

CIS 879 Software Testing and Maintenance University of Delaware

Instructions for Research Paper Overview Presentations/Discussion Leadership

1 Format of a Class Meeting

In each class meeting, we will cover either one or two papers. The time will be divided as follows:

1. Each student arrive with typed PDP form in hand, if bringing one for that class period.
2. Two students present an overview the research paper for the day, with interruption for clarification questions as needed. This should take about 30-40 minutes per paper.
3. Two other students present a state-of-the-art timeline presentation and lead discussion of the context of the contribution and its impact. This should take about 10 minutes.
4. Class discussion and brainstorming which should last the remainder of the class meeting (30 minutes). It is expected that each student will ask at least one question, raise a point for discussion, or propose a new research idea/direction. Your participation in this discussion will be used for your class participation portion of the grade.

2 The Research Paper Overview Presentation

2.1 The Process

The research paper overview for a given paper will be led by a group of two students. The two students should decide how to divide up the responsibility of the presentation and discussion leadership evenly, and send email to Lori at least 1 1/2 weeks before the presentation day.

1. Read through the paper to be presented several times, taking notes on the following aspects:
 - What problem did the researchers investigate?
 - What was their motivation?
 - What approach did they take?
 - How does their contribution compare with the related work?
 - How did they evaluate their efforts?
 - What conclusions did they make based on their evaluation?
 - What limitations do they admit their approach has?
 - Any other limitations that you can see?
 - What do the authors see as future directions based on their work?
 - Any other future directions that you can see?
2. AT LEAST 1 WEEK BEFORE CLASS MEETING: Create an outline for a 40 minute overview presentation on the paper, focusing on the items above, and email the outline to Lori about 1 week before the presentation day. The outline should be a powerpoint presentation with the titles at the top of each slide, and a quick statement of the contents (including figures) planned for each slide.
3. After getting feedback from Lori, create slides in the final form. See the instructions for slide formatting below for more details.

4. For a Tuesday class, set up to meet with Lori before Thursday of the prior week. For a Thursday class, set up to meet with Lori at least by Monday of the same week. You should come with your final slides, for review. Plan an hour to review the slides with Lori.
5. Make the suggested changes to your slides, and email to Lori at least 2 days before your presentation.
6. Practice your talk aloud at least twice before presenting it on your scheduled presentation date.
7. If possible, spend 10-30 minutes going over your talk to yourself as close to your presentation time as possible to refamiliarize yourself with what you want to say. I always go over my talks and lectures within the hour of when I am going to do the presentation. It makes a world of difference.
8. Print out adequate copies of your slides, 6 to a page, for each person in the course. Be sure to staple together your handouts and xerox double-sided to save on trees. Bring your handouts to class the day of your presentation to hand out at the start of class.
9. Present your overview.

2.2 Presentation Content

The presentation of a single paper should be approximately 30-40 minutes, depending on the paper length and complexity. The presentation should be conducted much like the model used at a conference. If you follow the guidelines in slide formatting, you should use about 20-25 slides for the presentation. Over 25 is too many slides. A typical organization of a conference talk, and your presentation is:

1. Motivation of the general problem with an example or description of the current way things are done and the limitations/problems with the current situation. This often requires some background information to set the context. (The general problem and motivation) This is typically 1-2 slides. Examples are good to use here.
2. Clear statement of the particular problem addressed by the authors. (The problem statement) This is typically 1 slide.
3. The current state of the art that occurred before this paper, in addressing this particular problem: what have other researchers done toward solving this problem? What limitations and drawbacks do their techniques have? Be sure to include citations in the form of author names and year of publication of the related work to give context of when the related work was done. (Related Work - Note: This could come later before conclusions.) This should be no more than 2 slides.
4. A description of the approach taken by this paper. This can often be done by going through an example to show the techniques developed. This should take the most slides. (Approach)
5. A description of the evaluation: experimental setup and results, if they did experimental work. This can be 2-5 slides depending on how much experimental work they did. There should be a clear description of the methodology/setup of the evaluation. This should be followed by the results/data and analysis/conclusions from the results. Try not to mix the methodology with the results. (Evaluation)
6. Conclusions based on the results, limitations of the work. What contribution did they make? What limitations does they work have? Typically, this is 1-2 slides. (Discussion)
7. Future research directions. Typically, this is 1 slide.

2.3 Formatting of Slides

Slides should be prepared using a word processor or Powerpoint, and available online in a form that can be viewed through a web browser (e.g., pdf, postscript, html). As a rule, the font size should not be smaller than 18 point.

Begin each slide with a centered title that states in 1-4 words the contents of that slide. No two slides should have the same title, unless something is being continued. Different font sizes, boldness, italics, and

underlining should be used to demonstrate the relative importance of different points. The formatting of different slides should be consistent in terms of fontsize, capitalization, italics, bold, color (if you use color), and grammar. Typically, we stay with 2-3 colors for a whole presentation text.

For a text slide, use outline style with short phrases as opposed to paragraphs of full sentences. Use keywords and short phrases. Put no more than 4-5 main points (bullets) on a single slide. Your slides should contain a significant amount of white space. If you are worried that you might forget to say something if you do not have it written on a slide, write it on a separate sheet of paper that you can use as backup, or in the notes section of Powerpoint. It is comforting to know that it is written down somewhere in front of you, but the audience does not have to see all of that writing. **DO NOT PUT WHOLE PARAGRAPHS ON A SLIDE.**

Break up your talk with pictures, figures and color whenever possible. Pictures should be relevant and helpful to the topic, not just random pictures for appearance. If you need to use a figure from the paper, scan it in and enlarge it to make it readable on an overhead. You may use existing figures from papers or other resources as long as you cite where you got the figure. **YOU SHOULD NOT BE GIVING SOMEONE ELSE'S TALK ON A PAPER THAT YOU FOUND ON THE INTERNET.**

2.4 Presentation Style

The most enjoyable presentations are those in which the speaker appears to be confident and have a casual, conversation-like style, as opposed to a speaker who is reading from the slides, screen, or notes. This comes with practice!! If you only put phrases on the slides, and practice what you want to say about each phrase or figure, your presentation is most likely to be in this style. If you put full sentences on the slides, and do not practice, it is only natural to read from the slide, and lead the audience into naptime!

Take on the challenge of capturing the audience's attention with your introduction, keeping them interested through your slides and possibly some light humor, avoiding burial in a pile of details, and teaching them the most important points/issues about your topic. You can do this by examples and thoughtful planning to make your talk flow nicely from slide to slide and keep the audience always wondering what is coming next.

Spend some time thinking about how to make your presentation interactive, getting audience participation rather than feeding them all the information. You are teaching the class, not just presenting material. Leave some of your slides with holes to be filled in during class, examples to be finished in class, short quizzes, questions for discussion,.. Be creative in how to get them involved and make them active learners.

1. Eye contact: You should glance around the room, making eye contact with various people. The talk should not be directed to the ceiling, floor, the slide projector, or only a small portion of the class. If you do not want to look at anyone, just look over their heads.
2. Voice: Be sure to talk at a pace that the audience can follow. Most of us tend to talk very quickly when we are nervous. You need to consciously be aware of how fast you are talking. Be sure to talk loud and clear enough that people in the back of the room can hear and understand you. If you think people are going to have trouble understanding your English, talk slower than normal.

2.5 Evaluation of Presentations

Each student in the class will complete an evaluation form for each speaker. These evaluations will be anonymous and given to the students as feedback. The professor will independently grade each oral presentation. Both the student evaluation and the grade will be based on: the speaker's perceived understanding of the topic, organization of the material, presentation of the material, quality of visual aids, treatment of questions, interactive nature of getting the audience involved, and overall effectiveness of the presentation. These student evaluations will not affect your grade, but provide you with lots of feedback for improving your oral presentation skills.

3 State-of-the-Art Timeline and Presentation

The purpose of this activity is to learn how to put researchers' work into perspective, and get a more global view of their contribution, with more appreciation for their work.

3.1 The Process and Deliverable

Two students different from the ones presenting the overview will do the following:

1. Create an initial timeline that depicts the state-of-the-art related to the paper, as presented by the authors. The timeline should go vertically. The timeline should include citations for work closely related to the current paper to the left of the timeline, and work less closely related, but necessary to mention, to the right of the timeline. The current paper should be placed in the timeline.
2. Students should use citeseer, the ACM and IEEE digital libraries, and websites of the authors and the authors of most closely related papers cited by the authors to add other relevant papers to the timeline as appropriate, with the goal of providing a complete picture of the state-of-the-art related to the current paper. Papers that build on the current paper should be later in the timeline. The cites on the timeline can just include first author, date, and short title/subject.
3. The final timeline should include a trailing list of complete citations for the papers cited in the timeline. The timeline should indicate clearly how papers are related to the current paper by labeling them by color or other indicator as one of: (a) work that the current paper builds on, (b) work that the current paper competes with to solve the same problem, (c) work that build upon the current paper and extended it or revised it in some way, (d) work that uses a similar/the same technique to solve a different problem, or less relevant work, but necessary to mention.
4. The timeline can be done with any tool that you see will create a nicely formatted timeline.
5. The students will present their timeline and discuss/describe it to the class after the overview presentation. The discussion should include mention of the main groups working on the same problem.

3.2 Evaluation

The timeline will be evaluated based on completeness and accuracy of content, timeline formatting, and oral discussion.