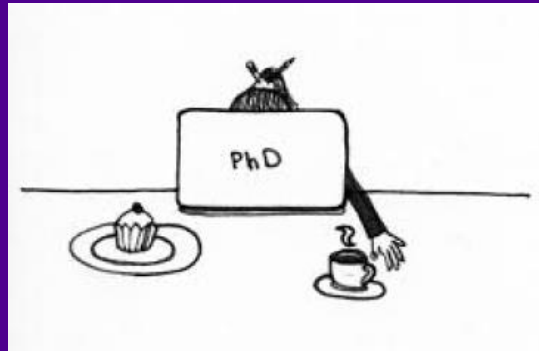


Finalising Info 2024

Faculty of Engineering and Natural Sciences

Azwirman Gusrialdi, Marika Kokko & Kaisu Kalliomäki

25 March 2024



Programme

- Doctoral committees
- Readiness of the thesis
- Internal pre-examination
- Pre-examination
- Defence proposal
- Public defence
- Assessment and grading of the dissertation
- Graduation

Doctoral committees

- The work of the doctoral committees revolves around topics such as:
 - Curriculum design
 - Study right applications
 - Internal pre-examination
 - Pre-examiner proposals
 - Defence proposals

TLTO Doctoral Committee



Tapio Niemi, Associate Professor (tenure track), Physics



Matti Rissanen, Associate Professor (tenure track), Physics



Head of the Programme Marika Kokko, Associate Professor (tenure track), Bio and circular economy



Alex Berdin, Doctoral Researcher, Physics



Olga Lem, Doctoral Researcher, Chemistry



Lasse Laurson, Professor, Physics



Nikolai Tkachenko, Professor, Chemistry

TTITO Doctoral Committee



Mikko Kanerva, Associate Professor (tenure track), Materials Science and Engineering



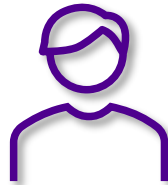
Marea de Koning, Doctoral Researcher, Automation Science and Engineering



Tatiana Minav, Associate Professor (tenure track), Automation Science and Engineering



Eric Coatanea, Professor, Automation Mechanical and Production Engineering



Antti Martikkala, Doctoral Researcher, Mechanical and Production Engineering



**Head of the Programme
Azwirman Gusrialdi, Associate Professor (tenure track), Automation Science and Engineering**



Jukka Koskinen, Doctoral Researcher, Materials Science and Engineering



Mikko Hokka, Professor, Materials Science and Engineering



Roel Pieters, Associate Professor (tenure track), Automation Science and Engineering

Readiness of the thesis / TLTO

- Compilation theses must contain **at least 3 (most commonly 4-5) publications** in internationally recognized peer-reviewed journals; **one of those papers can be in the “submitted” stage**. In case of 3 publications, their quality/impact and the role of the candidate are particularly important.
- Compilation theses must contain a comprehensive but concise introductory part (typically 50-80 pages) preceding the publications.
- Monograph theses are allowed, in principle, but compilation theses are more common.

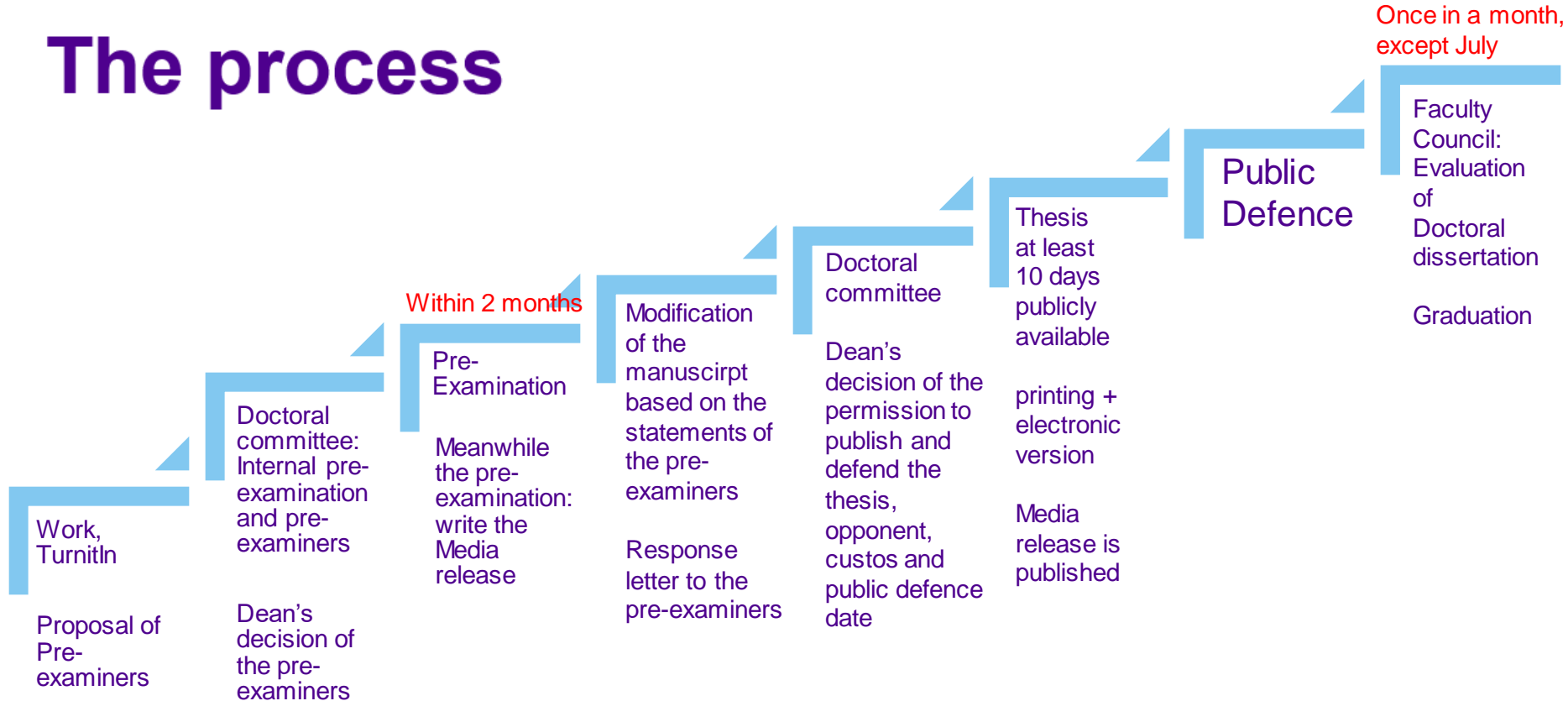
Readiness of the thesis / TTITO

- The compilation must include **at least 3 (most commonly 4-6) publications**, depending on the number of co-authored publications, the doctoral candidate's independent contribution to co-authored publications, and especially the scientific quality and significance of the publications and the scientific prestige of the publication forums. In case of 3 publications, the quality of the included papers must be outstanding, and the publishing media must have very high impact.
- One of the publications included in the compilation may be an unpublished manuscript.
- The recommended length of the introduction is 35-70 pages.
- Monograph theses are allowed, in principle, but compilation theses are more common.

Some general advice

- [Dissertation template](#)
- Remember that the introduction part of the thesis (preceding the articles) is a small fraction of the complete thesis work: don't get stuck with it!
- Ask your supervisor(s) and colleagues for feedback!

The process



Internal pre-examination in the Doctoral Committee

Purpose

- To confirm the quality of the theses sent out from TAU to pre-examination
- To help the candidate to improve the thesis according to the international standards

Points considered

- Sufficient scientific impact in terms of published papers
- Clear description of the own contribution
- Clear formulation of research questions
- Clear summary of the main findings
- Appropriate use of references
- Appropriate language and style according to the international standards

Examiners (= pre-examiners & opponent): Conflicts of interest

- **Candidate & examiners:**
No joint publications or close collaboration (e.g., joint publications, joint research grant or supervisor-employee relationship) ever.
- **Supervisor(s) & examiners:**
Recommended that no joint publications during the past 3 years. Visits etc. are OK.
- **Pre-examiners and opponent(s):**
Must not have had significant mutual collaboration. Conflicts of interest between the examiners must be avoided.
- Supervisors should avoid (re)using the same examiners in several dissertations.

Pre-examination statements

- Official time is 2 months
- Includes a report & multiple-choice evaluation
- Recommendation:
 - Publication as such** - “I recommend the permission to publish the thesis. *Minor amendments, technical revisions and error and stylistic corrections can be suggested, for the doctoral candidate to take into consideration.*”
 - Not to be published** - “I don’t recommend the permission to publish the thesis for the reasons set out in my statement.”
- ”Publication as such” recommendation must be received from both examiners.
- The candidate must revise the thesis accordingly and write a response letter to the pre-examiners.
- The responsible supervisor checks the revisions.

The permission to publish and defend the thesis, appointing the opponent and custos and confirming the date

- The candidate applies for the permission to publish the dissertation.
- At the same time, the responsible supervisor proposes an eligible opponent and custos (who normally is the responsible supervisor) and the date of defence.
- Opponent, custos and the defence date will be approved by the Doctoral Committee.
- Dean grants the permission, confirms the defence date and appoints the opponent and custos.
- If possible, reserve at least five weeks between the committee meeting and the defence.

Public defence

- Can be a traditional public defence or partly or fully remote → Streaming is recommended
- Dress code
 - Candidate, opponent and custos wear dark, festive outfits (e.g., tailcoat w. black vest, dark suit, black skirt suit or a long black long-sleeved dress)
- Entrance and opening words
 - *Lectio praecursoria*, max. 20 minutes
- Examination of the dissertation (~2 hours)
- Closing

Disheet Shah (right) after his defence with the opponent, Doc. Virpi Talman (left) and custos, Prof. Katriina Aalto-Setälä (middle).



”Karonkka” banquet – celebration in honour of the opponent



Hat & sword are traditional doctor symbols. Dr. Disheet Shah from TAU organized a karonkka party with his colleagues and received a sword as a present. The karonkka traditions vary a lot depending on the field / research group etc., but it's always fun! Speeches & presents are typically given between the main dish and dessert.

Practical arrangements of the public defence



Candidate

- Sends a printed version of the dissertation to the opponent
- Contacts campus assistants (kampusassistentit@tuni.fi) to arrange all the practical arrangements (auditorium reservation and coffee arrangements etc.)
- Contacts library (dissertations@tuni.fi) and starts the publication process
<https://libguides.tuni.fi/dissertationpublishing>
- Contacts printing place (dissertations@punamusta.com) and orders the printed versions of the dissertation (max 50 copies)
- Contacts communications (viestinta.tau@tuni.fi) and prepares a media release
<https://libguides.tuni.fi/dissertationpublishing>
- Arranges a party in honour of the opponent (in Finnish karonkka)
- Familiarizes with the room and technical equipment of the defence auditorium with the help of the info office staff

Custodian

- Sends the dissertation manuscript to the opponent electronically
- Keeps the opponent updated on practical arrangements and expectations
- Supports and guides the candidate in preparing for the defence
- Organizes the lunch (with campus assistant)
- Possibly organizes a pre-defence dinner with the opponent
- Helps the opponent in terms of travel arrangements (university-hotel-party)
- Ensures the fluent progress of the defence day according to the university protocol and leads the defence event
- Makes sure the opponent delivers the evaluation statement as soon as possible to the faculty

Assessment and grading of the dissertation

- Opponent prepares a written statement for the faculty
(hint: encourage the opponent to write it already on the defence day!)
- Internal pre-examiner/Doctoral Committee proposes a grade (fail, approved, approved with distinction) according to the statements of the pre-examiners and the opponent(s).
- The Faculty Council makes the decision of accepting and grading the dissertation (meeting once a month except July).

Evaluation principles in the Faculty of Engineering and Natural Sciences

Intranet: [Assessing the doctoral dissertation](#)

The following points will be considered when evaluating a doctoral dissertation:

- 1) The entire dissertation process from start to finish.
- 2) The introduction and conclusions included in the doctoral dissertation.
- 3) The publications appended to an article-based dissertation (compilation) and the doctoral candidate's independent contribution to these publications.
- 4) A monograph dissertation as a whole.
- 5) The statements provided and grades proposed by the preliminary examiners.
- 6) The doctoral candidate's ability to defend his or her dissertation at the public defence.
- 7) The statement provided and the grade proposed by the opponent(s).

Principles for awarding the grade “**approved with distinction**”: This grade will only be awarded to dissertations that are of exceptional quality and only to about 10% of all approved dissertations. The preliminary examiners and opponents must unanimously agree that the work merits this distinction, meaning that it ranks among the international top 10% of all dissertations written in the field.

Graduation

The doctoral candidate

- has to be enrolled as an attending student
- has made a personal study plan in Sisu
- has degree requirements approved
 - studies have been completed according to the requirements and registered
 - acceptance of the study modules has been applied in Sisu
- has the dissertation registered
- has applied for a degree certificate in Sisu
- may attend graduation ceremony, organised twice a year, in June and December

End of the transition period (31.7.2024) for the old degree structure

Old degree structure (-31.7.2020)

- Min 5 cr in the general academic competences, including the orientation course

→ Possible only for those students who started before 8/2020 and will still graduate this spring

New degree structure (1.8.2020-)

- Min 10 cr in the general academic competences, including the orientation course and a 1 cr ethics course

→ Everyone else who won't be able to graduate this spring

Graduation Ceremony

- The President hands out the certificates to the newly graduated Doctors, Licentiates and Masters of Science



Conferment of Doctoral Degrees



- Traditionally, the right to use the doctoral hat has been awarded at a conferment of doctoral degrees ceremony
- Organized once every few (about 3-5) years, last time in 2022, next one 6.–8.6.2025



Competencies of a doctor

Core competence

understand complex information and synthesize it

obtain results through a creative scientific process

draw scientific conclusions and defend them

propose and specify relevant research questions and problems

recognize the larger context and societal impact of the research

ability to apply scientific skills across different fields

ability to work independently / self-confidence of reached knowledge & skills

Communication skills

abilities to operate in an international research / industrial community

ability to write and co-write scientific publications

ability to report results to the scientific community

ability to report research beyond the scientific community (outreach)

oral presentation skills

basic evaluation skills (publications, reports, theses, ...)

social & networking skills

Scientific practices

knowledge of the scientific method

recognition of essential publication channels and practices

knowledge of research ethics and appropriate conduct of research

information retrieval skills

knowledge of an academic career path

Other skills

ability to give, accept and utilize justified criticism

project management skills, incl. financial issues

supervision and tutoring/mentoring skills (MSc & BSc students, trainees)

familiarity with industrial environment / public sector, understanding of career path

basic entrepreneurial skills

self-management, personal development

Information and support

- Student's guide > [Doctoral studies](#) includes information about topics such as dissertation guidelines, studies, and forms for doctoral students
- Education Specialist Kaisu Kalliomäki,
kaisu.kalliomaki@tuni.fi
- TTITO Head of the Programme Azwirman Gusrialdi,
azwirman.gusrialdi@tuni.fi
- TLTO Head of the Programme Marika Kokko,
marika.kokko@tuni.fi