

8813: Advanced Computer Security, Fall 2023

Guidance For Presenters

Your goal is to prepare a 40 minute lesson about the topic. The focal point of your presentation must be the main paper that was assigned to the entire class to read. In your presentation, be sure to provide a *neutral* description of what you think the paper is about: i.e., what was the authors' motivation, why they viewed the problem as important, and what contributions they made. For your lesson, it is important that you also:

- Place the paper in context, being sure to contrast that work with the secondary paper listed on the course website.
- Explain how the main contribution(s) of the paper compare to the prior art
- Explain the specific research questions, the methodology and approach taken to answer these research questions.
- Discuss how the understanding of the topic changed, and any new insights
- Co-lead a discussion about the paper based on themes, questions, concerns and extensions that are expressed in the written reviews (see below on *Guidance for Reviewers*).

You will not have time to delve into specific details of *all* parts of the main paper, but you are expected to present an in-depth assessment of the research method and main findings. See below for some questions you should be considering when putting your presentation together (as your classmates will be doing the same in preparing their written review). As a presenter, you will likely need to read the main paper and supplementary material several times, review talks the authors have given on the topic (those are usually available on the conference website), and explore any code or demos they released. **A draft of your presentation will be due to me 2 days in advance of your in-class presentation. Office hours have been set aside for review and feedback on your presentation.**

Guidance For Reviewers

For those students not presenting the lesson, you must provide a review (**max 2 pages**) of the main paper. Your review must be uploaded to Canvas 24 hours before the presentation date. Be sure to summarize the paper in your own words, and use the questions below as a guide to rewriting your review of the paper. In class, we will discuss mindsets and suggestions for reviewing papers prior to your first review assignment. To write a constructive review, you will need to read the paper more than once. Plan accordingly! Your first pass should be a quick read so that you get a good sense of what the paper is about.

Then, do a more thorough review, making notes along the way about the strengths and weaknesses of the paper, keeping in mind the questions below:

- Were the goals of the research clearly stated? What were the implicit and explicit research questions?
- What assumptions are the authors making, and are these assumptions justified? If not, *why not?*
- Does the methodology target the research question(s) appropriately? If not, *why not?*
- Is the methodology explained and designed in a way that makes it reproducible? If not, *what specific information do you need??*
- Were the experiments appropriate for the goals of the research? If not, *why not?*
- Are the experiments presented clearly and logically, and is the use of the underlying dataset(s) justified? Is there enough information to reproduce the core claims?
- Are there any technical weaknesses with the approach (e.g, were the statistical tests chosen the appropriate ones) beyond any specific limitations explicitly stated by the authors? Are there issues with how the data was processed? Are there any ethical concerns? If you think there are issues, express these concerns as questions and state how you might go about answering them. Likewise, what did you *like most* about the paper? What, in your opinion, is the really neat part? Overall, this exercise is not about “tearing a paper apart” – it’s about critical thinking and finding ways to improve your own research (through reflection).
- What outstanding questions do you have about the paper, and what might you have done differently (e.g., in terms of analysis, evaluation, methods)?
- Do the conclusions justifiably respond to the main questions posed by the author(s)? If not, be sure to justify your answer.

IMPORTANT: In your review, I expect the vast majority of the aforementioned questions to be addressed. **As a final requirement, each student must discuss at least 1 extension or followup experiment.** For questions or concerns that arise when reading the paper, think about how you would address those as an “extension”. Similarly, if you found some part of the methodology interesting, think about in what other context you might apply the core idea or the learned method. You will be called upon to discuss your idea(s) for extensions in class. There is no explicit format for the review, but you can structure it in 4 parts: Summary, Strengths and Weaknesses, Technical Comments, and Extension(s).