Team Projects in Computing Education

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To prepare computing graduates for professional careers, their education must provide them with “real-life” experience. Simply lecturing about and discussing all the software development phases is not sufficient preparation for a professional career. There are many tasks beyond those of core software development, for which students need training: project management, team building, software estimation and planning, progress tracking, and communication. Communication, in particular, has become a critical issue, since teams in modern software development projects are often multidisciplinary and distributed over cultures and time zones. Global and distributed development also make it more difficult to set up “real projects for real clients” courses, since there are a range of practical problems, which are difficult to simulate and/or control in an educational setting.

The aim of this special issue is to collect evidence-based information about team projects in computing education. The goal is twofold. On one hand, this information should help educators to improve the state-of-practice in computing education. On the other hand, it should bring forward research on various aspects related to the teaching and learning about team-projects.

We solicit contributions related, but not limited to, the following issues:

- Team building and team dynamics, in particular regarding multidisciplinary teams
- Distributed development
- Development of non-technical skills
- Project process definition and tailoring
- Instructional design and constructive alignment
- Studio-based approaches, Makerspaces¹ or other forms of project environments
- Real projects for real clients
- Curriculum issues and quality assurance
- Student and team assessment
- Problem-based learning
- Cognitive and psychological aspects of team project courses
- Collaborative learning
- Methods and tools to support team project courses
- Motivation

Preference will be given to contributions that provide some form of empirical evaluation.

A preliminary one-page abstract of the paper is due April 1, 2014. Feedback will be provided to authors by May 1, regarding relevance of the proposed paper with respect to the Special Issue. If invited, full papers submissions are due August 1, 2014, with publication expected in 2015. Submissions must be done via Manuscript Central (http://mc.manuscriptcentral.com/toce). In the cover letter, please indicate that the paper is for the Special Issue on Team Projects in Computing Education. More information about the TOCE review criteria can be found on http://toce.acm.org/authors.html.

Guest Editors

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¹ Makerspaces are creative learning environments that support the actual “making” of something by gathering knowledge, tools, ideas and projects in a common space, see for example http://makerspace.com/home-page.