

University of Waterloo
CS 860: Patterns in Strings
In-Class Presentation
Fall 2008

To obtain credit for CS 860, you are required to read papers on a topic and present it in class in a 30-50 minute presentation. Some possible topics and suggested papers to start with are listed on the course home page. You may choose a topic not listed, in the textbook, but please check with me first. You should *not* do the project on a topic that you have already studied. Doing the project on a topic which you will, in the future, do more work on (such as a thesis or essay) is fine.

Presentations will be on Fridays, beginning September 26. I will ask for volunteers for the presentations, but if no one volunteers I will assign dates.

Part of the goal of this project is for you to learn something about how to do research. The first step of your exploration is to learn what has already been done on the problem. On the course website I sometimes suggest a paper or two to get started, but you should not be content with just this. Trace back the citations in the listed paper to find out about earlier work. You should use any source of information you can think of. Check your text and the other reference books on the lists. Use the library: the library's online catalogue (Trellis), references such as Computing Reviews and Math Reviews, the internet, etc. Talk to people. Also try the CS bibliography at

<http://liinwww.ira.uka.de/bibliography/>

and MathSciNet at

<http://www.ams.org/mathscinet>

and Citeseer at

<http://citeseer.ist.psu.edu/>

and DBLP at

<http://www.informatik.uni-trier.de/~ley/db/>

Trace forward by using the "Web of Science" available on trellis - this lets you find papers that have cited the paper you are interested in.

How much information is enough? If your topic is well-studied and you only bother to look at one source (one paper or book) then you haven't done enough. (Even if the paper *claims* to have the ultimate solution, you should explore that for yourself.) On the other hand, if you collect a list of more than 10 papers, then you should probably narrow the field somehow, either by restricting the scope of the topic or the type of solution, or by focusing on the most recent or the most relevant work.

The second step of your exploration is then to make sense of the available results, judging which are most useful.

If you prefer a research-oriented approach, you may concentrate your efforts on trying

to solve an open problem. Such an attempt at original work is NOT required, but I would like to encourage it, and I will mark such attempts based on the efforts, not the results. Attempting original work does not excuse you from doing a literature search, but you should spend less time on the search (just enough to be sure you are attempting something new). Some open problems are given in the course notes and on Wednesdays in class.

For your presentation: you can choose to prepare something in powerpoint, in \TeX using the “beamer” package, or just on the blackboard. A handout is often helpful for people to follow the argument. Start with a general statement of the problem and motivation. Discuss, in a historical way, what has been done on the problem before. Then launch into your main discussion. There is no need to prove every result, but a talk should generally have at least one proof or two. Concentrate more on giving the main ideas than detailed technical results, and avoid case analysis when possible. Conclude by mentioning open problems.

You will be marked on depth of understanding displayed (50%), clarity (33%) and presentation details (spelling, arrangement of slides, etc.) (17%).