

Final Project Proposal Guidelines

598CLF “Secure Processor Design,” Fall 2017, UIUC

Due: Oct. 17

The purpose of the final project proposal is to develop a research-oriented motivation for your final project. The final project is meant to give you research experience in hardware security. Ideally, your goal going in should be to submit your findings to a security/architecture/etc conference. Problems often arise in research, so the bar for getting full points is not publishing a conference paper. But since publishable research is the goal, there should be sound motivation at the outset.

Different projects require different flavors of proposal, however, here are some guidelines. The proposal should be one to several pages in length - however long you need to make your case. In terms of content, we recommend the following main sections (adapted from Google’s faculty research award recommendations):

1. **Problem specification.** Good research is driven by a great problem or question, and a good proposal starts with a clearly specified one.
2. **Project outcome.** Describe a specific, credible, relevant outcome. What will likely come to be that might otherwise not happen? Try to identify a specific and appropriately sized outcome in the best case. Likewise, if problems arise, what are some useful negative results which can be recorded to help future researchers?
3. **Relation to prior work.** Crisply differentiate your project from prior work. Please apply normal practices (citations, etc.) for documenting how your work will materially advance the state of the art. Make it clear how your work will be changing the state of the art, and not simply trying to match it.
4. **Research challenges.** State what challenge(s) you expect will come up and how they might be addressed. Successful research projects combine a great problem with ideas for solutions, too. Not all the answers will be known yet, but state your preliminary ideas. Beyond making a strong proposal, going in with potential solutions makes for better final papers, as you can look back and articulate where your assumptions were incorrect.

Please also include any partners you plan to work with. Lastly, if you need any guidance or ideas on final projects, please let the course staff know and we can setup an appointment.