



GOOD AND BAD NEWS FROM THE FINNISH EDI LANDSCAPE IN PHYSICS

Katja Lauri, Eija Tuominen, Hanna Vehkamäki
University of Helsinki



OUTLINE

- **Finnish Women**
- **Finnish Women in Physics**
- **Another EDI Issue: Language**
- **Actions in Finnish Universities**

<https://blog.hip.fi/fighting-the-equality-paradox-in-finnish-science/>

By the Finnish NORNDiP Advisory Board Members:

Katja Lauri is research director @ Institute for Atmospheric and Earth System Research

Eija Tuominen is research team leader @ VTT

Hanna Vehkamäki is professor in computational aerosol physics and **vice dean of equality**





FINNISH WOMEN ARE COMPARATIVELY EQUAL

- Finland is #3 in the global equality index (used to be #2).
- E.g., three out of four political parties forming the Finnish Government are led by a woman.

1	Iceland	0.912		+0.004	-
2	Norway	0.879		+0.034	+1
3	Finland	0.863		+0.003	-1
4	New Zealand	0.856		+0.014	-
5	Sweden	0.815		-0.007	-
6	Germany	0.815		+0.014	+4
7	Nicaragua	0.811		+0.001	-
8	Namibia	0.802		-0.005	-
9	Lithuania	0.800		+0.001	+2
10	Belgium	0.796		+0.003	+4



From left:
Prime Minister Petteri Orpo,
Minister of Finance Riikka Purra,
Minister of Education Anna-Maja Henriksson,
Minister of Forestry and Agriculture Sari Essayah

<https://www.is.fi/politiikka/art-2000006628100.html>

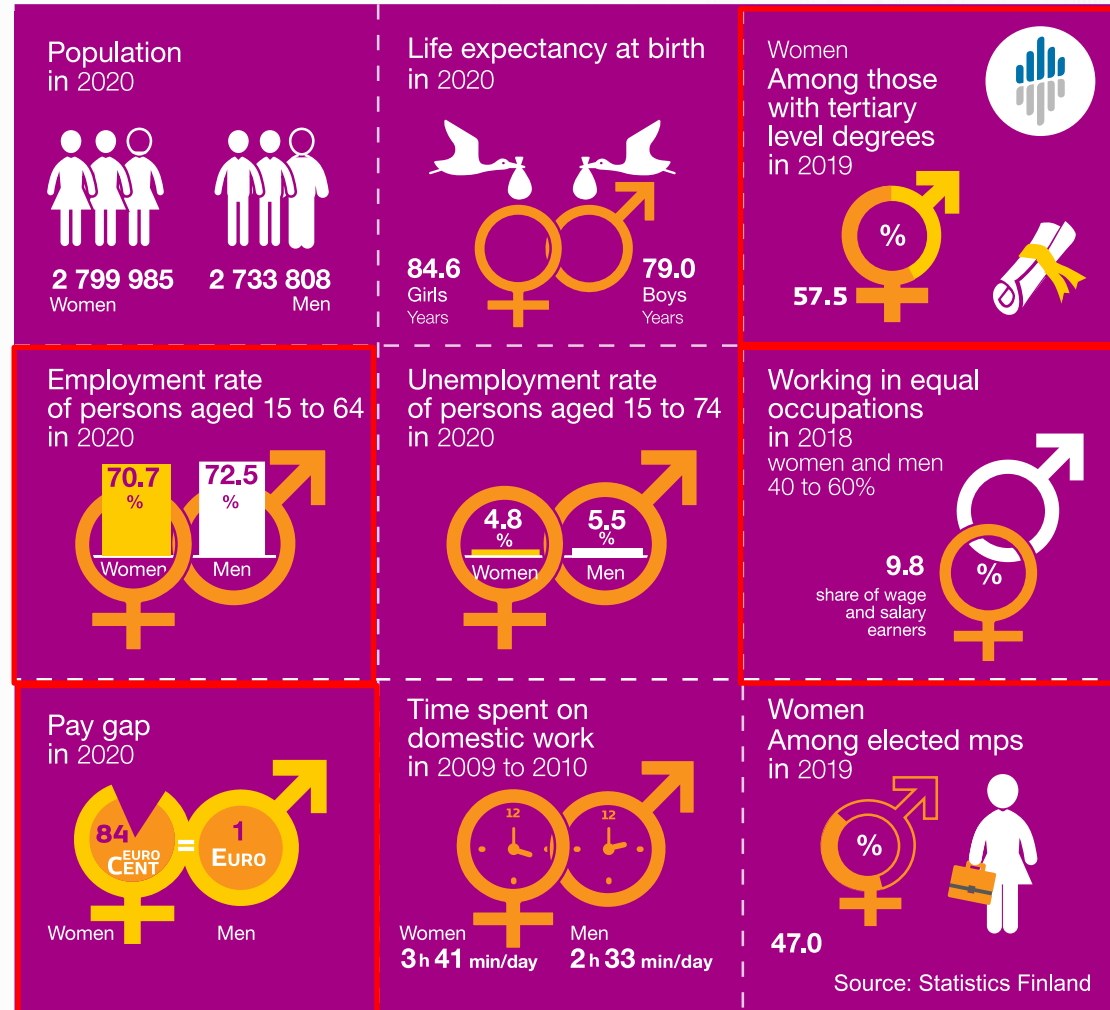
https://www3.weforum.org/docs/WEF_GGGR_2023.pdf



ARE FINNISH WOMEN EQUAL?

Finnish women in working life:

- Education: women prevail
- Employment: ~same level
- Salary: woman's euro is 84 cents
- NOTE: Finnish working life is extremely divided between women's jobs and men's jobs

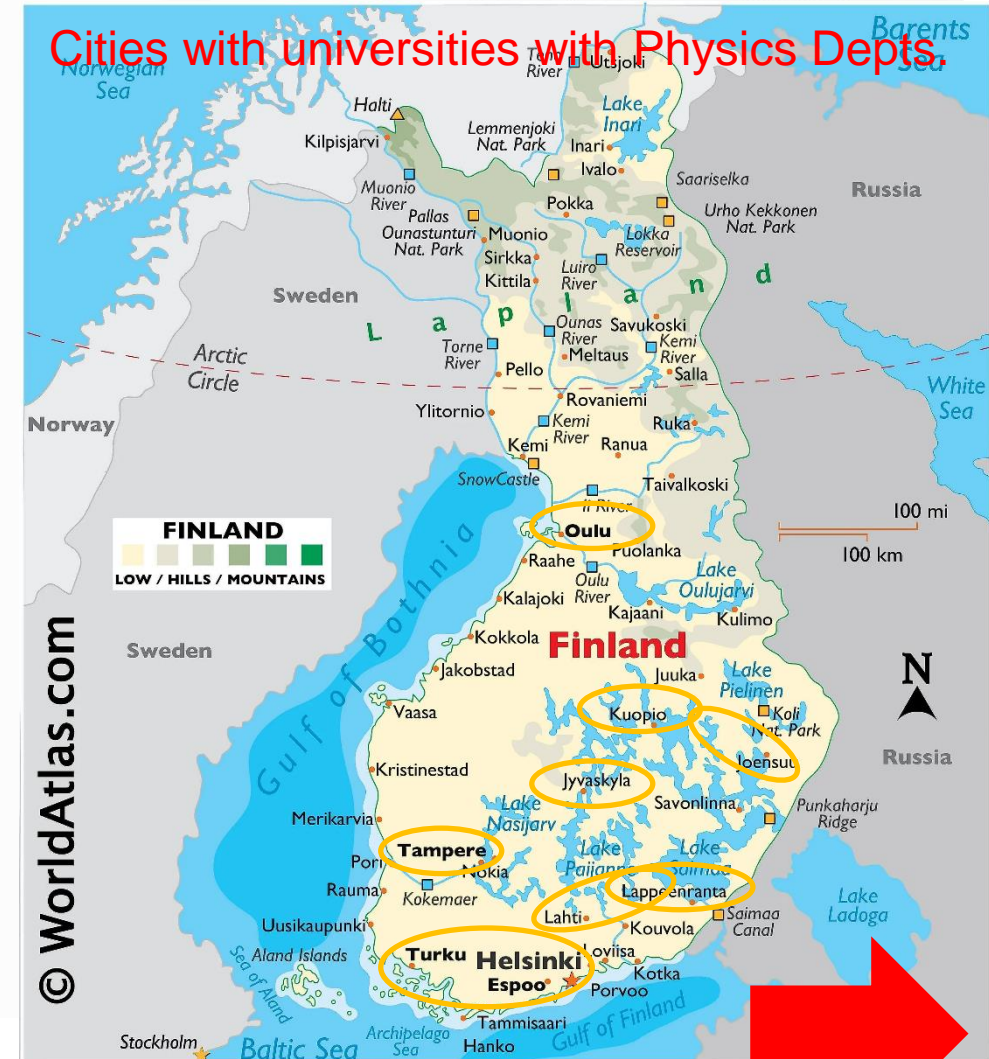


Source: Statistics Finland, Gender Equality in Finland 2021



WOMEN IN PHYSICS IN FINNISH UNIVERSITIES

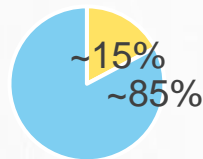
- **Data** is important!
- Data women in physics in Finnish universities is often or difficult to find – but the situation is slowly improving. (“The director did not answer my emails and HR did not dare to share the data.”)
- Luckily, many colleagues are actively working for diversity in physics in their universities.
- Special thanks to Bernadette Gehl-Väisänen (Aalto), Anu Kankainen (Jyväskylä), Laura Karppinen (Helsinki), Panja Luukka (Lappeenranta-Lahti), Miikka Dal Maso (Tampere), Assa Sasikala Devi and Taina Cooke (Oulu), Milica Todorovic (Turku) and Cristina Florea (UEF).





WOMEN IN PHYSICS IN FINNISH UNIVERSITIES

Members of the Finnish Physical Society @ 2021 (718↓)



FPS Board: ■ Female ■ Male

Members: 5/12 female ↑

Chair Mr. Daniel Price / Helsinki

Vice-chair Mr. Juha Muhonen / Jyväskylä

FPS WG Diversity in Physics Finland

(e.g., gender session in FPS annual meeting)

Chairs Ms. Tuuli Miinalainen and

Mr. Ondřej Krejčí

~90 members in the mailing list

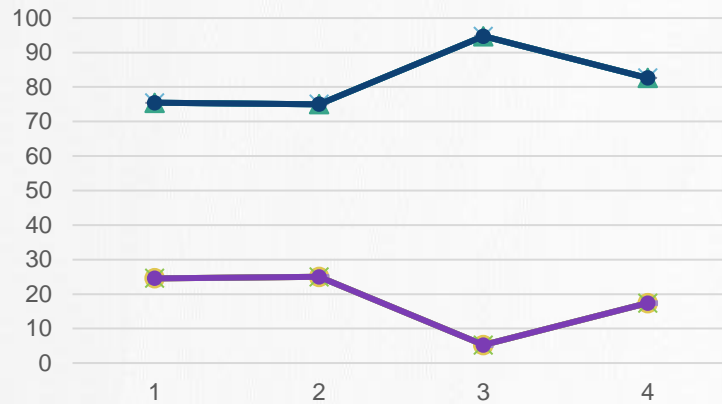
<https://blogs.helsinki.fi/diversityinphysics/>

UNIVERSITY	FEMALE FULL PROFESSORS	
Lappeenranta-Lahti University of Technology	1/4	25% →
University of Helsinki	9/43	21% ↑
University of Eastern Finland / Kuopio	2/13	15% →
University of Oulu	1/10	10% ↓
Aalto University	4/23	17% →
University of Turku	1/8	13% ↑
University of Jyväskylä	1/17	6% ↓
Tampere University	2/14	14% →
Åbo Akademi	0/1	0% →
University of Eastern Finland / Joensuu	1/15	7% →

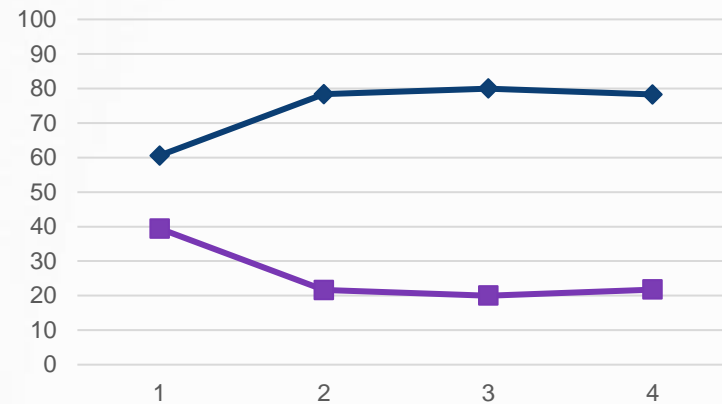


GENDER “TWEEZERS” IN PHYSICS IN SELECTED FINNISH UNIVERSITIES

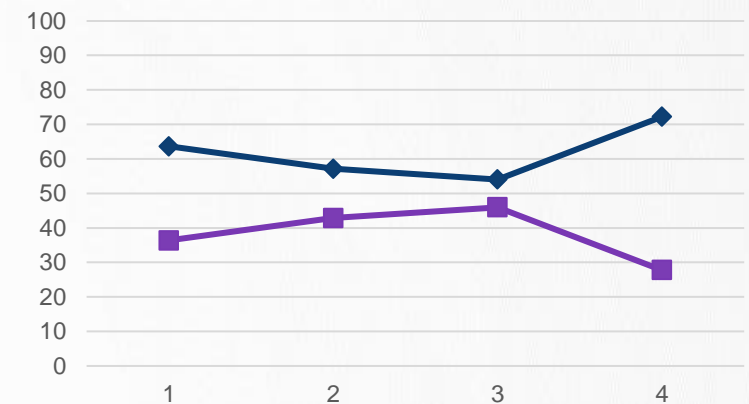
Aalto Physics, n=259



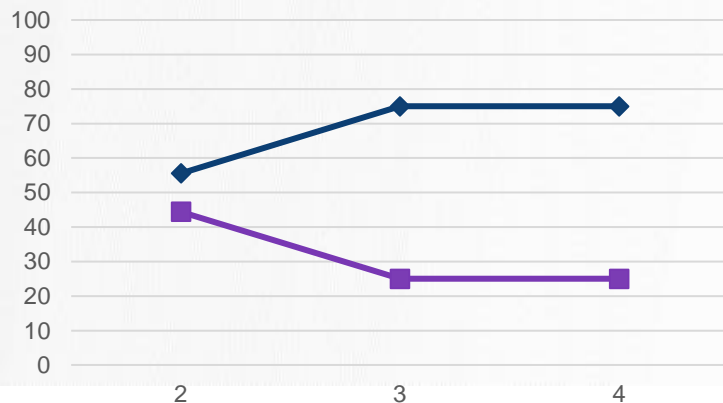
Helsinki Physics + HIP, n=181



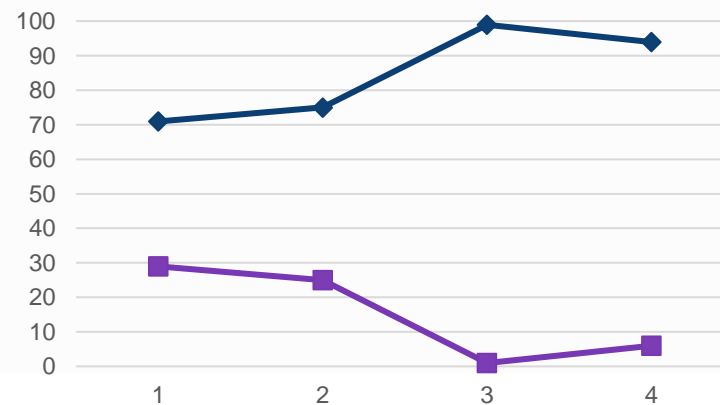
Helsinki INAR, n=131



LUT Physics, n=21



Jyväskylä Physics, n=132



For reference:

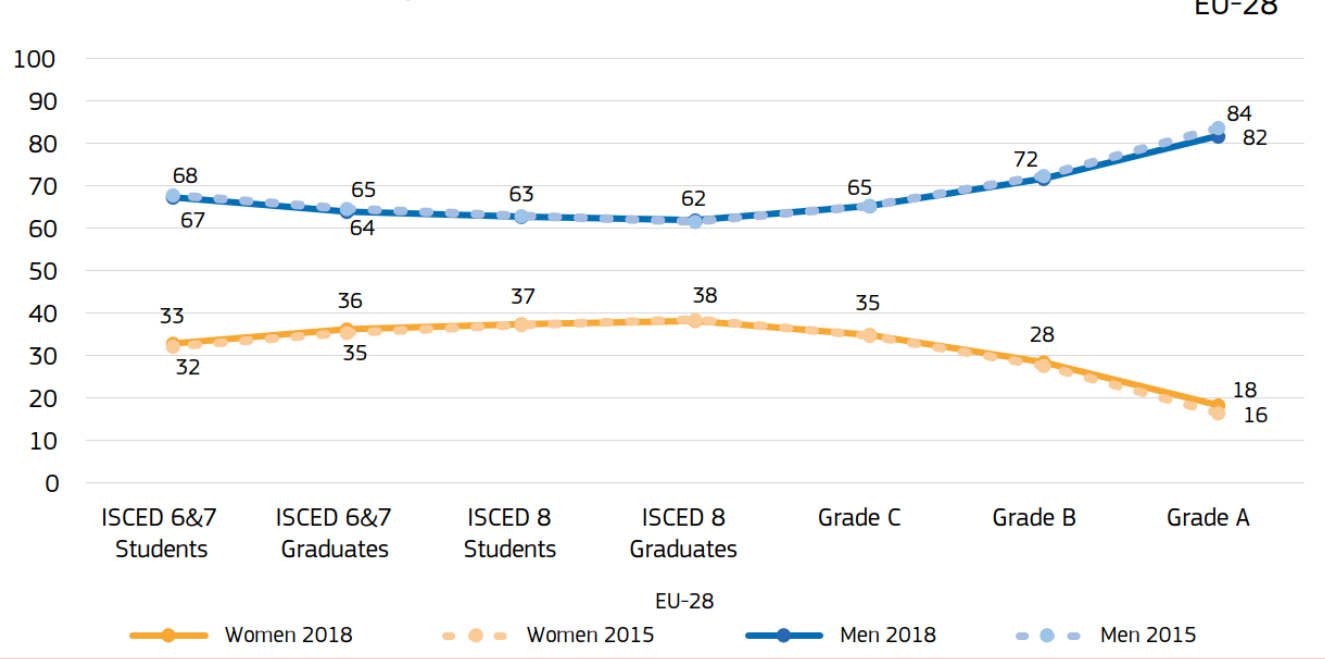
Barthelemy, R.S. and Knaub, A.V., 2020. *Gendered motivations and aspirations of university physics students in Finland*. Physical Review Physics Education Research, 16(1), p.010133:
“Despite all of the positive aspects in Finland for women and for science education, our results suggest that Finnish female university students still face challenges that male students do not face.”



GENDER “TWEEZERS” IN STEM IN EUROPE



EU She Figures 2021: Gender in STEM



<https://op.europa.eu/en/publication-detail/-/publication/67d5a207-4da1-11ec-91ac-01aa75ed71a1>

Factors influencing women’s career:

- 1. Hiring:** job advertisements, bias in recommendation letters, bias in recruitment
- 2. Working conditions:** less resources, less mentoring, lower salary, part time jobs
- 3. Career progression:** promotion, evaluation
- 4. Grants:** women’s chances to receive grants are lower

Source: <https://www.leru.org/publications/implicit-bias-in-academia-a-challenge-to-the-meritocratic-principle-and-to-womens-careers-and-what-to-do-about-it> (2018)



INTERNATIONALISATION OF FINNISH UNIVERSITIES



Englanti on ihan hyvä kieli, mutta nykyään se tekee kansalliskielistä kyökkikieltä, sanoo professori Janne Saarikivi. KUVA: EMILIA ANUNDI / HS

- Increase in number of foreign students and staff at universities
 - Example from Physics: in LUT, 62% of staff in Physics is international
- Almost 90% of dissertations and 40% of master's theses are written in English.
- A student survey expressed dissatisfaction with the current state. 38% of Finnish-speaking and 74% of Swedish-speaking respondents want more courses in their mother tongue.
- There is a need to increase Finnish language teaching and multilingualism. Otherwise, the marginalization of national languages in education and elsewhere in society is imminent.



UH FACULTY OF SCIENCE: DEPARTMENTS' WORK WELL- BEING GROUPS

- Each department has its own wellbeing group (CHEM, CS, GEO, INAR, MATHSTAT, PHY & HIP). These groups form Kumpula joint well-being network led by Vice-Dean Hanna Vehkamäki.
- A strong focus in the well-being work is on equal rights and opportunities.
- Departmental work well being groups are systematically involved in the analysis of the work well being survey results from 2023
- Collaboration with student association harassment contact persons initiated
- Nov 2022: all the current Well-being groups' low threshold contact person 'been trained'

FACULTY OF SCIENCE / WELLBEING AND A SENSE OF COMMUNITY
/ WELLBEING SUPPORT CONTACT PERSONS IN KUMPULA

Wellbeing support contact persons in the Kumpula campus

Have you experienced sexual harassment or other inappropriate behaviour at the university? Are there other challenges in your well-being at work? Or have you seen someone else suffering from these situations? Please report it.

The Kumpula campus has a number of volunteer low-threshold support contact persons (in addition to the university's common harassment contact persons) with whom you can confidentially discuss harassment or other issues related to well-being at work. Support persons are members of the departments' well-being groups. Support staff exist for both students and staff.

- See also the [code of conduct of our campus](#).
- See also the University level instructions [Prevention of inappropriate treatment and harassment](#).
- See also the Faculty of Science's [student's guide to equality and diversity \(PDF\)](#). The guide is also available in [Finnish](#) and [Swedish](#).
- See also [the student wellbeing service contact information](#).

RECENT DIVERSITY & WORK WELL-BEING ACTIVITIES IN THE UH FACULTY OF SCIENCE

Every toilet has a Safer space contact person info sheet

Unisex signs to all individual toilets in the campus (multitoilets in lobbies stay gender specific)

Up-to-date faculty staff & degree gender data now on the faculty web page

<https://www.helsinki.fi/fi/matemaattis-luonnontieteellinen-tiedekunta/tiedekunta/tiedekunta-numeroina>

Faculty student guide available since beginning of autumn term 2022

'In Kumpula we manage, or do we' - mental health event 10.10.2022 and minority stress and being an ally event 23.1.2024

Kumpula LGBTQ+ STEM day webinar 18.11.2021

<https://blogs.helsinki.fi/kumpula-lgbtq/events/lgbtq-stem-day-webinar-18-11-2021/>

Vice-dean's diversity blog in Flamma (also in HELWOR blog for general public)

<https://blogs.helsinki.fi/tutkijanaiset/>

Renewal of the faculty instructions for filling professor and lecturer positions finalized

KUMPULA CAMPUS IS A SAFER PLACE

WE DO NOT ACCEPT ANY BEHAVIOUR THAT INCLUDES:
• Any sort of discrimination towards someone's ethnicity, nationality, sexual orientation, gender expression, religion, size, socio-economic background, mental health or ability.
• Hate speech or any rude jokes that may insult people around you.
• Teasing or harassment of any kind.
• Entering someone's personal space – or touching them without their permission.
• Any offensive drunken or intoxicated behaviour.

STAFF
If you experience or witness this kind of behaviour, please contact the Kumpula well-being team through bit.ly/Kumpula-support-staff or this QR code (signature to Flamma required):

STUDENTS
If you experience or witness this kind of behaviour, please contact the Kumpula well-being team through bit.ly/Kumpula-support-students or this QR code (link to Studies Service):

KUMPULAN KAMPUS ON TURVALLISEMPI TILA
SE TÄRKEÄÄ, ETÄ EMME HYVÄSKY MIINKÄÄNLAISTA SYÖNTÄÄ TAI HARINTAA.

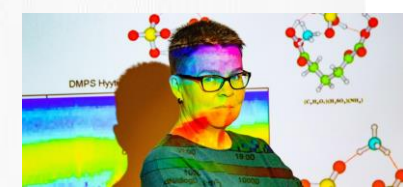
Oleko joutanut seksuaaliseen häirintään tai muun epämiellyttävään käyttökäyttöön? Oletko ollut? Tai havainnut jollakin muulla käyttäenä?

TYÖNTEKIJÄ
Ota yhteyttä kampuksen häirintä- ja työhyvinvointivastaavaan bit.ly/Kumpula-tuki-tyon tekijat tai ohjeeseen QR-koodin kautta (vaatii Flamma-käyttötunnin).

OPISKELIJA
Ota yhteyttä kampuksen häirintä- ja työhyvinvointivastaavaan bit.ly/Kumpula-tuki-opiskelijat tai ohjeeseen QR-koodin kautta (linkki: Opikele/tyohyvinvointi).

PERSONAL
Kontaktta kampuksen kontaktipersoner för trakasserier via bit.ly/Campus-tod-personal eller QR-koden (kräver att du loggar in på Flamma).

STUDENTER
Kontaktta kampuksen kontaktipersoner för trakasserier via bit.ly/Campus-tod-studerande eller QR-koden (link till Studietjänsten).





OTHER MATTERS IN PROGRESS

- Gathering information on employees' packing density across faculty
- Introduction of faculty travel support for work well-being and diversity related – conferences & presentations
- Piloting a survey on distribution of academic household work → poster in NORNDiP
- Summer worker orientation discussed and underlined in the supervisor's network
- Intranet link list for information that had proven to be difficult to find
- Discussion started on developing a moodle-based safety training
 - general house security (how to act in cases of fire, accidents etc)
 - general laboratory safety (physics, chemistry)
 - recycling etc
 - psychological safety (combating harassment, bullying, discrimination etc)



TO WRAP UP THE BAD AND THE GOOD NEWS

- Bad news:
 - The EDI (equality, diversity and inclusion) work is not getting easier in the polarizing environment
 - The gender tweezers do not seem to be improving in physics units in Finnish universities
- Good news:
 - Finland remains high in international gender equality indexes
 - FPS positive about equality, diversity and inclusion actions, FinDiP working group
 - We start to have more active local action groups at physics depts. in universities
- The unknown news:
 - Something will be done about the language environment in Finnish universities, but it remains to be seen if the change will be positive or negative in terms of EDI





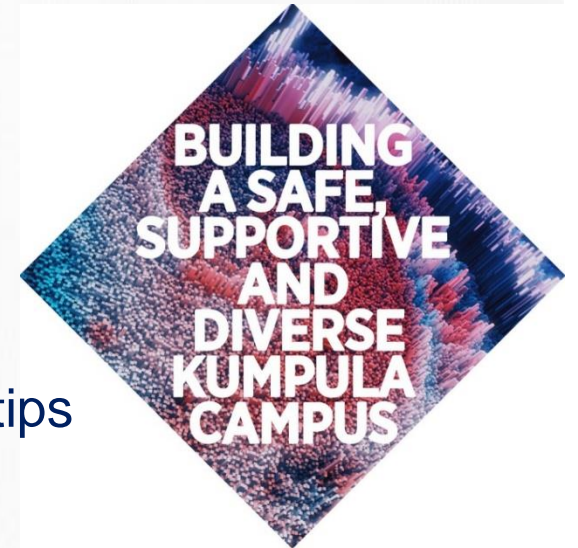
ABSTRACT OF THE MINEDU REPORT

The number of foreign students and staff at universities has increased. In particular, there has been an increase in English-language master's programs. Even in programs declared to be in Finnish, there is a lot of teaching in English. Almost 90% of dissertations and 40% of master's theses are written in English. For one third of students, the educational path in the national language is interrupted between the bachelor's and master's degrees. At Aalto University, teaching in English extends widely to bachelor's studies. Decisions by law enforcement authorities regarding the right to study in the national languages have not changed the situation. A student survey expressed dissatisfaction with the current state. 38% of Finnish-speaking and 74% of Swedish-speaking respondents want more courses in their mother tongue. If possible, over 80% would prefer to have the course in their mother tongue. The recommendations of the study include clear guidelines on the right to study in Finnish and Swedish. It proposes a language proficiency requirement and arrangements for teachers recruited from abroad, rewards for research conducted in the national languages, and recording the number of students trained in Finnish-language programs in the universities' performance agreements. With the increasing number of international students at universities, there is a need to increase Finnish language teaching and multilingualism. Otherwise, the marginalization of national languages in education and elsewhere in society is imminent.



EXAMPLE: ACTIVITIES INCREASING DIVERSITY @ UH SCIENCE

- **Active discussion**
 - Talks and presentations in meetings, colloquia, and lectures
 - Training events, e.g., about implicit bias and sexual harassment
- **Work well-being**
 - Well-being groups, low-threshold contact points, Code of Conduct, tips for a more inclusive workplace
- **Networking, mentoring, role models**
 - Avoiding being “the only woman in the room”, avoiding “all-male-panels”
- **Work life balance**
 - Understanding family responsibilities, also in job announcements
- **Continuous collection of data**
 - Where we are and where we want to be





EXAMPLE: TOILET NOTES @ UH SCIENCE

KUMPULA CAMPUS IS A SAFER PLACE

WE DO NOT ACCEPT ANY BEHAVIOUR THAT INCLUDES:

- Any sort of discrimination towards someone's ethnicity, nationality, sexual orientation, gender expression, religion, size, socio-economic background, mental health or ability.
- Hate speech or any rude jokes that may insult people around you.
- Catcalling or harassment of any kind.
- Entering someone's personal space – or touching them without their permission.
- Any obtrusive drunken or intoxicated behaviour.

These rules are inspired by Pien Shop.

STAFF

If you experience or witness this kind of behaviour, please contact the Kumpula well-being team through bit.ly/Kumpula-support-staff or this QR code (sign-in to Flamma required):



STUDENTS

If you experience or witness this kind of behaviour, please contact the Kumpula well-being team through bit.ly/Kumpula-support-students or this QR code (link to Studies Service):



KUMPULAN KAMPUS ON TURVALLISEMPI TILA

SE TARKOITTAÄ, ETTÄ EMME HYVÄKSY MINKÄÄNLAISTA SYRJINTÄÄ TAI HÄIRINTÄÄ.

Oletko joutunut seksuaalisen häirinnän tai muun epäasianlaisen käytöksen kohteeksi yliopistolla? Tai havainnut jollekin muulle käyneen niin?

TYÖNTEKIJÄ

Ota yhteyttä kampuksen häirintä-yhdyshenkilöihin osoitteessa bit.ly/Kumpula-tuki-henkiloisto tai oheisen QR-koodin kautta (vaatii Flamma-kirjautumisen):



OPISKELIJA

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CAMPUS GUMTÄKT ÄR ETT TRYGGARE RUM

DET INNEBÄR ATT VI INTE TOLERERAR TRAKKASSERIER ELLER DISKRIMINERING.

Har du blivit utsatt för sexuella trakasserier eller annat osakligt bemötande vid universitetet? Eller har du sett att det hänt någon annan?

PERSONAL

Kontakta campusets kontaktpersoner för trakasserier via bit.ly/Gumtakt-stod-personal eller QR-koden (kräver att du loggar in på Flamma):



STUDERANDE

Kontakta campusets kontaktpersoner för trakasserier via bit.ly/Gumtakt-stod-studerande eller QR-koden (länk till Studietjänsten):



- Helsinki Association of Women Researchers conducted a survey on sexual harassment (2018): the importance of low threshold contact was obvious (<https://blogs.helsinki.fi/tutkijanaiset/2019/01/17/how-to-erase-sexual-harassment-feedback-from-finnish-academia/>).
- Every toilet in Kumpula Campus has a note with contact information.
- An upset person can look for more information in a quiet place.



WHY DIVERSITY MATTERS?

1. Diverse teams make better science

- Diverse teams bring in diverse experiences, practices, perspectives, values, and motivations
- Diversity increases the quality of the process and effectiveness of scientific inquiry.
- (Reference: abundancy of scientific studies.)

2. Everyone has right to equal opportunities



https://greatergood.berkeley.edu/article/item/how_diversity_makes_us_smarter



SUMMARY

Diversity makes better science!

Increasing diversity needs actions!

Actions make difference!





BACK UP SLIDES



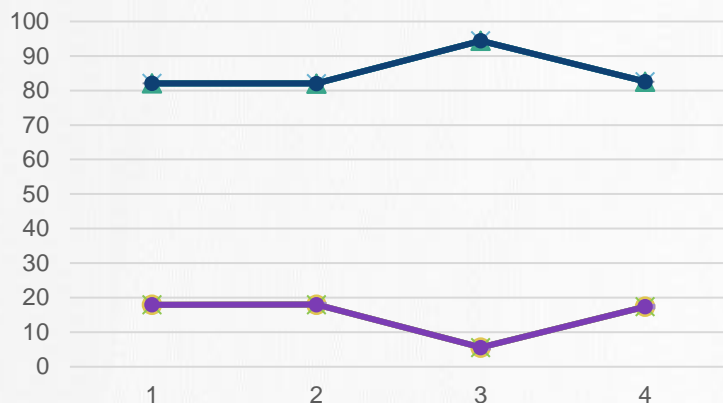
REFERENCES

- Astegiano, J., Sebastián-González, E., & Castanho, C. D. T. (2019). **Unravelling the gender productivity gap in science: a meta-analytical review.** *Royal Society open science*, 6(6), 181566.
- **EU She Figures** (2018). https://ec.europa.eu/info/publications/she-figures-2018_en, accessed 29.7.2020.
- Gvozdanović, J., & Maes, K. (2018). **Implicit bias in academia: A challenge to the meritocratic principle and to women's careers - And what to do about it.** *Technical Report 23. Advice paper.*
- Holman, Luke, Devi Stuart-Fox, and Cindy E. Hauser (2018). **The gender gap in science: How long until women are equally represented?** *PLoS biology* 16.4 (2018): e2004956.
- Hunt, Vivian, Dennis Layton, and Sara Prince (2015). **Diversity matters.** *McKinsey & Company* 1.1: 15-29.
- Medin, Douglas L., and Carol D. Lee (2012). **Diversity makes better science.** *APS Observer* 25.5.
- Nielsen, Mathias Wullum, et al. (2017). **Opinion: Gender diversity leads to better science.** *Proceedings of the National Academy of Sciences* 114.8: 1740-1742.
- Nielsen, Mathias Wullum, Carter Walter Bloch, and Londa Schiebinger (2018). **Making gender diversity work for scientific discovery and innovation.** *Nature human behavior* 2.10: 726-734.
- Quimby, Julie L., and Angela M. De Santis (2006). **The influence of role models on women's career choices."** *The Career Development Quarterly* 54.4: 297-306.
- Schiebinger et al. (2017). **Gender diversity leads to better science,** *Proc. Nat. Acad. Sci.*, 114(8), 1740.
- Stoet, Gijsbert, and David C. Geary (2018). **The gender-equality paradox in science, technology, engineering, and mathematics education.** *Psychological science* 29.4: 581-593.
- Ward, Kelly, and Lisa Wolf-Wendel (2004). **Academic motherhood: Managing complex roles in research universities.** *The Review of Higher Education* 27.2: 233-257.

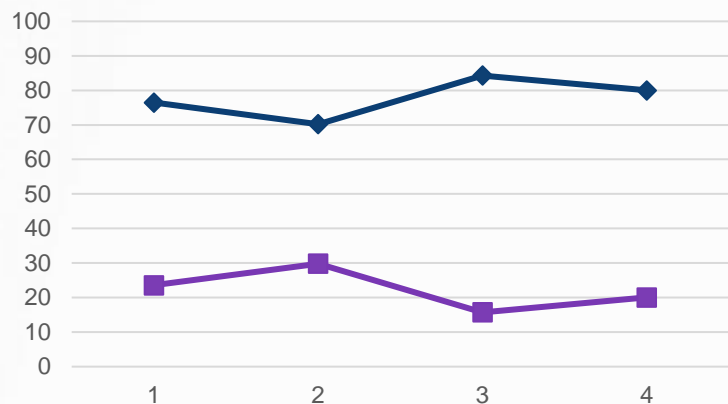


GENDER “TWEEZERS” IN PHYSICS IN SELECTED FINNISH UNIVERSITIES 2023

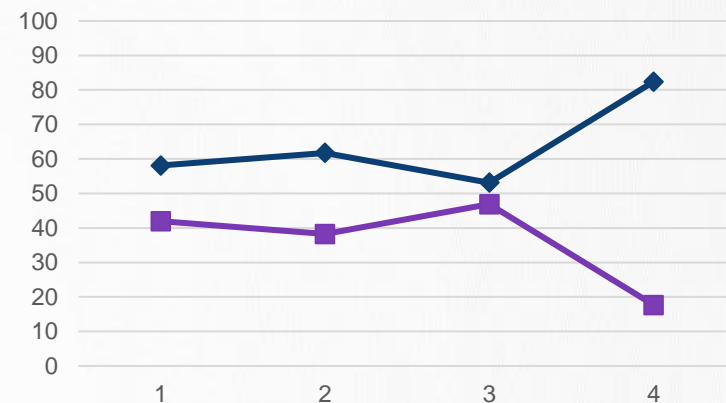
Aalto Physics, n=282



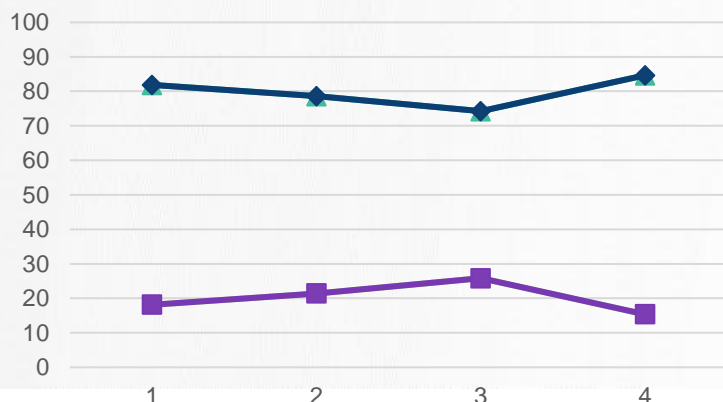
Helsinki Physics + HIP, n=208



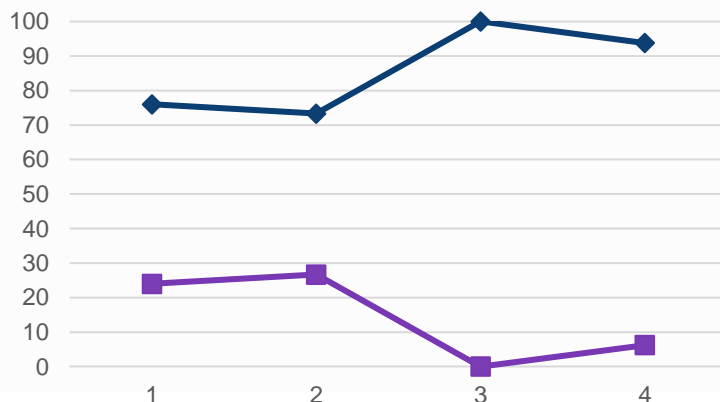
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UEF Kuopio Physics, n=113



Jyväskylä Physics, n=163



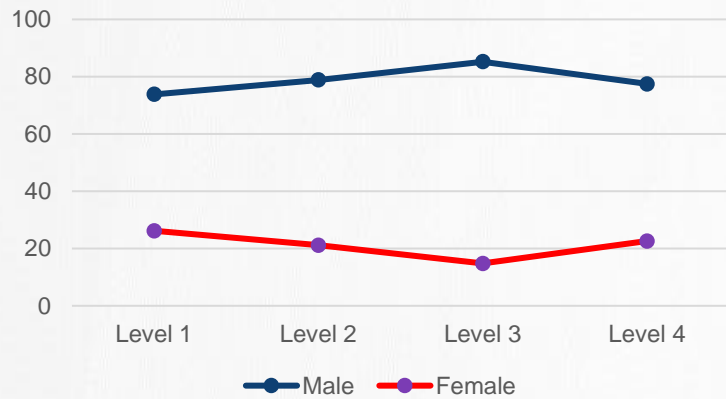
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“Despite all of the positive aspects in Finland for women and for science education, our results suggest that Finnish female university students still face challenges that male students do not face.”

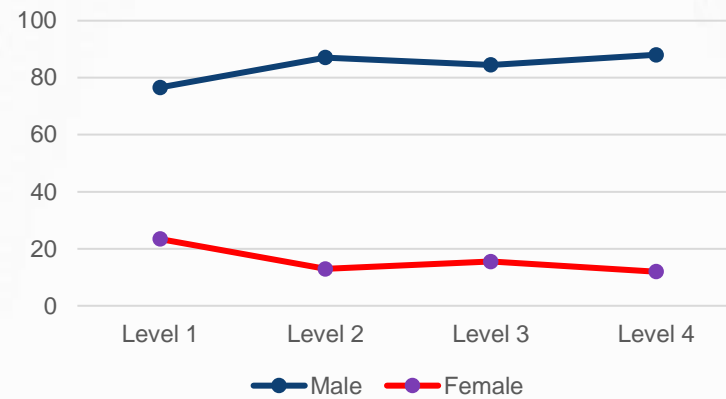


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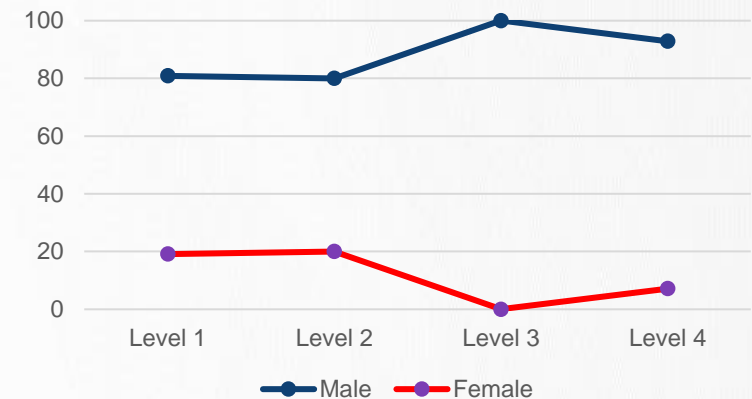
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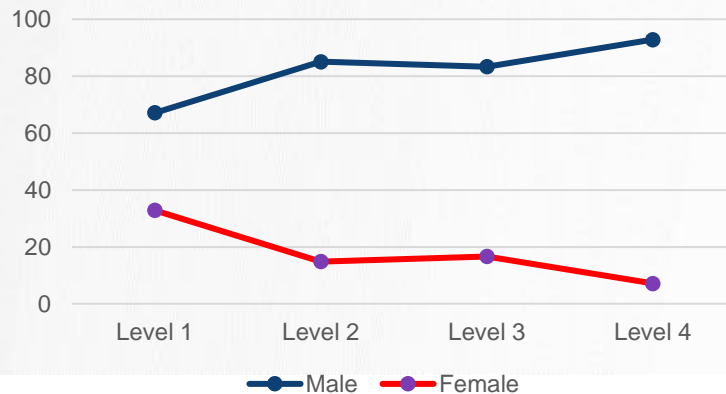
Aalto Physics [%], n=266



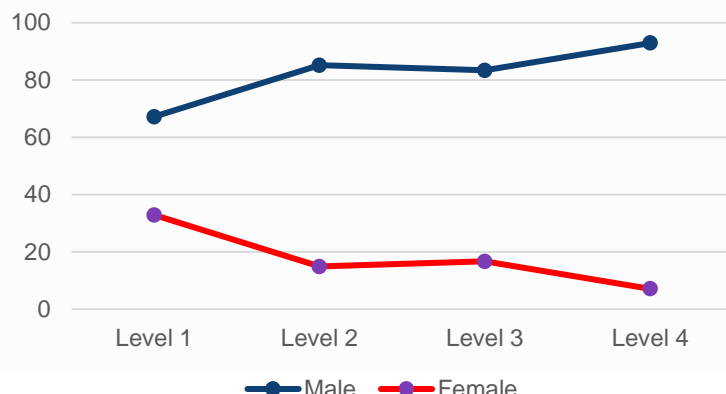
Jyväskylä Physics [%], n=149



Tampere Physics [%]



Kuopio Physics [%], n=113



For reference:

Barthelemy, R.S. and Knaub, A.V., 2020. *Gendered motivations and aspirations of university physics students in Finland*. Physical Review Physics Education Research, 16(1), p.010133:
“Despite all of the positive aspects in Finland for women and for science education, our results suggest that Finnish female university students still face challenges that male students do not face.”



(Women in Technology (WIT) matters) <wit-matters@cern.ch>

“What’s the matter?
It’s the same distance!”