

# Guidelines for critical review/opposition of MSc-theses at the Department of Automatic Control

Critical review of the work of others is an important part of all scientific work. Therefore, an opposition, or critical review of a peer's master's thesis is also mandatory as part of the master's thesis project at LTH.

The official guidelines "Process overview of degree project" / "Arbetsprocess examensarbete för civilingenjörer", link: <https://www.student.lth.se/english/exchange-students/degree-project/>, give general instructions on how to perform the critical review/opposition along with guiding questions. **This document clarifies the expectations on the written and oral review for degree projects at the Department of Automatic Control.**

1. The critical review should address the technical and scientific content of the thesis, not its form. Questions should be detailed and specific.
  - You are expected to pose at least 2-3 questions pertaining to the scientific methodology
  - You are expected to reflect on the relevance of the problem formulation, particularly in relation to technical and societal challenges.
  - You are expected to reflect on the applicability of the results – specifically, to what extent the authors draw valid conclusions and whether they successfully address the problem formulation.
  - You are expected to critically review central definitions and assumptions
  - You are expected to critically review logical arguments(The above points should lead to 3-4 additional, relevant questions)

Example of relevant questions:

"How reasonable is your assumption that XYZ is linear?", "The model you learn has over 20.000 parameters. Is this reasonable to capture XYZ?", "You chose to exclude a part of the dataset – how can you motivate that decision?", "Would the proposed solution be realistic to implement?", "How could one find the value of this parameter in practice?"

2. You may also give some feedback on the structure, form, and language of the thesis. In the following cases, you are expected to do so:
  - References are used incorrectly or inadequately – for example, if non-obvious claims are made without support from the literature

- The language hinders understanding, or terminology is misused
  - Figures and plots presenting results contain errors or are unclear
  - Important sections are missing
3. The oral opposition is expected to take around 15 minutes if you are the only opponent; in case of 2-3 opponents in total 20-30 min. It should ideally be a technical/scientific discussion between the presenter(s) and the opponent(s), rather than you simply providing feedback.
- Watch this video: <https://www.youtube.com/watch?v=k0FWQWwO6Ks> to see an example of good vs bad opposition. Note that the example is from another faculty and needs to be suitably adapted to your situation. (The initial summary of the thesis done in the video is for instance not needed since the thesis has just been presented)
  - Listen attentively during the presentation. Often, it may lead to you amending or editing your prepared list of questions. Note down slide numbers that show content you wish to ask about.
  - If there are other opponents adapt your questions to what has already been discussed.