WHAT ARE THE FUTURE PATHWAYS IN DIVERSITY, EQUITY, AND INCLUSION (DEI) IN PHYSICS IN FINLAND

FinDiP

Diversity in Physics, Finland (FinDiP)

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FLINGA WALL
ACCESS CODE: FFW69GR

WHO WE ARE

- A working group of Finnish Physical Society
- 2006: “Finnish Women in Physics” (FinWiP)
  → 2019: Diversity in Physics, Finland (FinDiP)

To Promote:
gender, orientation and international diversity and an inclusive workplace culture in Finland.

To Support:
our community of physicists of all genders and backgrounds interested in diversity, inclusivity and wellbeing.

WHAT IS DIVERSITY?

Diversity refers to difference.

It is not a property of an individual but of a group of individuals

=

Groups of individuals possess diversity

A WORD WITH MANY DIMENSIONS

Dimensions of the word difference include but are not limited to:

1. gender
2. sexual orientation
3. race/ethnicity
4. nationality
5. disability status
6. socioeconomic background
7. religion

One individual can have multiple identities and this should not be neglected in studies.

THE ACADEMIC WHEEL OF PRIVILEGE

Source: UKRIO Research Integrity Office

WHAT DOES DIVERSITY MEAN FOR SCIENCE

"Diversity in science refers to cultivating talent and promoting the full inclusion of excellence across the social spectrum. This includes people from backgrounds that are traditionally underrepresented and those from backgrounds that are traditionally well represented."

- Kenneth Gibbs Jr.

WHY DOES DIVERSITY MATTER

1

Critical to excellence

Diverse research groups have people who:

- Approach work and problem solving differently.
- Bring new/diverse perspectives.

2

Richer pool of talent

Lack of diversity represents loss of talent.

3

Societal advancement

Increasing diversity in science leads to innovation, growth, and global competitiveness

4

Better results

Companies committed to diversity show "a 39 percent increased likelihood of outperformance for those in the top quartile of ethnic representation versus the bottom quartile.

- *McKinsey Diversity Matters report*

ENEMIES TO DIVERSITY

1

Implicit bias

We have been conditioned as societies to associate scientists with being white cis male.

2

Affinity bias

We tend to prefer people like ourselves.

3

Unequal opportunities

- Unequal learning environments.
- Unequal career advancement opportunities.
- Unequal expectations.
- Unequal treatment by mentors/supervisors.

4

Lack of role models

Which leads to lack of community and enhances the feeling of not belonging.

5

Undervaluing

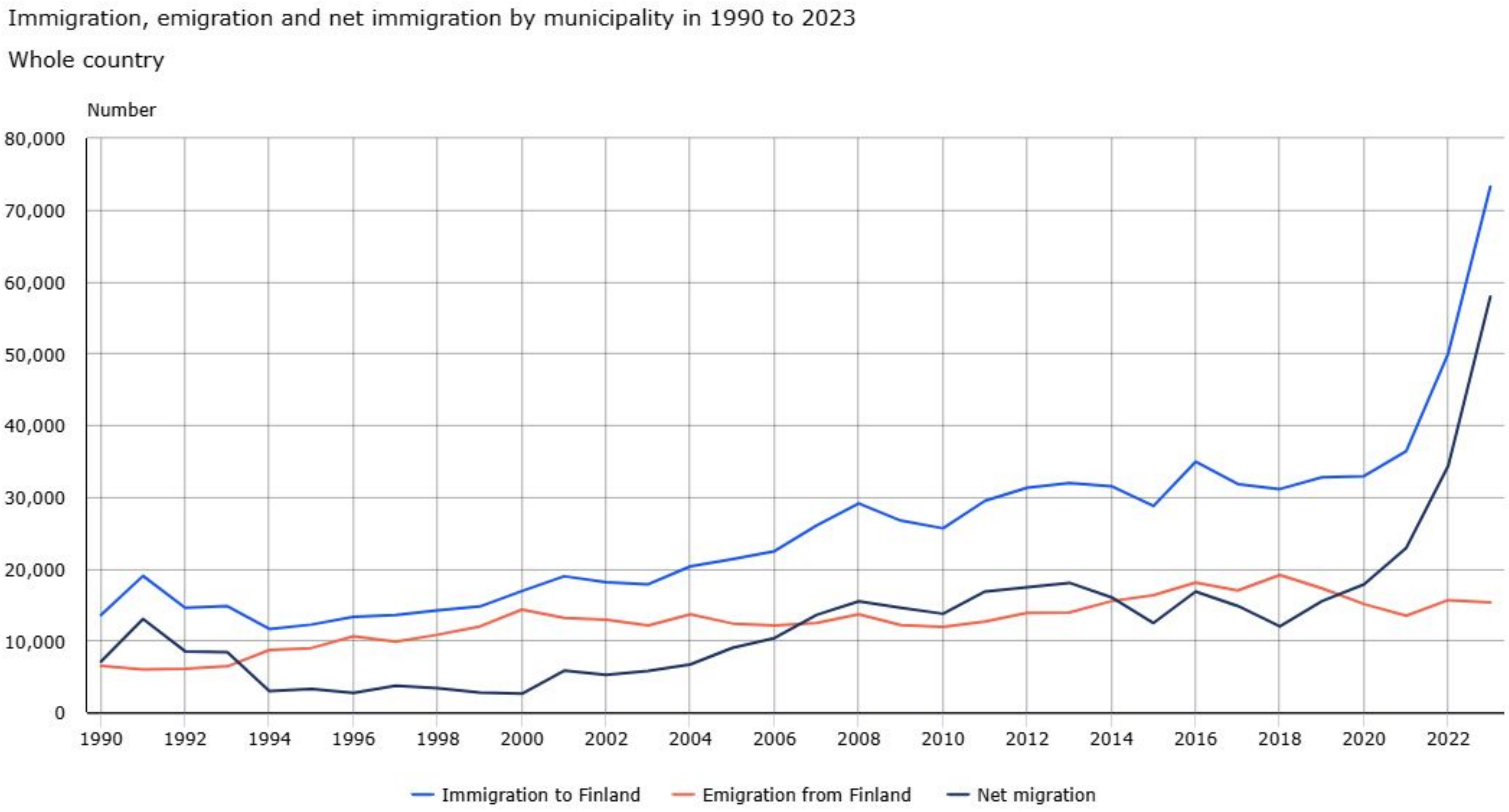
Minority contributions in STEM are not valued as highly as those by white cis able-bodied men.

6

Negative culture

Unsupportive and very competitive environment.

FINLAND IS DIVERSIFYING RAPIDLY AND SO SHOULD PHYSICS



Source: Statistics Finland, migration

01.

Gender diversity in Physics

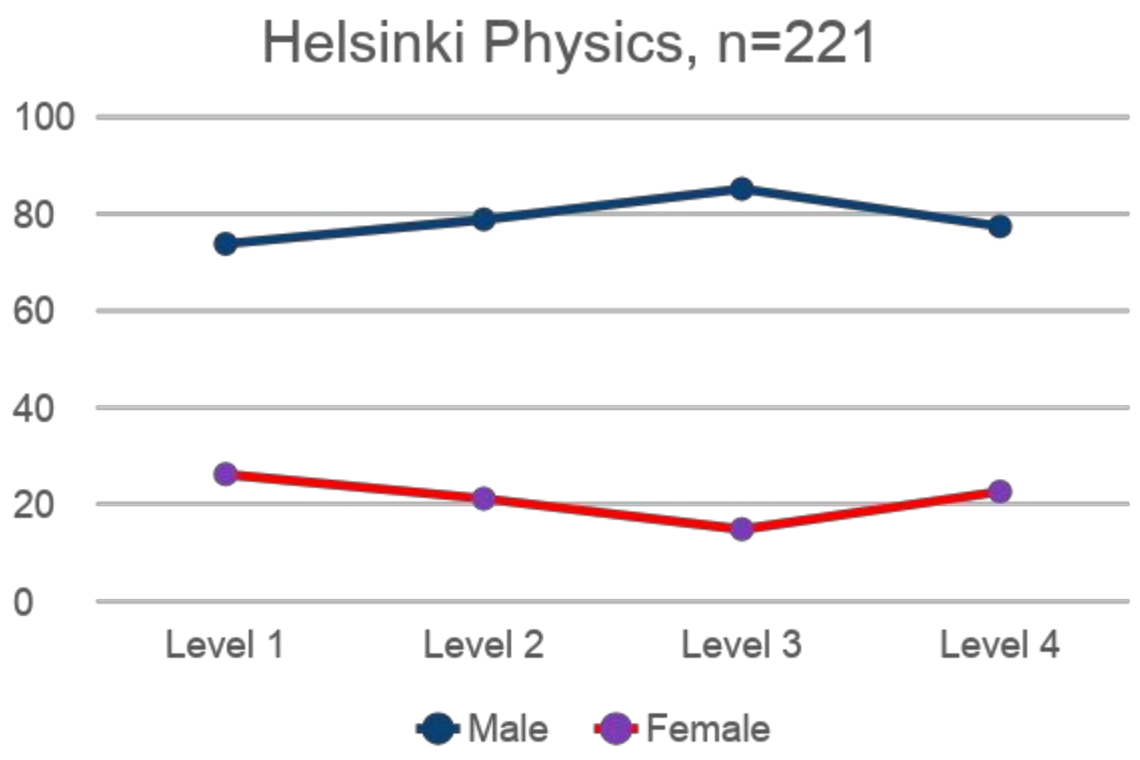
PROBLEM

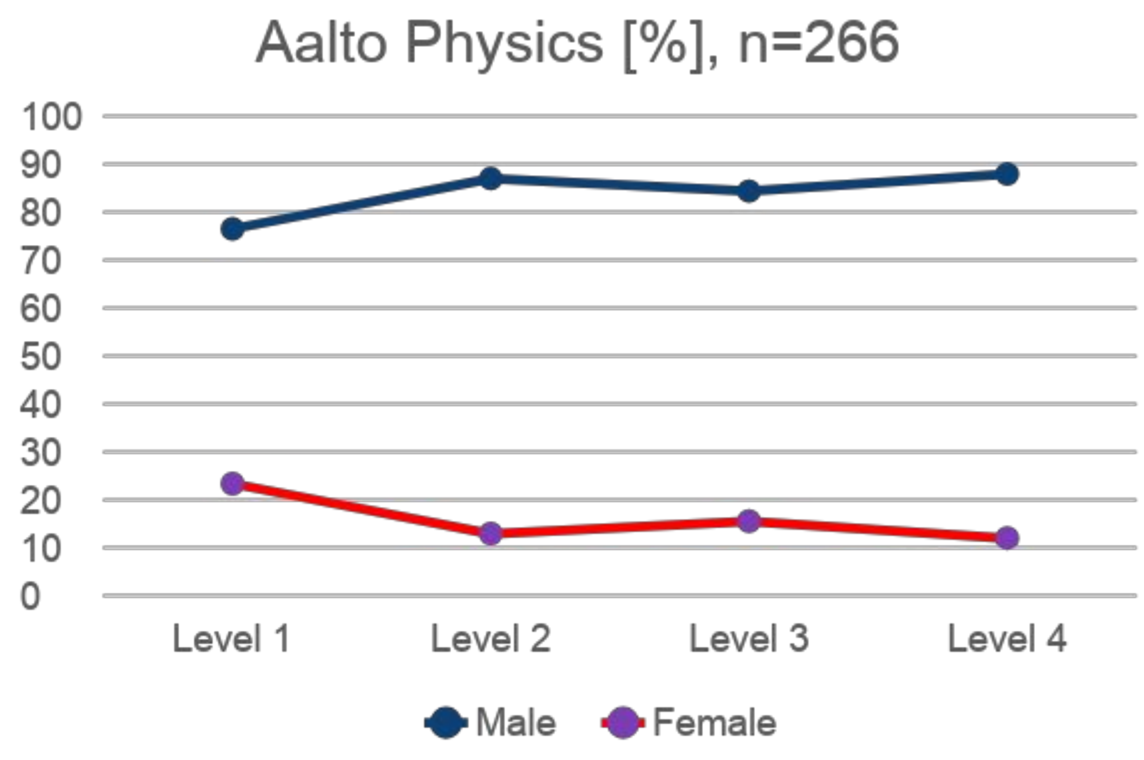
Data on gender diversity in physics in Finnish universities is often difficult to obtain – but the situation is improving.

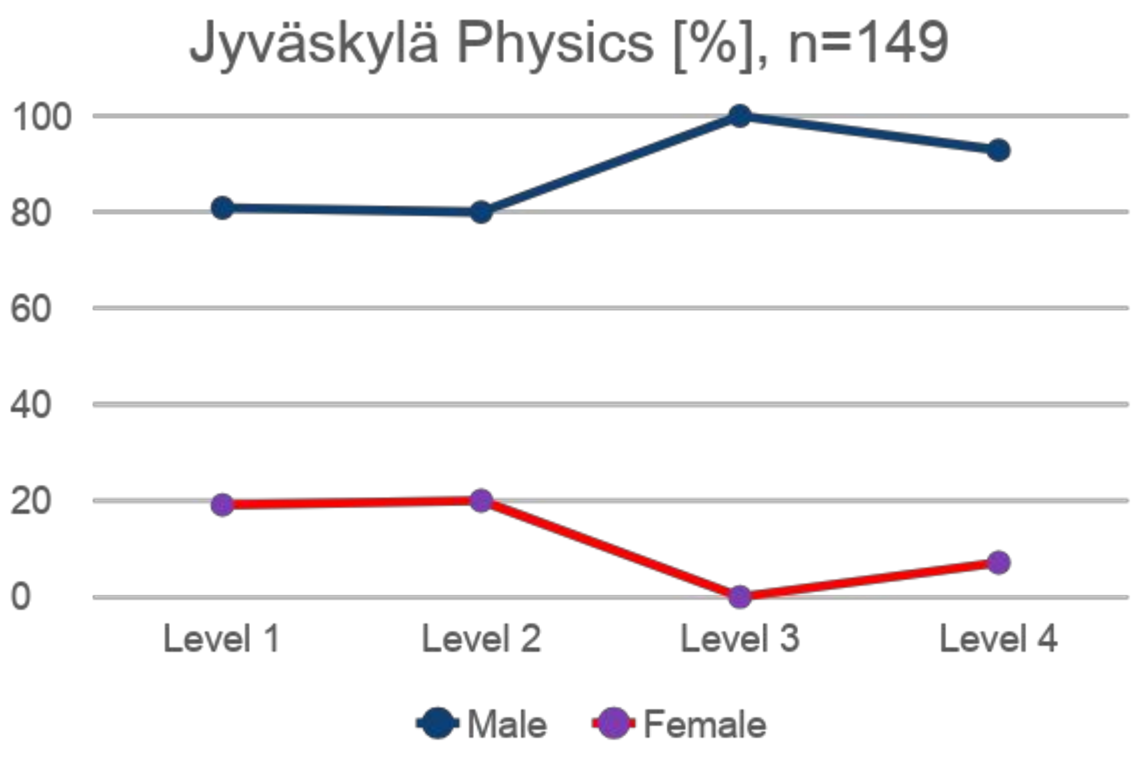
IN 2023

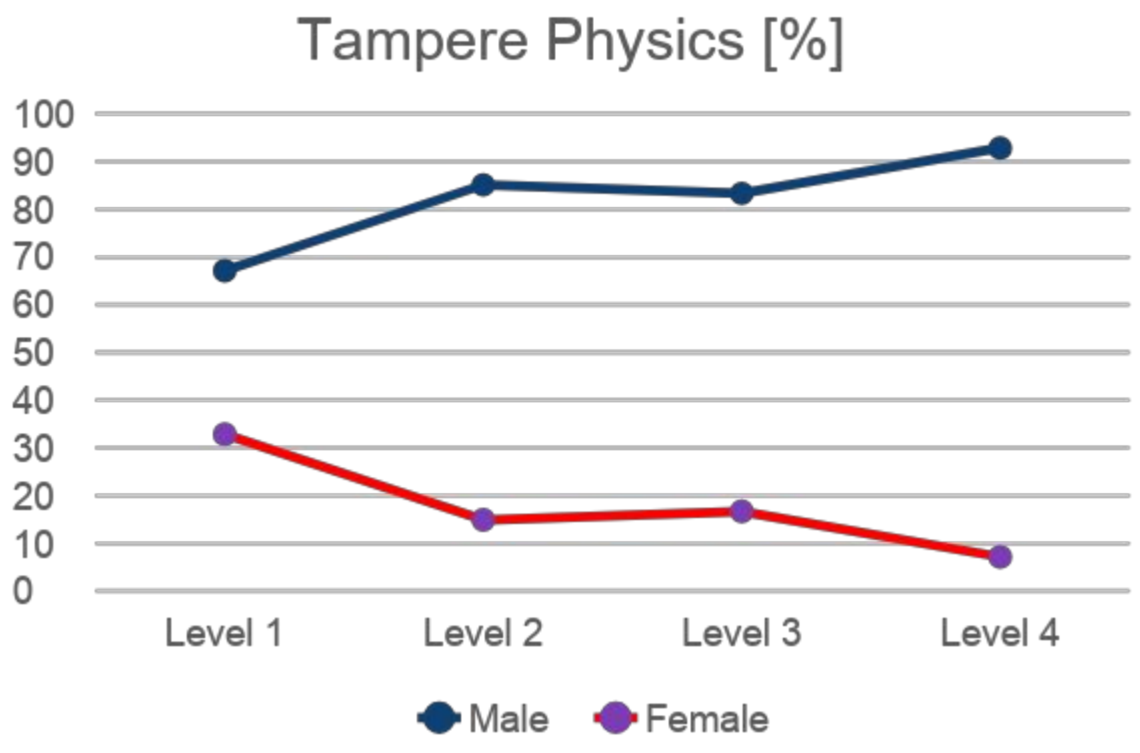
UNIVERSITY	FEMALE FULL PROFESSORS	
Lappeenranta-Lahti University of Technology	1/4	25 % →
University of Helsinki	6/34	18 % ↓
University of Eastern Finland / Kuopio	2/13	15 % →
University of Oulu	2/9	22 % ↑
Aalto University	4/23	17 % →
University of Turku	1/9	11 % →
University of Jyväskylä	1/16	7 % ↓
Tampere University	2/14	14 % ↑
Åbo Akademi	0/2	0 % →
University of Eastern Finland / Joensuu	1/15	7 % ↑

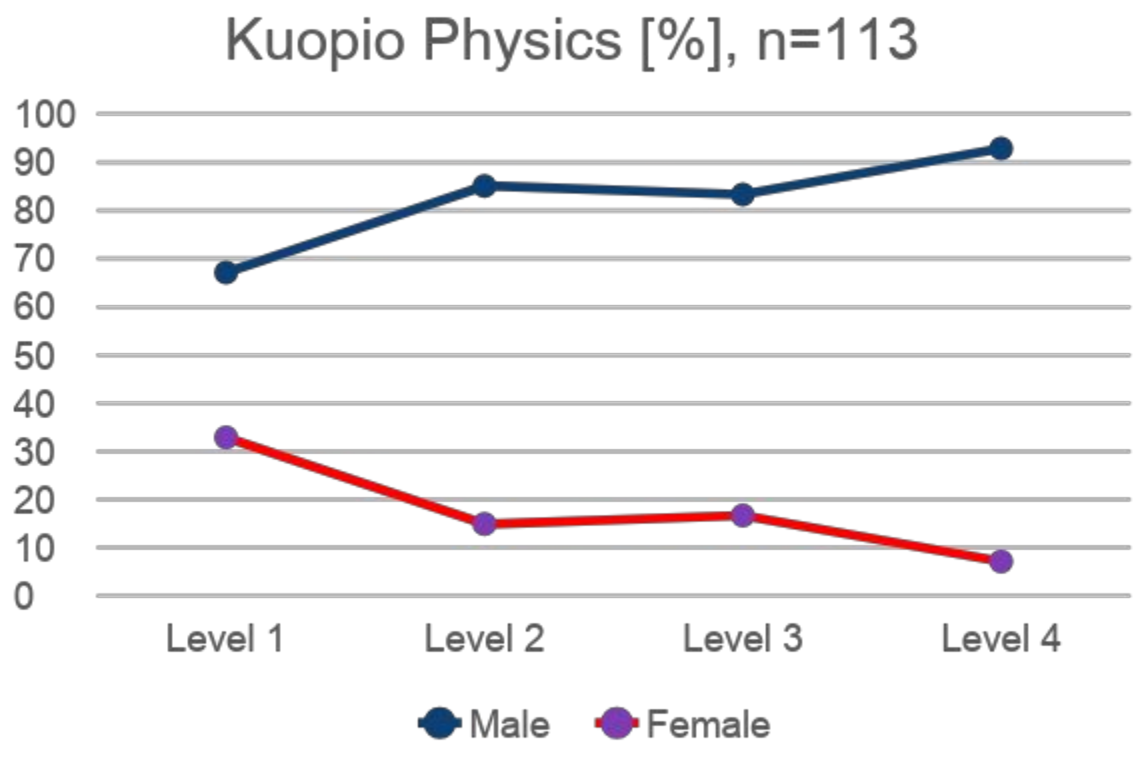
GENDER SCISSORS IN PHYSICS IN 2022









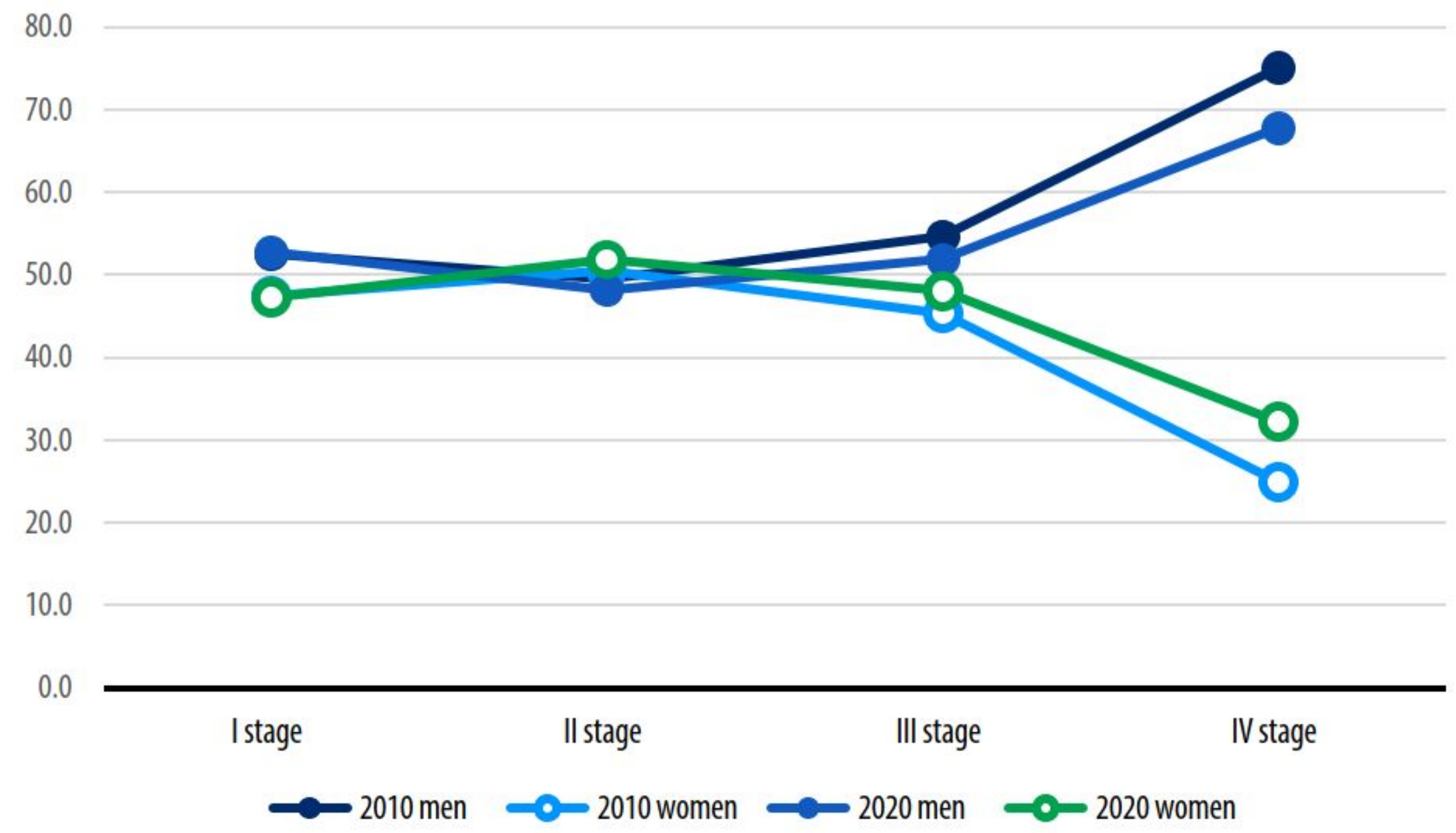


PERCENTAGE OF WOMEN AT FULL PROFESSOR LEVEL IN DIFFERENT FIELDS OF RESEARCH

	Natural sciences	Engineering and technology	Medical sciences	Agriculture and forestry	Social sciences	Arts and humanities
EU-27	21.99	17.91	30.08	28.50	30.85	34.95
Finland	15.28	10.07	33.40	40.63	37.71	47.31
Sweden	18.69	16.88	32.94	32.94	35.10	38.87
Norway	19.57	14.23	43.85	21.82	33.92	36.36
Spain	22.21	15.54	27.69	20.33	25.54	30.69

Source: Ministry of education and culture

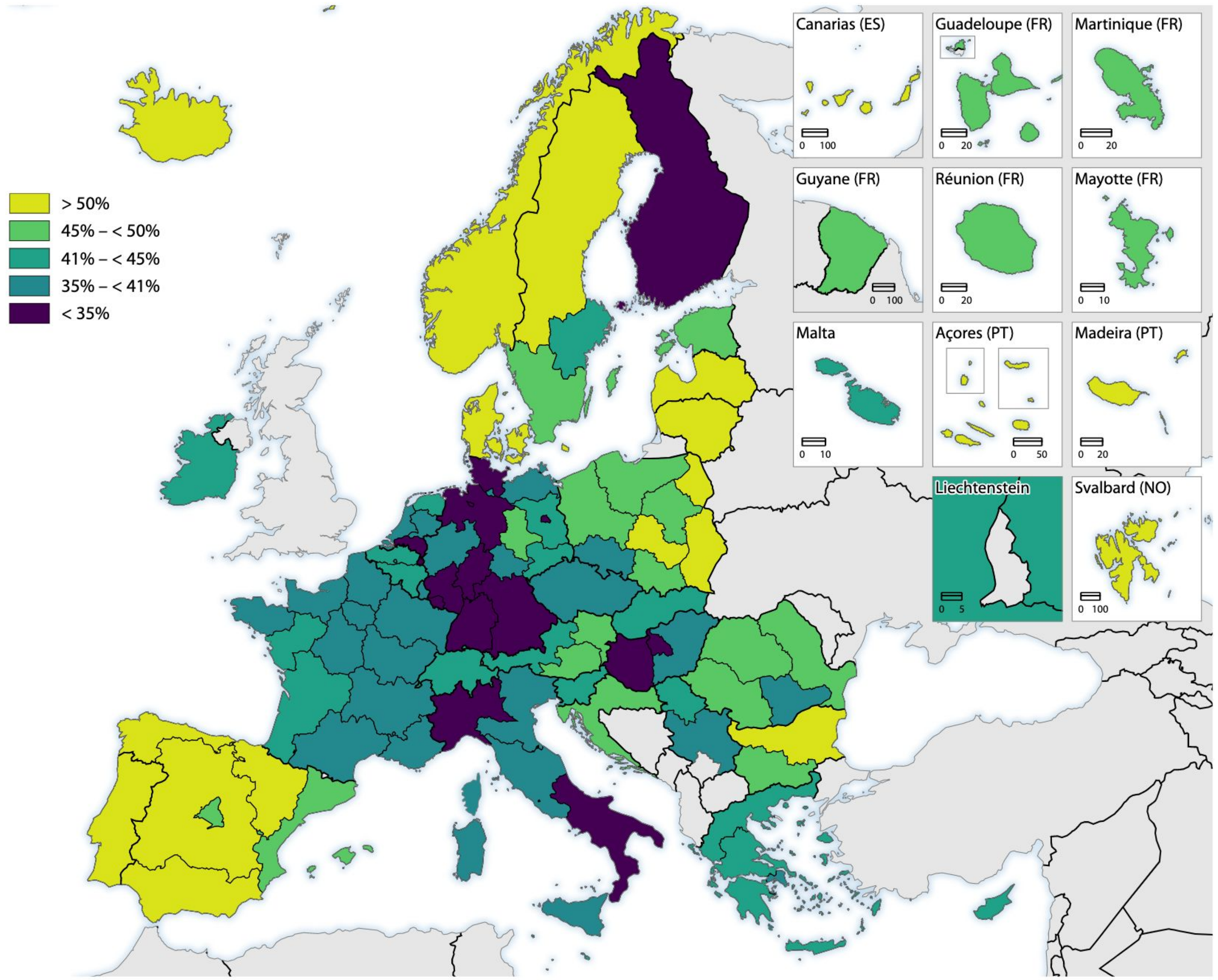
Figure 1. Gender distribution of academic research and teaching staff at different career levels in 2010 and 2020, percentage of labour units. (Vipunen – Education Statistics Finland: University personnel.)



COMPARISON WITH EU

The proportion of women at the professorial level (full professor, grade A) in natural sciences in EU-27 is 21,99 percent compared to 15,28 per cent in Finland.

Proportion of women scientists and engineers, 2021
(%, by NUTS 1 regions)



Regional data for Croatia, Cyprus, Czechia, Denmark, Estonia, Ireland, Lithuania, Luxembourg, Latvia, Malta, Slovenia and Slovakia: Single regions at this level of detail. Bremen (DE5), Saarland (DEC), Corsica (FRM), Åland Islands (FI12): Break in time series, low reliability

Administrative boundaries: © EuroGeographics © UN–FAO © Turkstat
Cartography: Eurostat – IMAGE, 02/2023

eurostat

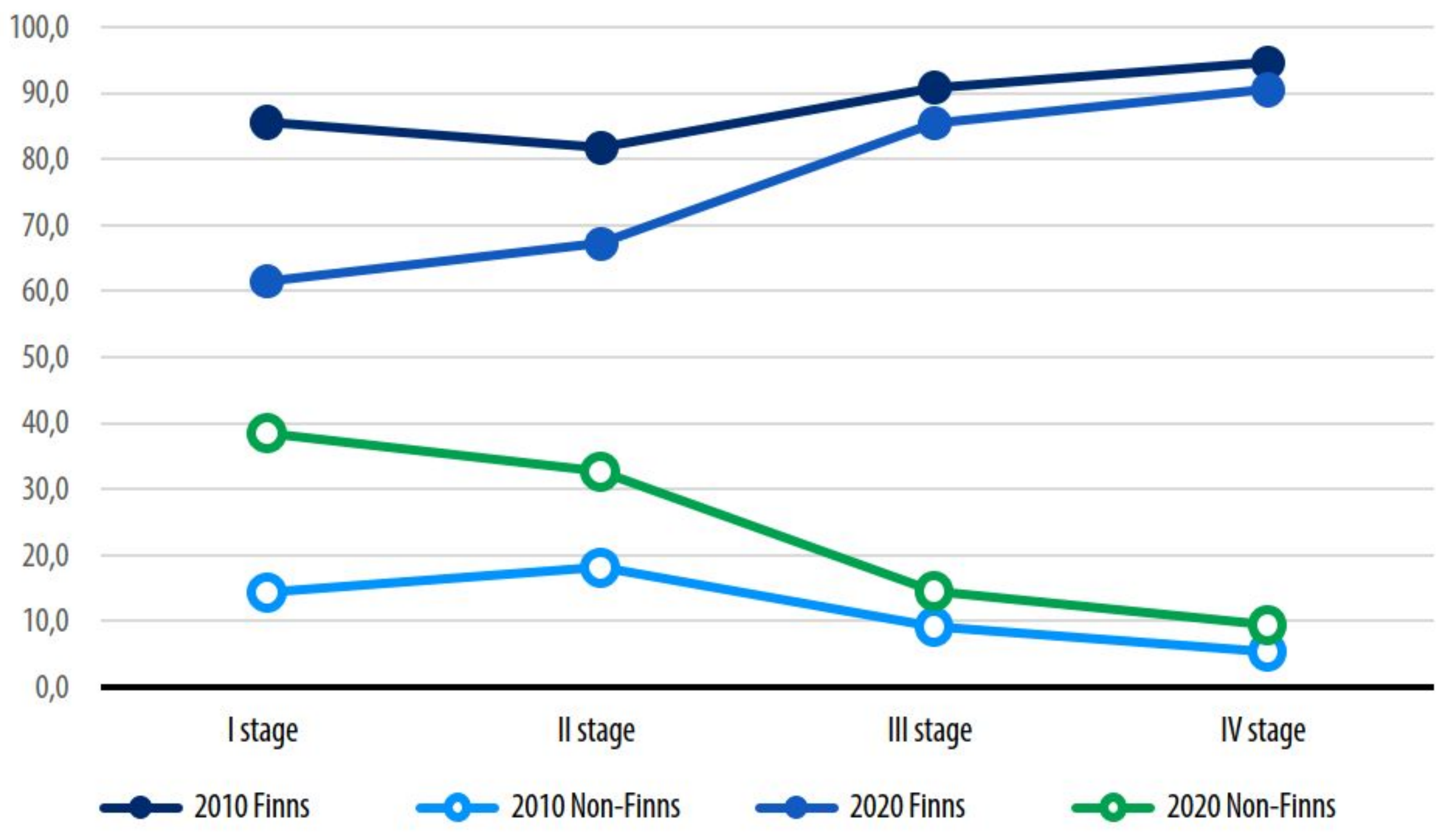
Source: European Commission 2021

02.

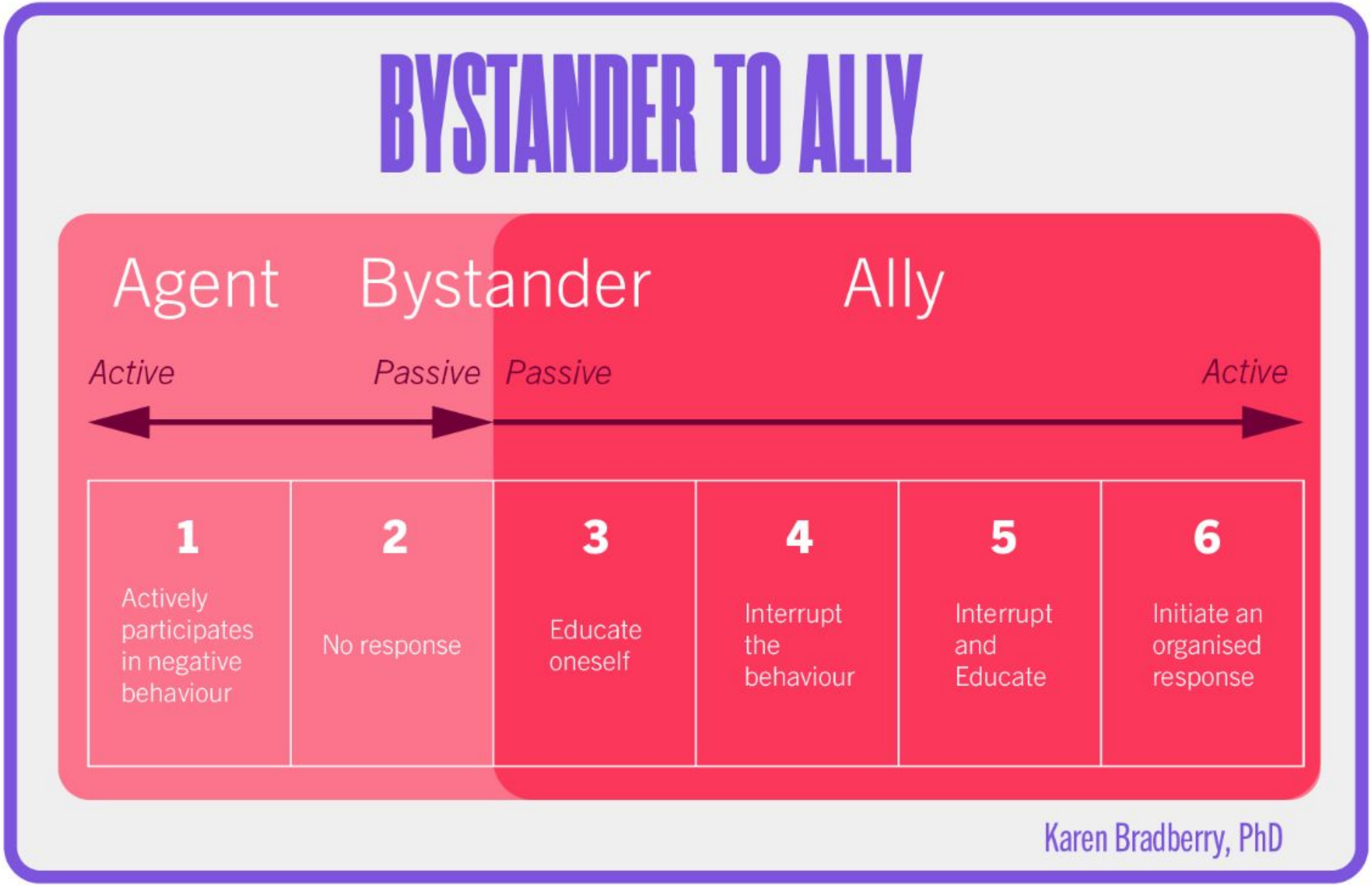
Ethnic diversity in research in Finland

ETHNIC SCISSORS IN THE FINNISH RESEARCH LANDSCAPE

Figure 2. Proportion of Finnish citizens and other nationalities among academic research and teaching staff at different career levels in 2010 and 2020, percentage of labour units. (Vipunen – Education Statistics Finland: University personnel.)



Source: Ministry of education and culture


BYSTANDER TO ALLY
Agent
Bystander
Ally
Active
Passive
Passive
Active
1
Actively participates in negative behaviour
2
No response
3
Educate oneself
4
Interrupt the behaviour
5
Interrupt and Educate
6
Initiate an organised response
Karen Bradberry, PhD

EU ON SALARY TRANSPARENCY

The Council has adopted new rules on pay transparency on 24 April 2023.

This EU directive aims to combat pay discrimination and help close the gender pay gap in the EU.

Under the new rules, EU companies will be required to share information on salaries and take action if their gender pay gap exceeds 5%.

The directive also includes provisions on compensation for victims of pay discrimination and penalties, including fines, for employers who break the rules.

KNOW YOUR RIGHTS & WHO CAN SUPPORT YOU

Unions: Tieteenkijät, Professoriliitto, TEK …

FPS, FinDiP and TEK: https://www.youtube.com/watch?v=u2zv9mlYV7I

FinDiP useful material - anti harassment brochures:

- Aalto: https://www.fyysikkoseura.fi/wp-content/uploads/2024/11/Aalto-anti-harasment.pdf

- UEF: https://www.fyysikkoseura.fi/wp-content/uploads/2024/11/Inappropriate-treatment-and-harassment-UEF-Kamu.pdf

Some interesting sources

- Report on the state of equality and diversity in Finnish higher education institutions – Ministry of education and culture
- Finland the promised land of gender equality – Miikkulainen et al. 2021
- Towards meaningful diversity, equity, and inclusion in physics learning environments – Maries & Singh (2024, Nature)
- How to begin building a culture of diversity, equity, and inclusion in your research group – Alaina G. Levine (Science)
- Diversity in STEM: What is it and why it matters – Kenneth Gibbs Jr. (Scientific American)
- How implicit bias and lack of diversity undermine science – Kuheli Dutt (Scientific American)
- Why should we care about diversity in a physics classroom) – by University Communications Staff (2019)
- Diversity in Physics – Shirley M. Malcom (Physics Today)
- How Gender and Race Stereotypes Impact the Advancement of Scholars in STEM: Professors' Biased Evaluations of Physics and Biology Post-Doctoral Candidates – Eaton et al. (2020)
- Advancing equity, diversity, and inclusion: A HOW-TO GUIDE - Rowan M. Thomson
- https://academy.florence-nightingale-foundation.org.uk/courses/allyship/lessons/au1-5-understanding-privilege/