

Guidelines for Writing the Kappa of a PhD Thesis

This text contains brief pointers for writing the kappa of a PhD compilation thesis at the Department of Mathematics at Stockholm University. The guidelines from the Faculty of Science can be found here:

[Vägledning inför disputationer och utformandet av doktorsavhandlingar](#)
[Guidance for doctoral dissertations and public defences](#)

The present guidelines are meant to serve as a complement to the faculty guidelines, with some clarifications and additions specific to the Department of Mathematics.

Purpose and Goal

The main goal of the kappa is to explain what the contributions of the thesis are and place them in a proper context. Any decision regarding content or structure should be informed by how well it serves the purpose of explaining the work and its context.

Target Audience and Tone

- **General Audience:** The text should ideally address a general mathematical audience, making it at least partially understandable to those outside your domain of specialization.
- **Avoid Over-Technicality:** Do not assume that the readers are familiar with highly specialized definitions; giving precise technical statements is often not the best way to explain contributions.
- **High-Level Discussion:** It can be more instructive to focus on a high-level discussion of the results and their role in the field, while referring to the included papers for specific technical statements.

Content Requirements

- **Beyond Concatenation:** As stated in the faculty guidelines, the kappa must amount to more than just a concatenation of the introductions to the individual papers.
- **Summary and Discussions:** It requires a synthesis summarizing the thesis as a whole, including additions, problematizations, and a comprehensive concluding discussion.
- **Novelty:** The kappa should delineate new content contributed in the thesis. It should also include reflections on how the work affects the field.

Scope and Balance

- **Background Material:** Review background material and key concepts only to the extent needed to explain the contributions and their relation to existing research.
- **Occam's Razor:** Apply Occam's razor by excluding results or concepts that are not directly relevant to explaining the thesis contributions.
- **Not a Textbook:** Maintain a balance in detail; the goal is not to write a textbook introduction to the subject.

Guiding Questions for Reflection

To structure your discussion, you may find it helpful to consider the following questions:

- **Meaning:** What is the meaning of the result?
- **Prior Knowledge:** What was known before?
- **Contrast:** How does it contrast to other results or approaches?
- **Innovation:** Does it introduce new ideas?
- **Limitations:** What are the limitations of the methods/results?
- **Future Directions:** Does it lead to new research questions?