Writing and defending your thesis
– what works and what doesn't

Gerth Stølting Brodal

Maximum number of co-authors on a PhD thesis

0% a) 1 🙂

0% b) 2

0% c) 3

0% d) no limit

§12-(2) A PhD dissertation cannot be submitted for assessment by two or more authors jointly

§11

The PhD dissertation must document the PhD student's ability to apply relevant research methods and to conduct research work meeting the international standards for PhD degrees within the field in question.

(4) Any articles included in the dissertation may be written in cooperation with others, provided that each of the co-authors submits a written declaration stating the PhD student's or the author's contribution to the work

Co-author statements
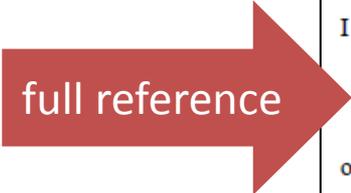
Co-author Statement

I hereby declare that I am aware that the work in the paper/manuscript entitled:

of which I am a co-author, will form part of the PhD dissertation by PhD student:

who made a

☐   major
☐   proportional
☐   minor

contribution to the work in the research phase

and who made a

☐   major
☐   proportional
☐   minor

contribution to the work in the writing phase.

Signature: _____

Name: _____

Date: _____

full reference

GSST §11.1

A PhD thesis may be formed as ❶ a monograph, or it may include a ❷ number of manuscripts or papers in different stages of completion that are related to the topic of the PhD project. If the thesis is composed mainly of manuscripts or papers, the PhD student must include a section encompassing the following elements:

- A brief description of the proposed research questions in the papers

- A short presentation of the results and a brief assessment of the applied methodologies

- A critical review in which the PhD student relates his or her own work to the most state-of-the-art work within the field. The PhD student must also demonstrate that he or she has an up-to-date knowledge hereof and is able to put this knowledge into a broader perspective.

The review section may resemble a major review article.

Your goal of writing the thesis?

- 0% a) Required – get it done and move on
- 0% b) Write a summary and stable
- 0% c) Rewrite results as a monograph
- 0% d) Have not thought about it – yet

When to start thinking about the content of *your* thesis ?

0% a) When you start your PhD studies

0% b) Before the qualifier exam

0% c) After the qualifier exam

0% d) 6 month before

0% e) 3 month before

0% f) 1 month before 😐

Thesis deadline

new results
finish papers
conference presentations
thesis writing

Timeline

PhD enrollment — Qualifier exam — thesis.tex — Thesis deadline — Thesis defence — typo fixes

PhD studies, TAs, stay abroad, beer, …

3 weeks - 3 months
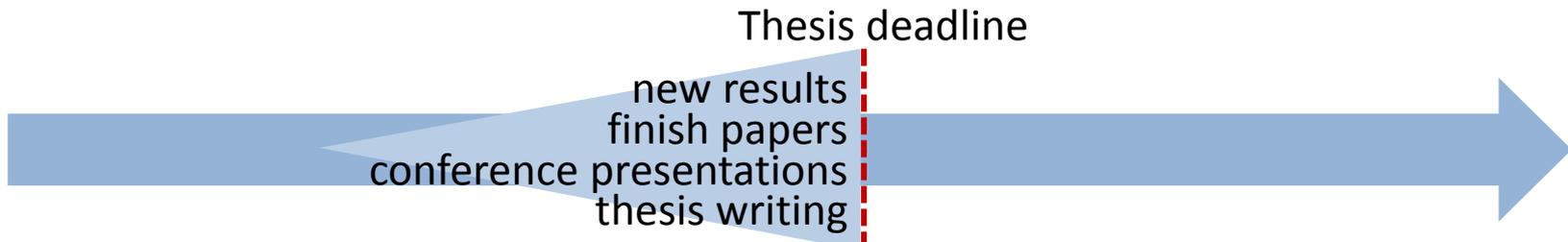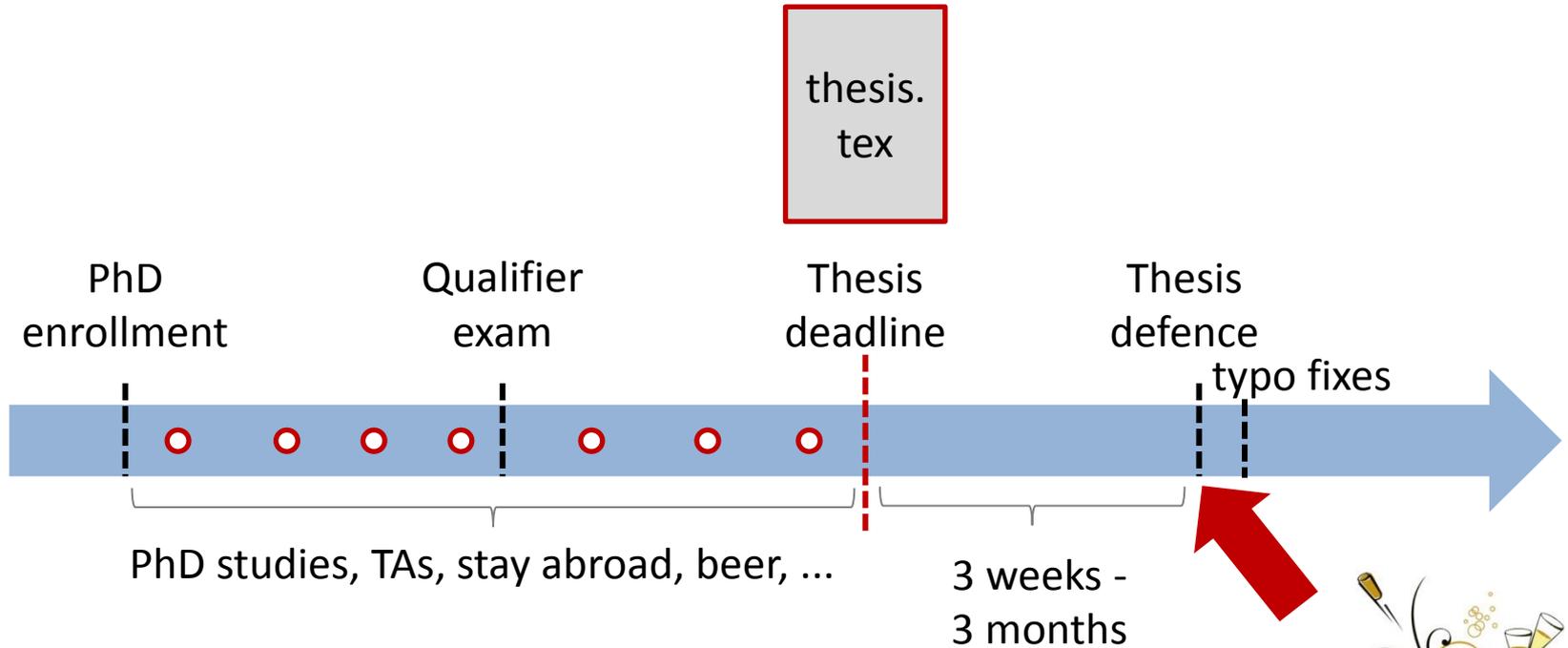
○ PhD plan updates / support group meetings

Reception

Language of PhD thesis

GSST §11.1: The PhD thesis is normally written in English, however, the Head of PhD School may allow the PhD student to write the PhD thesis or parts of it in another language

Language of abstract ?

- 0% a) Language of thesis
- 0% b) English
- 0% c) Danish
- 0% d) Danish and English 🙂

GSST §11.1: … A one page résumé in Danish and a one page résumé in English must be included in the thesis.

Minimum number of published papers required to be the basis of a thesis?

0%   a)   0 🙂

0%   b)   1

0%   c)   2

0%   d)   3

0%   e)   4

0%   f) ≥ 5 (incl. 18)

Maximum length of a thesis

- 0% a) 100
- 0% b) 150
- 0% c) 200 🙂
- 0% d) 250
- 0% e) 300
- 0% f) no limit

GSST §11.1: The PhD thesis should not exceed approx. 200 pages and must be submitted to GSST as one single PDF file

Should all your papers from your PhD studies be in the thesis ?

0% a) Yes

0% b) No (not necessarily) 🙂

0% c) Don't know

Many PhD studies end up with publications in diverse areas.
Selecting a subset of publications can sometimes make a more focused thesis.

Merged papers ?

Assume you wrote manuscript *P* and another group *X* wrote *P'*, and you and *X* merged the two manuscripts and $P \cup P'$ was published.

How much of $P \cup P'$ should be in the thesis?

0% a) Only *P*

0% b) *P* and relevant parts of *P'*

0% c) $P \cup P'$

0% d) $\varnothing$

Should "rough corners" be fixed ?

0% a) No – leave as published

0% b) Known bugs should be fixed

0% c) Level of polished journal versions

Note
Assessment committee might be previous anonymous reviewers

PhD Assessment Committee

- Advisor member of the PhD assessment committee

  0% a) Yes

  0% b) No 🙂

  0% c) Don't know

- Assessment Chair : Member of PhD committee
- Two external members, one outside Denmark

¬ A̳U̳

Selection of committee: PhD student ┈▶ Advisor ━▶ PhD programme chair ━▶ PhD school chair

Assessment Committee members

- not have a personal or financial interest in the outcome of the PhD defence

- not have prepared, submitted, published or under preparation any publications with the PhD student

- external members may not have prepared, submitted, published or under preparation any publications with main **supervisor** or co-supervisor(s) within the past 5 years

- exemptions under very specific circumstances…

GSST Rules of impartiality for members of PhD assessment committees

Should your parents understand (part of) your defence?

0 % a) No

0 % b) Yes, the introduction

0 % c) Yes, half of it

0 % d) Yes, all

Note Assessment committee has read the thesis – no need to recall all the details for the committee at the defence

The Defence

- Maximum duration (hours) of the defence:

  - 0% a) 1
  - 0% b) 1½
  - 0% c) 2
  - 0% d) 3 🙂
  - 0% e) 4

GSST §12.6:

The total duration of the defence should not exceed 3 hours.

...

The PhD defence begins with a 45 minutes lecture by the student, followed by (typically) 45-60 minutes of discussion between the student and the evaluation committee.

Group Work

Return for discussion @ 11:40

1) What constitutes a good thesis ?

2) What constitutes a good defense talk ?

Who is the target group for your thesis? Good title? Good first line, paragraph, section? What is a good introduction? What is a good motivation for the research? 2-column pages? Unify layout? Unify notation across chapters? Unify layout across chapters? Running example throughout thesis? Is there a good template for a thesis (or at least for each CS topic)? Use terms before formal definitions? Should all proves be given in full detail? Should a thesis have a table of notations? Include full papers, or only actual contributions by PhD student? Coherent vs. many papers? Level of detail in writing? How polished should the thesis be? ...

Examples: Google for "phd dissertation <name> site:pure.au.dk"
<name> eg. = Kasper Larsen, Rasmus Ibsen-Jensen, Mathias Schwarz, Rikke Bendlin, Nervo Verdezoto, Mads Schaarup Andersen, Matthias Korn, Vaida Ceikute, ...

Groups

7

Laura Radaelli
Kenneth Sejdenfaden Bøgh
Michael Lind Mortensen
Jakob Truelsen

1

Antonio Faonio
Bernardo David
Navid Talebanfard
Michael Nielsen

2

Irene Giacomelli
Pavel Hubacek
Pratyay Mukherjee
Roberto Trifiletti

3

Asger Feldthaus
Casper Svenning Jensen
Christoffer Quist Adamsen
Fabio Strocco

4

Esben Andreasen
Aleš Bizjak
Hans Erik Bugge Grathwohl
Morten Krogh-Jespersen

5

Andreas Sand Pedersen
Jacob Malte
Jinjie Duan

6

Dan Ariel Søndergaard
Jade (Yu) Cheng
Paula Cristina Tataru
Laurits Skov

8

Edvin Berglin
Ingo van Duijn
Bryan Wilkinson
Sarfraz Raza

9

Anders Lehmann
Allan Stisen
Markus Rasmus
Gustav Wüstenberg
Matthias Nielsen

10

Anna Maria Polli
Henrik Korsgaard
Siemen Baader
Jacob Toft Pedersen