

A!ENG Research Lab

A course on science, research and scientific writing

ENG-LV A!ENG Research Lab, 18.4.-23.5.2019

School of Engineering

Aalto University

Course coordinator: Roza Yazdani (roza.yazdani@aalto.fi)

Today's agenda

- **Introduction to A!ENG Research Lab**
- **Doctoral thesis** by *Prof. Harri Koivusalo, Head of doctoral committee of ENG*
- **Break**
- **Science, research and scientific writing + Research plan** by *Sen.Univ. Lecturer Marko Keskinen*

A!ENG Research Lab

- **In this course you learn:**
 - The aims and requirements for doctoral degree in A!ENG
 - How to craft your research
 - The role of research method in science
 - Skills in scientific writing and in outlining a scientific manuscript
 - Management of time and research work
 - The importance of paying attention to well-being
 - Interaction, group working and reflection skills
- **In addition, you get a good chance to meet and discuss with your peers**

A!ENG Research Lab

- Arranged by School of Engineering
- Course coordinator: *Postdoc. Roza Yazdani* (roza.yazdani@aalto.fi)
- Responsible professor: *Prof. Harri Koivusalo, Head of doctoral committee of School of Engineering*
- For doctoral candidates in early phase of research and studies
- 3 credits/ 2 credits without scientific writing part (ECTS)
- Eight contact sessions, **only one non-attendance is acceptable!**

Schedule and content

- Thursday 18.4., *Doctoral thesis process*
- Thursday 25.4., *Crafting your research*
- Thursday 2.5., *Research methodology*
- Thursday 9.5., *Career and well-being*
- Wednesday 15.5. *Scientific writing* (lecture + group work)
- Thursday 16.5., *Scientific writing* (lecture + group work)
- Friday 17.5., *Scientific writing* (lecture + group work)
- Thursday 23.5., *Planning of research and time management*
- Time: 12.15-16.00 (latest), in case of three-day scientific writing seminar : Wed to Fri **9.00-16.30**
- Location: Otakaari 1: A2, A1, U5, please see MyCourses!

Teaching methods

- **Pre-reading before the lectures** (important to read)
- **Discussion of pre-reading materials**
- **Lectures**
- **Individual and group exercises during the sessions**
- **One groupwork** (takes one or half day)
- **Reflective essay** (to be returned before the next session)

Lecturers

- **Prof. Harri Koivusalo** *Water and Environmental Engineering, Aalto University*
- **Sen. Univ. Lect. Marko Keskinen** *Water and Environmental Engineering, Aalto University*
- **Postdoc. Roza Yazdani** *Thermodynamics and Combustion Technology, Mechanical Engineering, Aalto University*
- **Postdoc. Kersti Haahti** *Natural Resources Institute Finland (Luke)*
- **Sen. Univ. Lect. Panu Kiviluoma** *Engineering Design, Aalto University*
- **Nina Lyytinen** *Psychologist, Terveystalo*
- **Mikko Inkinen** *Psychologist, Learning services, Aalto University*
- **Prof. Emeritus Bengt Lundberg** *Applied Mechanics, Uppsala University, Sweden*
- **Assoc. Prof. Jani Romanoff** *Marine Technology, Aalto University*

Course information and materials

- All is in MyCourses
- Course page in MyCourses:
<https://mycourses.aalto.fi/course/view.php?id=23218>
- Course Coordinator: Roza Yazdani (roza.yazdani@aalto.fi)

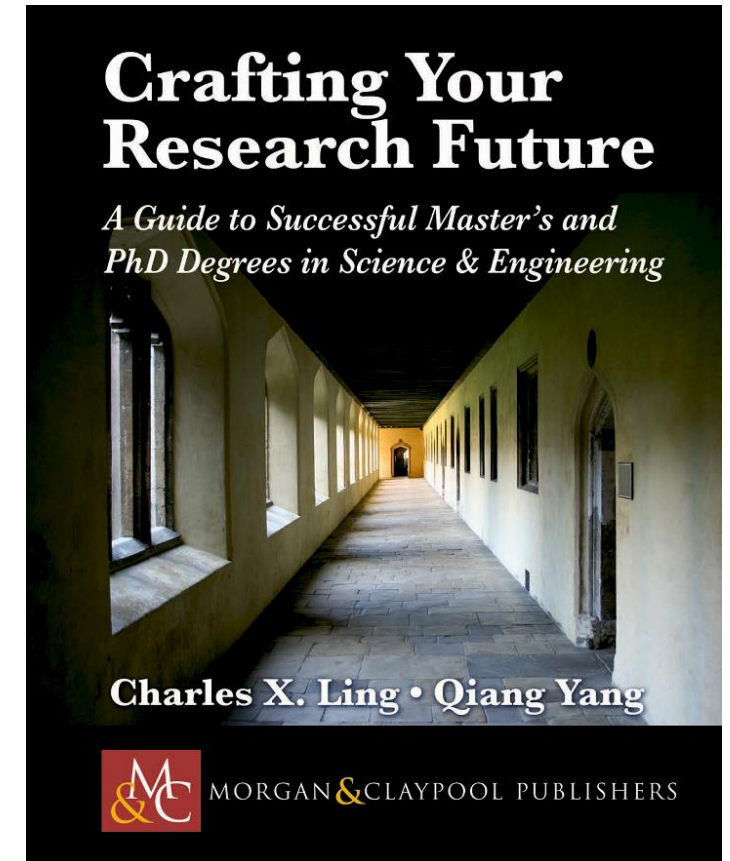
Reflective essay instructions

- **Write essay about each session**
- Altogether 6 essays (one from scientific writing)
- **1 page** (Times New Roman 12, linespacing 1.15)
- **Guiding questions for each essay in MyCourses**
- **Write from [your own personal perspective](#)**; Please do not just repeat what was in the session's slides
- **Return in pdf format** (Return box in MyCourses)
- **Deadline before the next session!**
- **[Instructions also in MyCourses](#)**



Next week session: Crafting Your Research

- **Reading from book:** Ling, Charles X., and Qiang Yang (2012) [*Crafting your research future : A guide to successful master's and ph.D. degrees in science & engineering*](#). San Rafael, Calif.: Morgan & Claypool.
- **Six groups** (each group one chapter)
 - Group 1: *Basics of Research*
 - Group 2: *Goals of PhD Research*
 - Group 3: *Getting Started: Finding New Ideas and Organizing Your Plan*
 - Group 4: *Conducting Solid Research*
 - Group 5: *Writing and Publishing Papers*
 - Group 6: *Misconceptions and Tips for paper writing*
- **Reading materials available in MyCourses.** [Need to login!](#)



Next week session:

Crafting Your Research

- **We make posters next time based on your pre-reading**
- **Each group teach their chapter to the rest of the class**
- Everyone needs to be able to present on the pre-reading
- Tips for making the poster next week: while reading the book, make notes on the key points of the text