
AC 2012-4559: PANEL SESSION: CASE STUDY TEACHING IN COMPUTING CURRICULA

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Panel Session –Case Study Teaching in Computing Curricula

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Abstract

The use of case studies is an effective method for introducing real-world professional practices into the classroom. Case studies have become a proven and pervasive method of teaching about professional practice in such fields as business, law, and medicine. Case studies can provide a means to simulate practice, raise the level of critical thinking skills, enhance listening/cooperative learning skills, and develop problem solving skills. Although the use of case studies in education has shown success in the above mentioned disciplines, it is yet to be adopted in any significant way in the computing education. Although many computing and engineering textbooks provide case studies to illustrate concepts and techniques, and there are various case study websites (e.g., <http://sciencecases.lib.buffalo.edu/cs/>, <http://www.afit.edu/cse/cases.cfm>), they often lack the following:

- Realistic artifacts (often space or intellectual property concerns do not allow one to provide a complete engineering artifact such as a design document or a project plan)
- Completeness (most are focused on some part of engineering practice, or on a single course)
- Ability to decouple from the intended use and apply in ways not intended by the author
- Techniques for integration into course activities,
- A scenario format that motivates student engagement in problem identification/solution.
- Guidance to the instructor on how to use the case study material

This panel session will explore central issues about the use of case study teaching: What is it? What are its advantages and challenges? Where and how should case study teaching be used in a computing curriculum? What works and what might not work? What cases study resources are available? In addition, to the panel discussion and Q &A, the session will engage the audience in a simple exercise related to a smart house case study (<http://www.softwarecasestudy.org/>).

Potential Panelists

Dr. Sushil Acharya, Robert Morris University
Dr. Steven Roach, University of Texas, El Paso
Dr. Salamah Salamah, Embry-Riddle Aeronautical University
Dr. Walter Schilling, Milwaukee School of Engineering
Dr. Massood Towhidnejad, Embry-Riddle Aeronautical University, Panel Moderator

References

1. Thomas B. Hilburn, Massood Towhidnejad, A Case for Software Engineering, *Proceedings of the 20th Conference on Software Engineering Education and Training (CSEET)*, Dublin, Ireland, July, 2007, 107-114.

2. Salamah Salamah, Massood Towhidnejad, Thomas B. Hilburn, Reporting on the Use of a Software Development Case Study in Computing Curricula, *Proceedings of 2011 ASEE Annual Conference & Exposition*, Vancouver, BC, June 2011.