

Welcome to Aalto ENG!

Jani Romanoff

Vice Dean of Education, School of
Engineering

26 August 2024

A''

Aalto-yliopisto
Insinööritieteiden
korkeakoulu



Welcome to the School of Engineering on my behalf. I am the Vice Dean for Education, Kari's right or left hand, and my task is to help the Dean and the school's students and staff in matters related to teaching.

Learning through Well-being

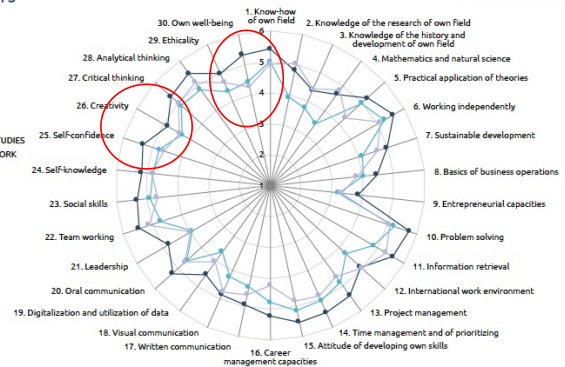
- The aim is that everyone find their own meaningful study path
- We learn and we teach the best we can – we are in this journey together
- Society needs you to solve the grand-challenges with creativity and entrepreneurial mindset – we are known for our capability to innovate
- Work-life balance is essential for our success, see related course *Mind and Study (3cp)*

Expertise and skills

Aalto ENG, n= 175

SCALE
1 = Not at all (important)
2 = Very little
3 = Little
4 = Somewhat
5 = Much
6 = Very much
(7 = Cannot answer)

— IMPORTANCE
— DEVELOPMENT IN STUDIES
— DEVELOPMENT IN WORK



A? Aalto-yliopisto
insinöörityöteiden
korkeakoulu

The fact is that all of you are needed in our society. We need a diverse pool of talent.

Aalto students are known for a brand where they have the ability to be creative and bring new and truly functional solutions to our everyday environment. They are well-rounded as our graduate survey in right highlights.

For example, on the way to our campus, you will interact with several of them.

A good work-life balance is essential for our success. Therefore, these skills should be studied alongside engineering.

ENG: Structure of the degree programme portfolio

Master's Programme in Mechanical Engineering

- Major: Marine Technology
- Major: Product Development
- Major: Arctic Technology
- Major: Mechatronics
- Major: Engineering Materials
- Major: Production Engineering
- Major: Solid Mechanics

Master's Programme in Building Technology

- Major: Construction management
- Major: Mineral-based materials
- Major: Structural Computational Mechanics and Engineering
- Major: Structural Engineering
- Major: Engineering Materials
- Major: Building Performance

Master's Programme in Geoengineering

Master's Programme in Geoinformatics

Master's Programme in Real Estate Economics

Master's Programme in Spatial Planning and Transportation Engineering

Master's Programme in Water and Environmental Engineering

Nordic Master in Cold Climate Engineering

Nordic Master in Environmental Engineering

Nordic Master in Innovative Sustainable Energy Engineering

Nordic Master in Maritime Engineering

EIT Master's Programme in Environmental Pathways for Sustainable Energy Systems

EIT Master's Programme in Urban Mobility

EIT Master's Programme in Manufacturing

- Major: Zero Defect Manufacture for a Circular Economy
- Major: Additive Manufacturing for Full Flexibility

European Mining Course

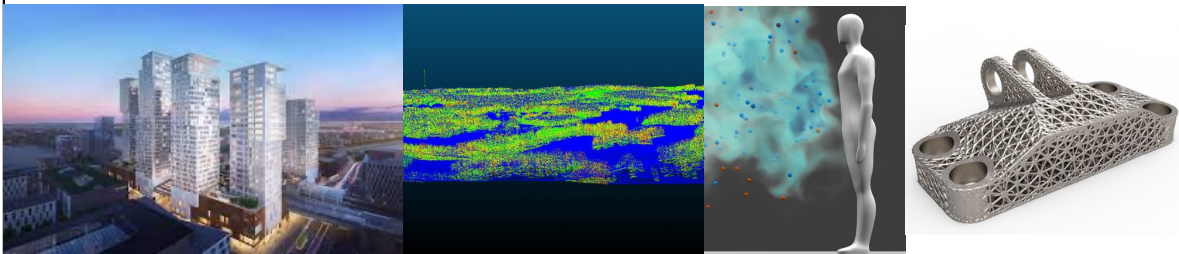
Master's Programme in Advanced Energy Solutions

- Major: Energy in Buildings and Built Environments
- Major: Energy Conversion Processes

Master's Programme in Urban Studies and Planning (English)

- Urban Studies and Planning in Real Estate Economics

Master's Programme in International Design Business Management



When I state that our school contributes to the society at large, you can look at the number of Master's programs and majors we have. Basically, you can specialize in multiple ways and each one of you can make difference in the future.

Regardless of the program or major you select, you may phase so-called grand-challenges related to sustainability, resource-wise engineering, better products, services and processes for the future. The tools are various modeling and simulations tools, digital twins, predictive models based on AI and ML as well as advanced manufacturing methods.

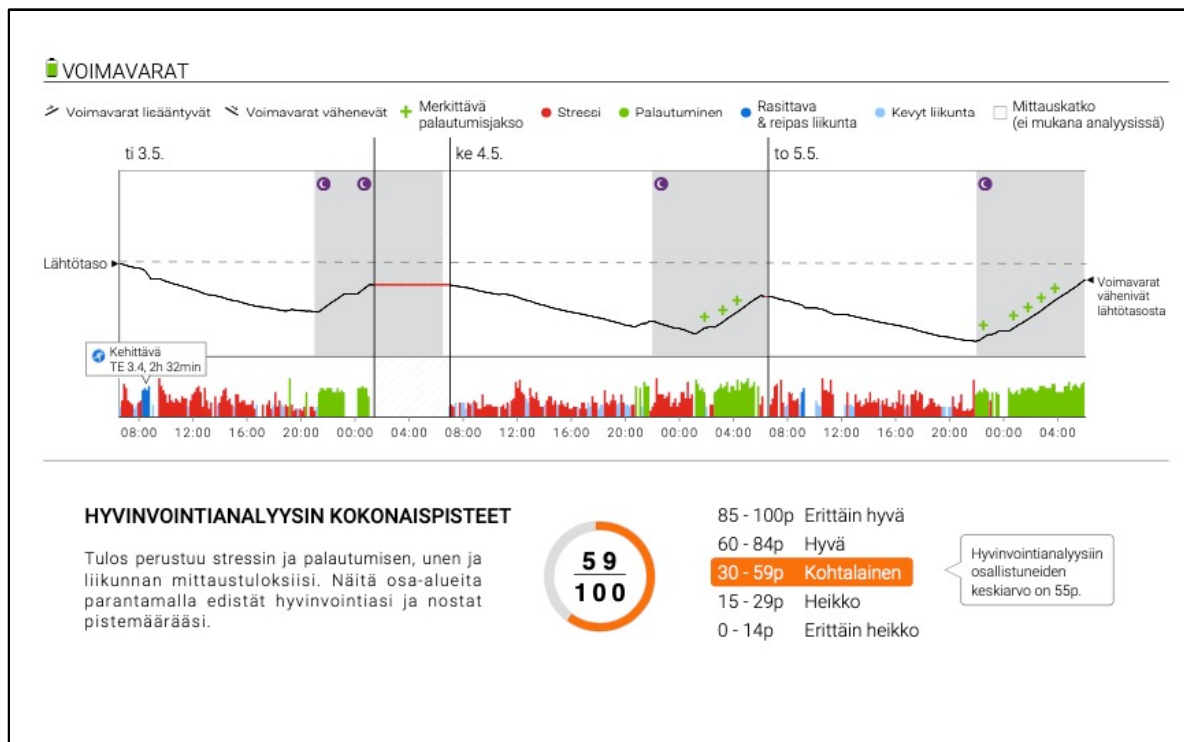
During your 2 years with us you will learn all this. With one specialization. This is a basis for employment which is our common goal.



How many people identify themselves with this picture?

These moments always come in life. They came in high school, at the B.Sc. and now you are at such a turning point, and a similar one day when you graduate with a M.Sc. (Tech.) degree.

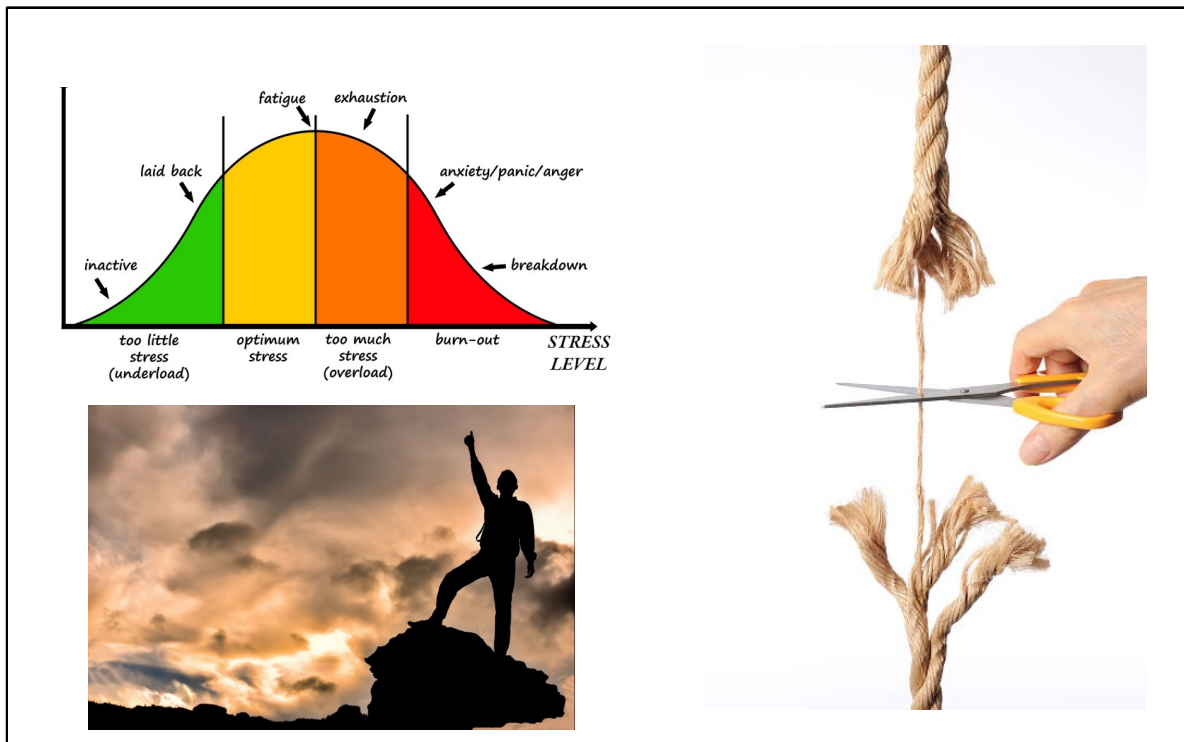
My professor once said that, on average, a M.Sc. (Tech.) retrained 8 times during his career. Learning is lifelong in technology and now the goal is to take that first degree out and learn how to learn.



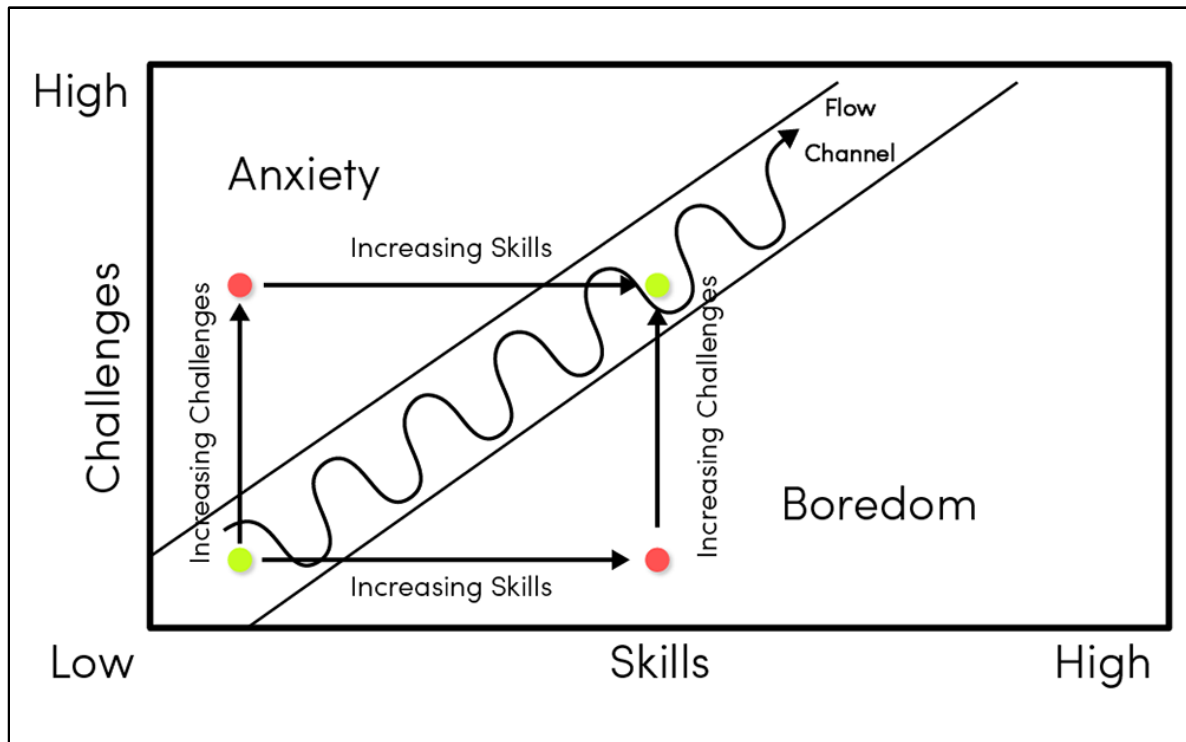
Learning is linked to your resources. There is a "battery" in a person that needs to be charged. Learning requires bandwidth and resources, and downshifting is an essential part of studies.

Here's an example of my own "charging cycle" that shows that sleep isn't enough. Exercise and food will help. There must also be meaningful activities during the day, for example. music, art, or friends to help you recover.

Time management and energy management are good to practice. Remember the calendar and identify for you those "recovery elements".



Stress is a double-edged thing. It is needed in order to develop and grow into a professional. On the other hand, if there is too much of it, there may be a burnout. Everyone has limits. It's not worth playing with this item. In the beginning, I started by describing a meaningful path. It helps a lot in your studies, because it gives you intrinsic motivation and still the drive that is often needed in studies. When the drive lasts long enough and into right direction, results are achieved.

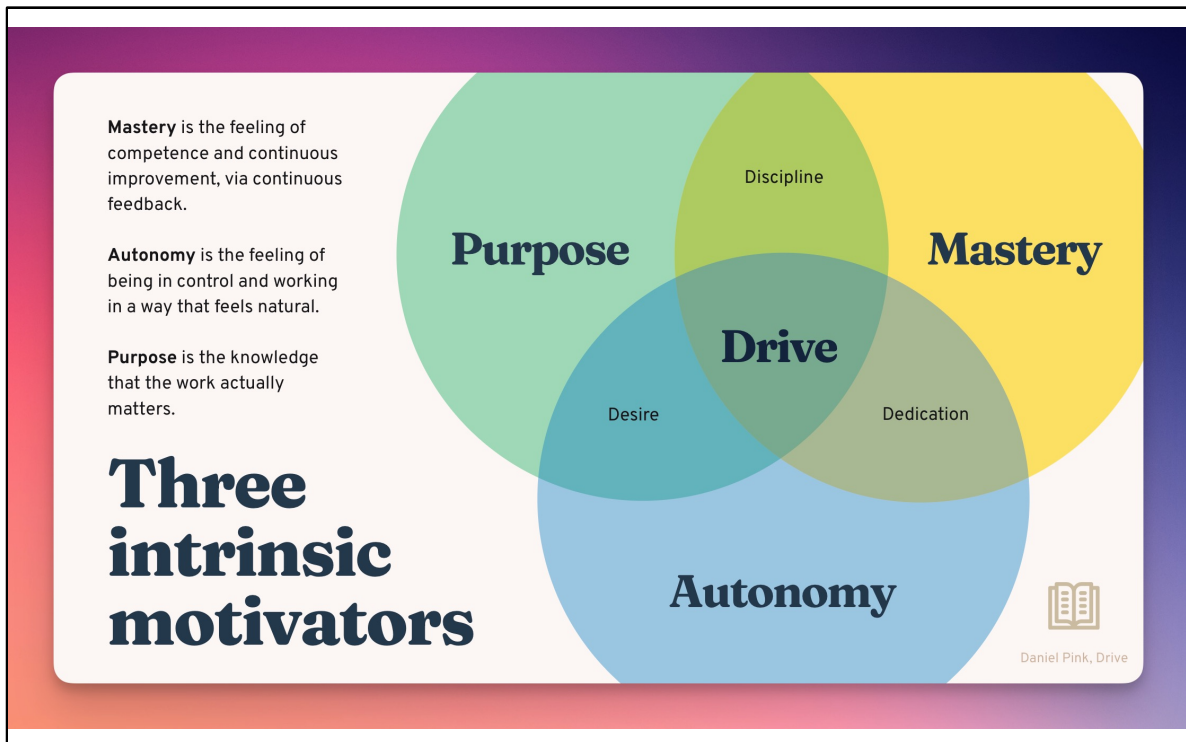


First, a little bit about the state of flow. The key here is to find a balance between your skills and challenges.

In other words, seek that balance during your studies. If the challenges are too tough in relation to skills, we easily get anxious. On the other hand, if things are too easy, we get bored easily.

I would advise you to focus on finding that balance of your own. You need this also in work life. We have easy and difficult courses. For different people, different courses can be these. For this reason, it is a good idea to discuss matters with, for example, academic advisors and fellow students. We are on this journey together.

If you get into a flow state, your studies are a really great time for the studies themselves.



About the Drive. It has three elements. Purpose, mastery and autonomy.

If you have the energy to search for your own role as an engineer in our society and develop your mastery deeply and in your own style, it will give you confidence to lead your own life as a by-product of the motivation.

So here I recommend looking for the "own thing" that drives you forward. A diploma is great, but a diploma of your own thing that you know really well, even greater.

Thank you!



aalto.fi

A''

Aalto-yliopisto
Insinööritieteiden
korkeakoulu