# Providing a Seminar++: Innovation Seminars

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## General Terms

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## 1. INNOVATION SEMINARS

Seminars are an essential part of studying Computer Science. Students will typically read materials provided by the supervisor, find related materials, summarize them in their own words, and provide a coherent presentation - both as a talk and as a written document.

Despite good student attendance at our seminars, we wanted to improve several key aspects:

- The overall "theme" of the seminar should attract many motivated students and also be of interest to the supervising staff, for whom it is often merely a repetition of well-known papers or other literature.

- Students should be highly interested in "their" topic. This can be difficult to achieve with prepared topics, such as a selection of papers or book chapters.

- Supervisors should be able to help the students, but should also find their task interesting. This is unlikely for seminars based on well-known papers or book chapters.

- The seminar should spark new ideas and help in recruiting motivated students for follow-up work, such as a Bachelor or Master Thesis.

The idea we came up with is an "innovation seminar", offered since the summer term 2003. In this seminar, we provide only a general topic that changes in each iteration. We then ask our students to come up with an innovative idea to be presented in the seminar. "Innovative" here means that it must be reasonably new, unpublished, and unknown to the students and supervisors – it need not be able to

hold up for a patent application or a Ph.D. Thesis. The intensive discussion of the idea with the supervisors (usually Ph.D. students) who work in a related area, as well as the discussion with other participants during the seminar has often been highly productive and thought-provoking. The students are also asked to provide a S.W.O.T. analysis of their idea's *s*trengths, *w*eaknesses, marketing *o*pportunities and *t*hreats.

In each iteration, a few students find the unusual approach of the seminar and the need to come up with a new and "innovative" idea too difficult. However, most students have presented interesting ideas. At least six of these ideas have since been (partially) implemented in Bachelor or Master Theses - usually by the students who have proposed the ideas in the seminar. In fact, one of our former "innovation seminar" students now continues to work on her idea as a research assistant.

The innovation seminars have helped us improve all of the aspects outlined above - and shifted the supervisors' work to more interesting aspects. In a regular seminar, much time used to be spent on finding and preparing or copying appropriate literature. In the innovation seminar, the main time investment lies in discussing the "hot" (or not so hot) ideas offered by our students. While this may take more time than "just copying this book", we feel the time is well invested, as it leads to far higher student motivation - and is also spent with a far more interesting activity than copying or printing materials. The fact that we are discussing the *students'* own ideas with them means that they are usually highly motivated in these discussions, and may even become rather passionate in defense of their ideas - to a level we have not previously experienced in our seminars.

The critical aspect of this type of seminar is the initial phase. Here, many students need to be reminded occasionally to work on finding an idea that can be followed up. If the students are not helped at this stage, a significant number can drop out by default due to not having an idea to present. On the other hand, several students come to the seminar with a semi-reflected idea - which often develops in the time between reading about the seminar and the organizational meeting in the first week of the summer term.

The attractiveness of the innovation seminar is also reflected by the large number of registered students. The final presentations, consisting of 30 minutes of presentation and 15 minutes for discussion, often do not fit into one full working day. In the summer term 2008, 46 students have registered for the innovation seminar with a theme of "Exploring new worlds for teaching and learning".