies to conduct these programs should fulfil the expectations of a divergent public as well as dealing with the challenges of understanding the state of practice and providing the means to advance the formation of future practitioners.

Resources available through distance education can contribute to narrowing the gap between theory and practice and to increasing communication between students, academics, and industrialists for more realistic case studies and/or experiments [5]. Some possibilities are: to conceive expert communities based on social networking facilities; to facilitate student projects proposed by industry; to support the planning, development and replication of research experiments with practitioners; and, to provide feedback to academics on the results of the application of theory. In addition, it is important to provide means to establish flexible and high-quality educational content, capable of stimulating the learners (and instructors as well), and effectively contributing to their knowledge construction processes in software engineering learning scenarios [1].

The discussions should take into account relevant initiatives to establish graduate software engineering curricula [3][4], and initiatives to define skills needs [6], and reflect on how to reconcile them with distance learning strategies.

2. Objectives

The goals of the workshop are to join software engineering academics and industrialists to present contributions and discuss strategies for distance learning software engineering postgraduate education. We are mainly looking for ideas that lead to a model that contributes to improving software engineering programs by:

(i)   enhancing relations between academics and industry;

(ii)   motivating (attracting) high quality people for postgraduate study in software engineering (both from industry and from young graduates);

(iii) identifying core abilities and skills to be developed in software engineering education; and,

(iv)   creating strategies for software engineering experimental studies taking advantage of an interaction between academics and industry.

3. Planned activities and format (3 hours)

The activities of the workshop are as follows:

- Part I – Express paper presentation (5 mins per paper) (~30 mins).
- Part II – Group discussions with groups divided according to the main topics dealt with in the papers (60 min).
- Part III – Plenary session – Group reports followed by an open discussion (90 min).

Participants will receive a worksheet to help structuring the discussion of papers. Authors will receive a presentation template to help summarize information in a uniform way in the time allocated.

4. Expected audience

We expected to attract participants from academia, and industry in the area of software engineering.

5. Brief biography of organizers

Itana Maria de Souza Gimenes is a professor of Software Engineering at State University of Maringá (UEM), Paraná, Brazil. Post-doctoral research at the School of Computer Science, University of Waterloo, ON, Canada (2005). Ph.D. in Computer Science at the University of York, Department of Computer Science, UK (1992). President of the Brazilian Computer Society (SBC) Committee of Software Engineering (CEES) in 2007-2008 and 1998-1999. She has lead several research projects, including international cooperation with the European Community. She is a program committee member of several national and international software engineering conferences. Current research interests include: software product line, component-based development, workflow management systems and business process management. She is taking a sabbatical year at the Open University in 2011.

Leonor Barroca, PhD, is a senior lecturer in Computing at The Open University, UK. Previously she has taught at Universidade do Minho, Portugal. Her research is in the Software Engineering area where she has published in international conferences and journals and been a member of international conferences program committees; she has recently been also carrying out research in the area of research skills development in distance education. Leonor

has co-chaired, in the Open University, the Virtual Mphil in Computing since its inception. In teaching, she has been involved with the production and teaching of many undergraduate and postgraduate distance education courses in software engineering; she is also involved with PhD supervision at a distance.

Ellen Francine Barbosa received her DS in Software Engineering in 2004, from University of São Paulo (ICMC-USP/Brazil). During her DS, she was a visitor scholar at Georgia Institute of Technology (GATECH/USA) and at University of Florida (UFL/USA). Since 2005, she is a lecturer at ICMC-USP. Her research interests are related to Computer Science and Software Engineering education and training, collaborative and distance learning, knowledge management, software engineering, software testing and validation, and software quality. She is member of several research projects, including international cooperation with the European Community – QualiPSo Project (Quality Platform for Open Source Software, IST-FP6-IP-034763).

References

[1] E. F. Barbosa, and J. C. Maldonado. Collaborative development of educational modules: a need for lifelong learning. In: G. D. Magoulas. (Org.) E-Infrastructures and Technologies for Lifelong Learning: Next Generation Environments, IGI Global, 2011 (To appear).

[2] L. Barroca, L. Rapanotti, and M. Petre. "Developing research degrees online", 3rd Annual International Conference of Education, Research and Innovation (ICERI 2010), Madrid (Spain), November 2010.

[3] Graduate Software Engineering 2009 (GSwE2009): Curriculum Guidelines for Graduate Degree Programs in Software Engineering (www.gswe2009.org), Stevens Institute of Technology, September 2009.

[4] CSEE&T 2010 Panels. GSwE2009: A New Set of Guidelines for Graduate Software Engineering Education, 23rd Annual IEEE-CS Conference on Software Engineering Education and Training (CSEE&T 2010), Pittsburg (USA), March 2010.

[5] L. Rapanotti, L. Barroca, M. Vargas-Vera, and A. J. Reeves. "deep|think: A Second Life environment for part-time research students at a distance", 10th IEEE International Conference on Advanced Learning Technologies (ICALT 2010), Sousse (Tunisia), July 2010.

[6] SFIA, Skills Framework for the Information Age (http://www.sfia.org.uk/), access December 2010.

[7] B. Quinn, L. Barroca, B. Nuseibeh, L. Rapanotti, J. Fernandez-Ramil, P. Thomas, and M. Wermelinger. "Learning Software Engineering at a Distance", IEEE Software – Special Issue on Software Engineering Curriculum Development, November/December 2006.