

## *Call for participation*

# **Methods and results in Computing Education Research**

*PhD course organised by Laboratory of Software Technology, HUT, Finland*

Computing education research (CER) is a cross-disciplinary field that comprises computing – of course – as well as a wide range of other disciplines, for example pedagogy, psychology, cognitive science, learning technology, and sociology. The defining feature of CER, which unifies this diversity, is the intent to improve learning and teaching within computing, and thereby to contribute to computing itself. Research with computing education that is theoretically anchored both in pedagogy and computing can help to draw solid and significant conclusions about how students learn computing and thus how the subject ought to be taught.

When studying teaching and learning, it is important to take into explicit account the role and relevance of different, qualitative as well as quantitative, research approaches in CER, and to consider the nature of the results that can be reached with different approaches. Different research approaches brings the project down different roads, and leads to different forms of result. Thus, the research approach has to be carefully selected and the quality issues it brings with it has to be addressed.

For reasons as these, Laboratory of Software Technology offers the course *Methods and results in Computing Education Research*. The course discusses how research into the field is performed. Many of the research perspectives used in computing education research differ from the "objectivist" (or "positivist") perspective that is well known from the natural sciences. In the course we will investigate the nature of the insights that can be gained from these different research perspectives.

### **Reasons to take the course**

- It presents useful methods to do research in computing education and related fields, and does, in this way, support a high quality research in computing education.
- There are a large number of research questions that are better addressed by qualitative methods than with quantitative methods. When applying these methods in areas that are dominated by positivist research, it is vital that the methods used are well founded, used in a well-established research tradition and that the benefits and limitations of the methods are well understood.
- The course offers a different perspective on computer science, since it focuses on how others (such as students) understand computing.
- It offers ways of thinking that could be useful for those who will teach, talk about, or discuss computer science with non-computer scientists.
- The course questions what research is, and how it ought to be performed, by discussing the relationship between results and research methodologies as well as the role of the researcher.
- It is interesting and fun to discuss new ideas and to broaden one's mind.
- It can be "customized", in that the projects can be tailored to meet individual interests or requests.

### **Registration and further questions**

Please register at the web site: <http://www.cs.hut.fi/Research/COMPSER/ROLEP/methods-registration.html> by 15.1.2007 at the latest.

Course home page: <http://www.cs.hut.fi/Studies/T-106.5550/english.html>

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