

HIP status overview

Katri Huitu, 25.8.2026

Helsinki Institute of Physics HIP, founded in 1996: **HIP turns 30 years 1.9.2026**

- University of Helsinki (UH) 1996-
- Aalto University (AU) 1996-
- University of Jyväskylä (JYU) 2002-
- Lappeenranta-Lahti University of Technology (LUT) 2006-
- Tampere University (TAU) 2008-
- Radiation and Nuclear Safety Authority (STUK): interim member since 2018

Mission

- Research in **basic and applied physics** as well as **technology development** at international accelerator laboratories
- HIP is responsible for the **Finnish research collaboration with CERN** since 1996, and the **Finnish contribution to the FAIR laboratory** since 2010
- Researcher education
- Societal impact

<https://www.hip.fi/about-us/>



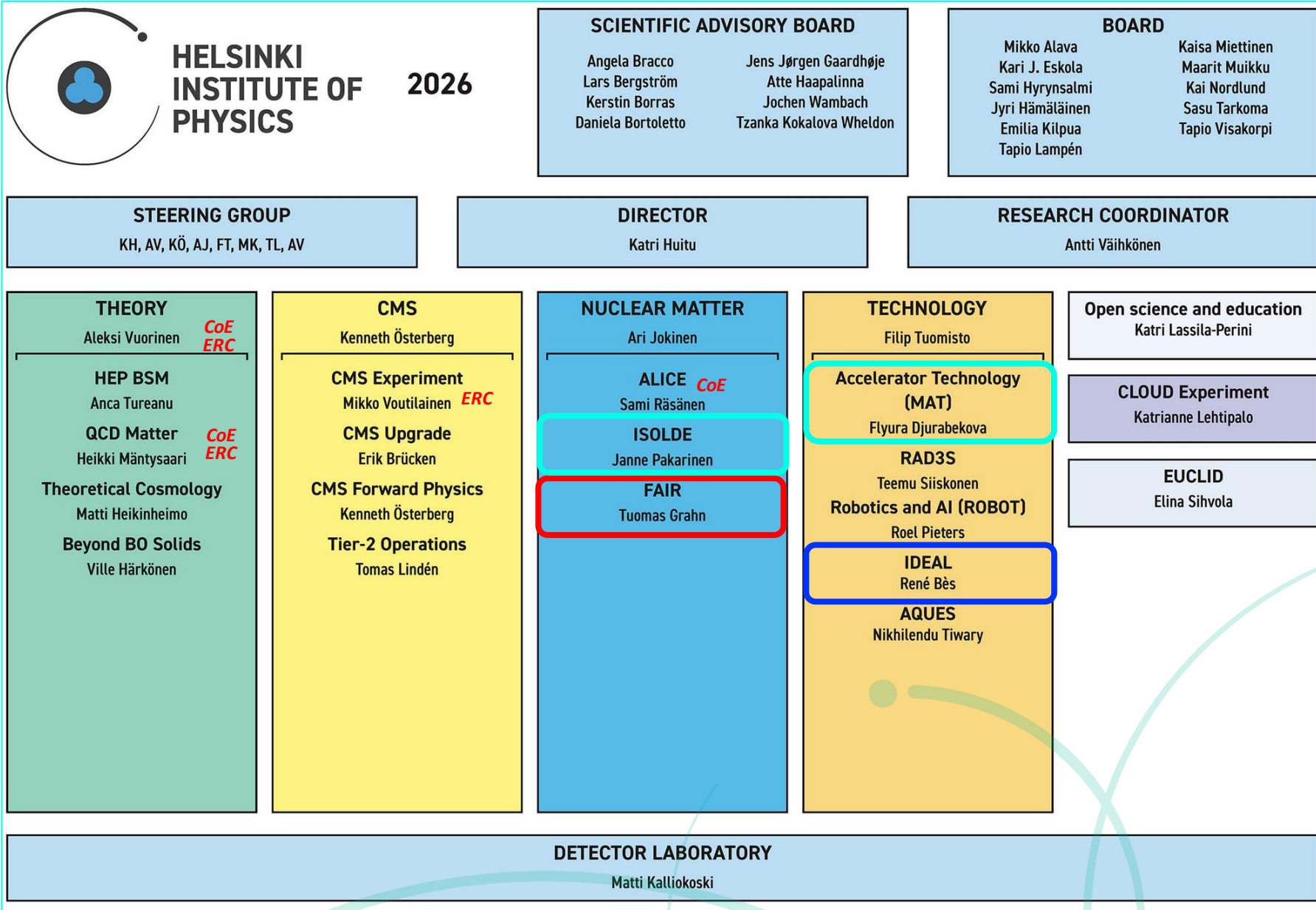
Theory: LHC-physics, cosmology, dark matter (COSINUS), gravitational waves (LISA), materials physics

CMS and Nuclear matter: particle and nuclear matter experimental collaboration with CERN, FAIR-construction and experiments

Technology: technology development connected to accelerator laboratories (LHC, FCC, CLIC, muon col.), applications

Detector Laboratory: support for experimental projects; InstQ, MoEDAL. International Detector R&D Collaborations DRD1 (Gaseous Detectors), DRD3 (Solid State Detectors) and DRD5 (Quantum Sensors).

Standalone projects: EUCLID – dark energy, dark matter; CLOUD – atmospheric science with accelerator, Education and Open data



Personnel

- HIP vice-Director Antti Väihkönen will start as the Chair of the FAIR Administrative and Finance Committee 1.9.2026
- Professor Anu Kankainen from ISOLDE- and FAIR-projects was promoted to Academy Professor (JYU)

Scientific communities

- HIP represents Finland in NuPECC starting 2026

Quality control of research in 2025

- **Research Assessment of UH:** HIP together with the UH Dept. of Physics :
"The Faculty of science is one of the largest at the University of Helsinki, representing roughly 15% of total Ftes. It performs exceptionally well across scientific breadth, research output, and overall excellence... The project-based model behind the department of physics and Helsinki Institute of physics (HIP) ensures the **renewal of research** and **supports career development**.... **HIP is a strong institute across Finland** linking both phd education, instrument development and research. **HIP creates visibility in the international context** through its role as Finland's Cern coordinator."

...HIP News 2025-2026 ...

New external funding, either directly in HIP projects or benefiting projects through member universities

- ERC Advanced Grant to the Director of the Theory Programme Aleksi Vuorinen
- ERC CoG to Academy Researcher Risto Paatelainen from Phases of strongly interacting matter project; Risto Paatelainen appointed to a professor position at the University of Turku
- RCF project funding to the ISOLDE project leader Janne Pakarinen (JYU)
- RCF project funding to the Euclid project leader Elina Sihvola (UH)
- RCF Neutron Star Physics CoE to Theory Programme Director Aleksi Vuorinen for 2026-2033 (Universities Helsinki, Jyväskylä and Turku)
- RCF Quantum Materials CoE: one of the PIs is Project Leader Teemu Ojanen (Tampere University, Aalto University, University of Jyväskylä and VTT Oy)
- RCF thematic research infrastructure funding to Technology Program Director Filip Tuomisto for Material Innovation Park, 2026-2028
- RCF Research infrastructure funding by invitation for FAIR in-kind contributions (50% / 50%)

Industrial Liaison Officer

- Business Finland nominated Christina Rinne as the CERN industrial liaison officeriksi (ILO)



...HIP News 2025-2026...

Events

- Tampere Cosmology Meeting 4.9.–5.9.2025
- Particle Physics Days in Hyytiälä 13.11.–14.11.2025 – [Finland's input for ESPPU discussed](#)
- CERN exhibition "Code of the Universe" in Tampere, Jyväskylä, Lahti, Helsinki, 5.5. –16.7.
- Future Circular Collider Conference FCC Week in Helsinki 8.6.–12.6.2026
 - 656 participants, 5 days broadly on FCC (265 talks, 47 posters)
 - Welcome addresses by Commissioner Dombrovski, RCF President Eerola, UH Rector Lindblom, HIP Director
 - Industry Day, welcome by Minister of Economic Affairs Puisto
 - DG Mark Thomson visited Minister of Science Talvitie and Minister of Economic Affairs Puisto
 - Public outreach event: Thomson's talk Particle Physics today and tomorrow, and panel discussion Next Frontier of Fundamental Science
 - First Finnish CERN alumni gathering
- Strong and Electro-Weak Matter 2026 Conference in Helsinki 17.8.–21.8.2026
- CMS JETMET workshop 19.8.–21.8.2026



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...HIP News 2025-2026

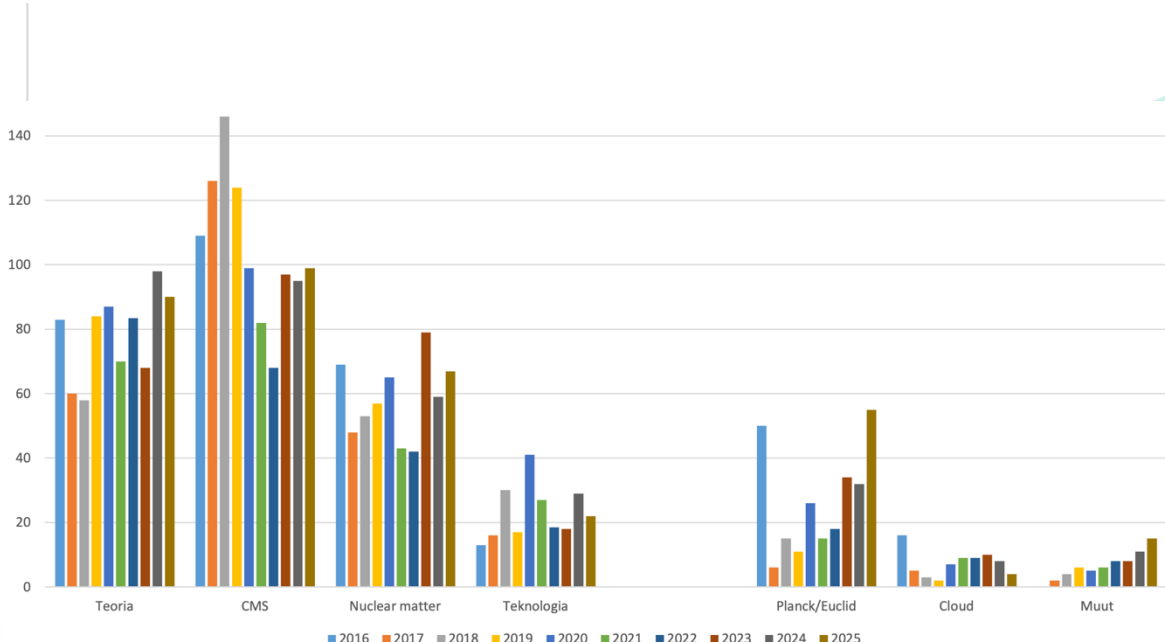
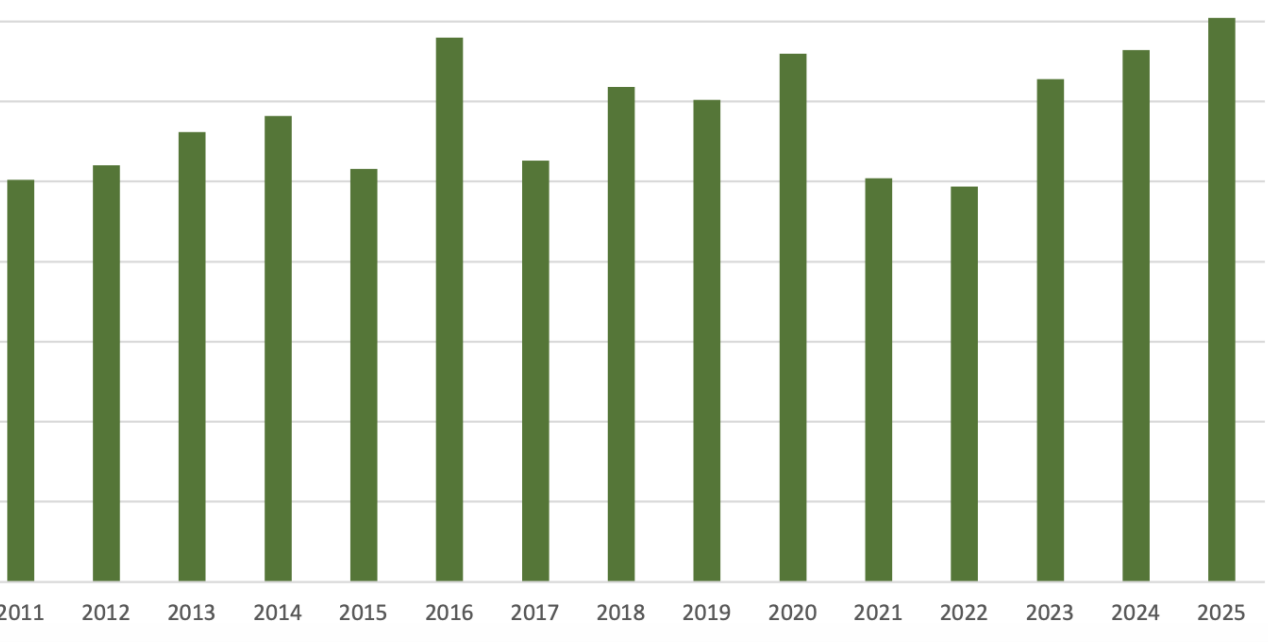
HIP 30 year theme week 31.8. – 4.9.2026

- Monday: Kick-off with posters and sparkling wine
- Tuesday: Running event+Board games
- Wednesday: HIP escape room
- Thursday: History and Scientific talks
- Friday: Entertaining talks and movie

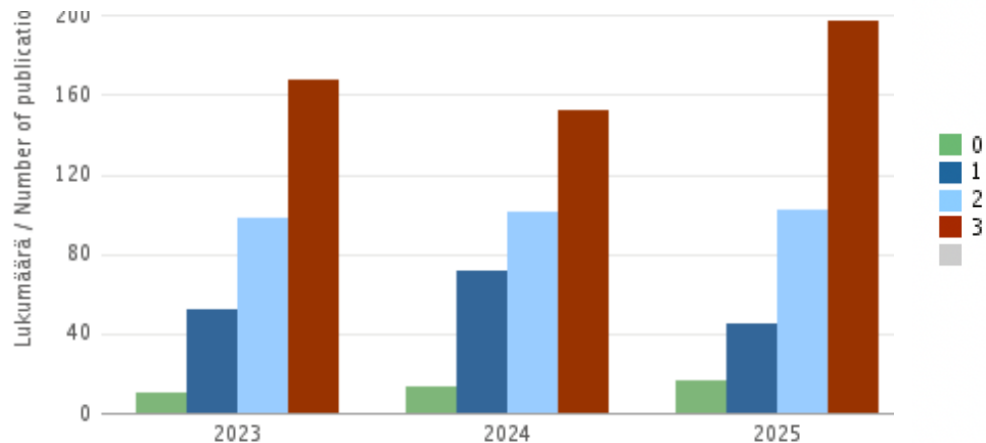
Performance indicators

	(2017)	(2018)	(2019)	(2020)	(2021)	(2022)	(2023)	(2024)	(2025)
TOTAL	263	309	301	330	252	247	314	332	352
Theory programme	60	58	84	87	70	83,5	68	98	90
CMS programme	126	146	124	99	82	68	97	95	99
Nuclear matter programme	48	53	57	65	43	42	79	59	67
Technology programme	16	30	17	41	27	18,5	18	29	22
Planck/Euclid project	6	15	11	26	15	18	34	32	55
Cloud project	5	3	2	7	9	9	10	8	4
other	2	4	6	5	6	8	8	11	15

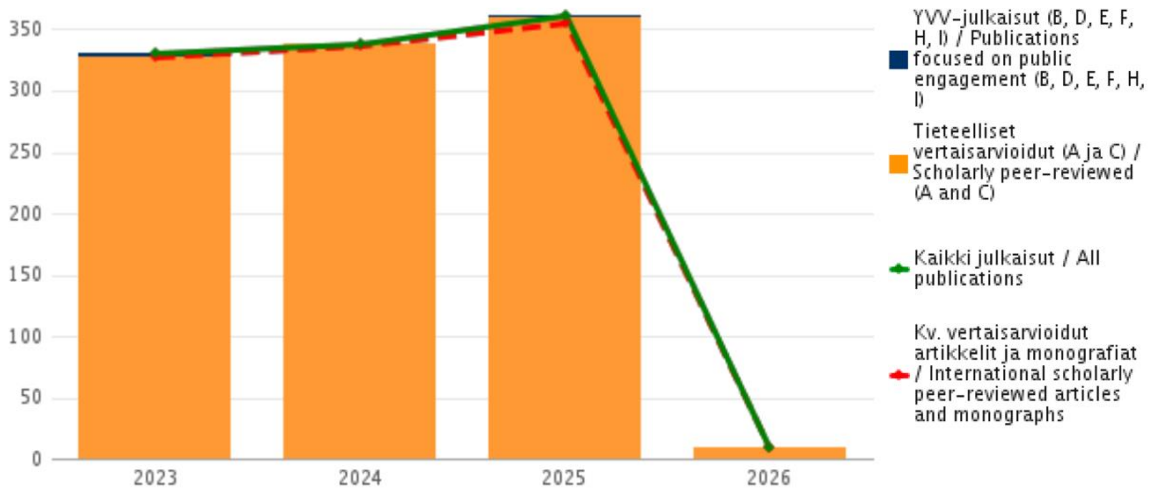
Publications in 2011 - 2025



Publication forum levels



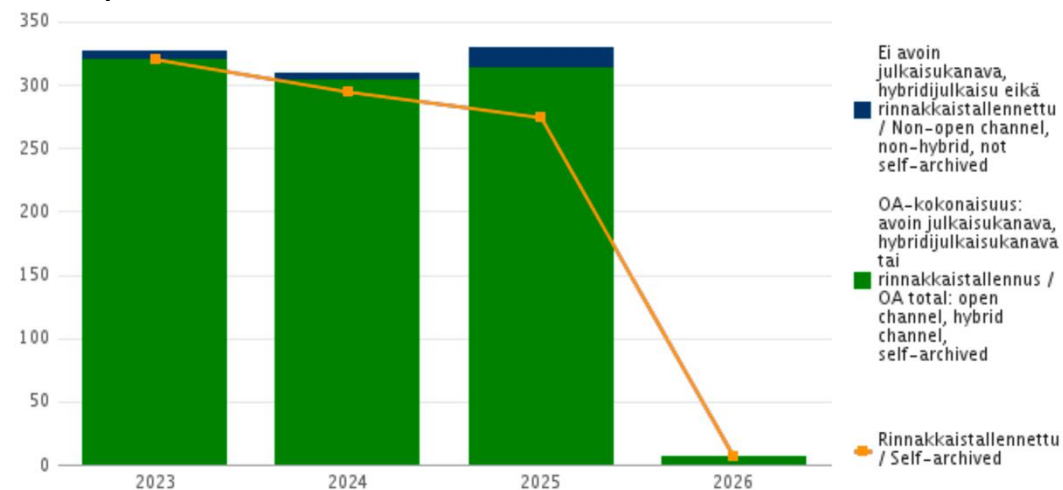
Reported publications



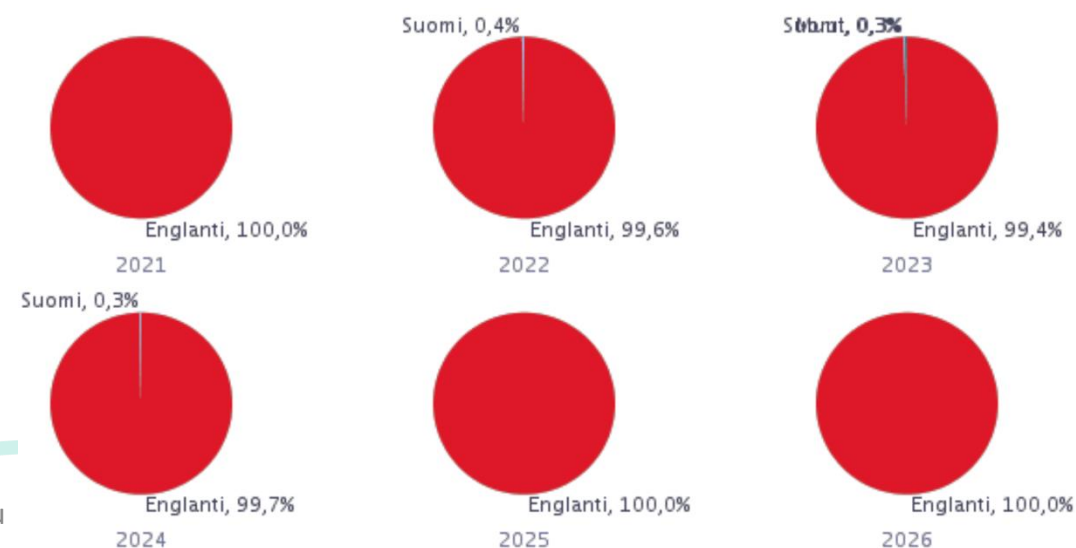
25.8.2026

SAB meeting/Katri Huitu

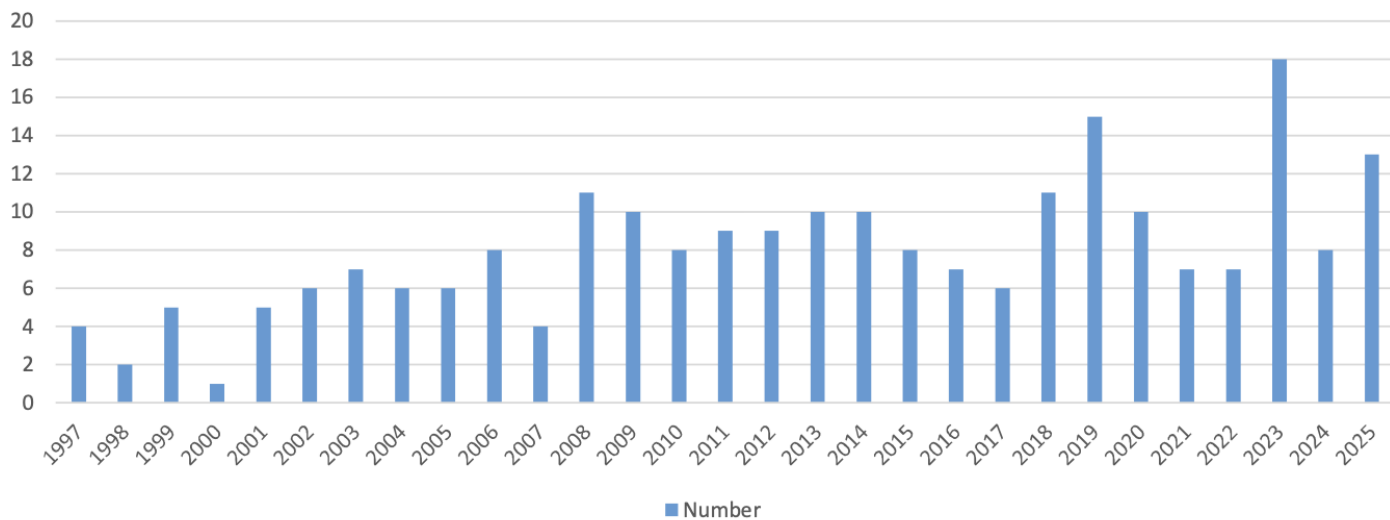
Openness



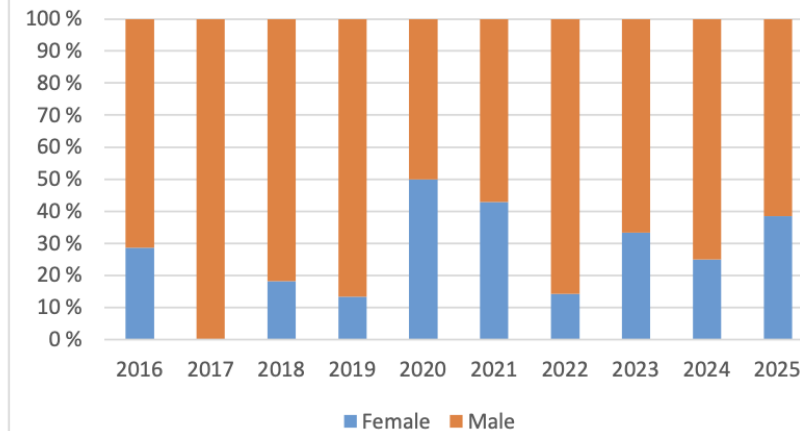
Language of publications



Doctoral degrees

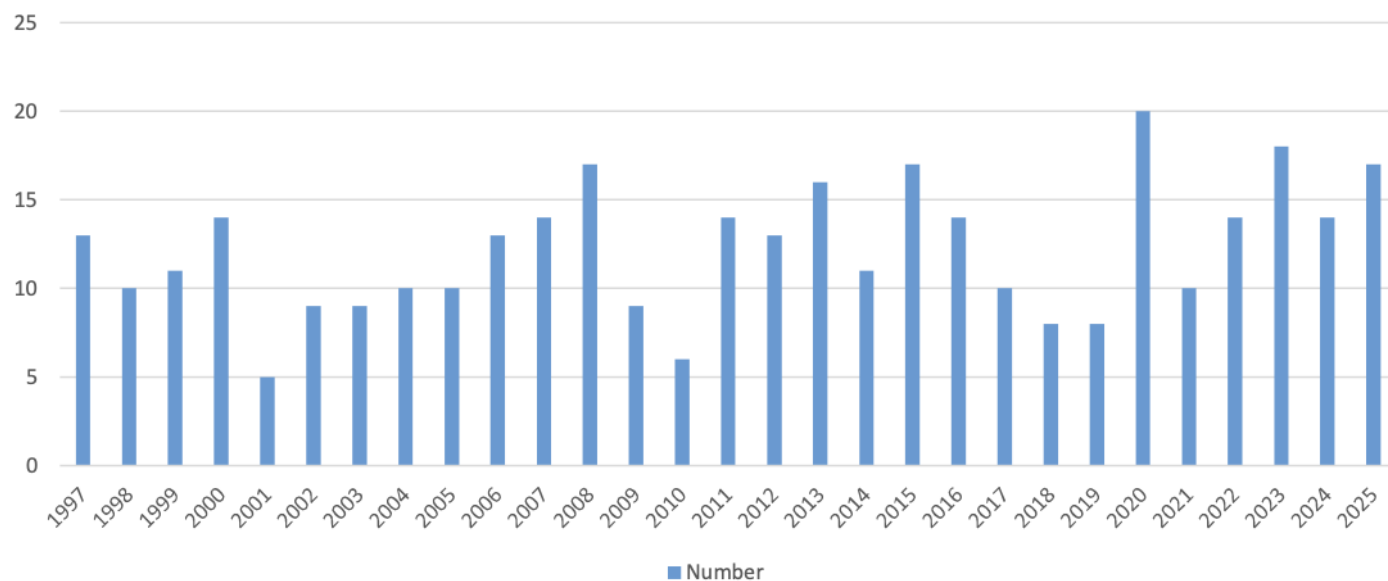


Gender distribution

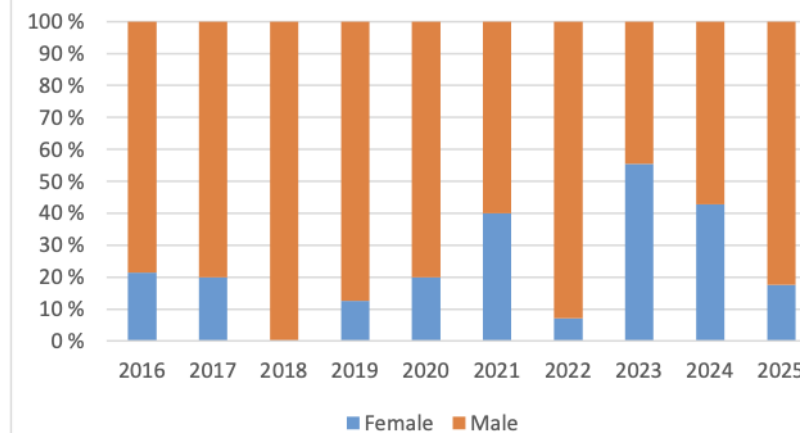


Degrees 1997 – 2025

MSc/MSc(eng) degrees



Gender distribution



Budget for HIP is in 4-year periods, now 2025–2028

k€	2026 budget	2025	2024	2023
Ministry of Education and Culture	2 609	2 619	2 800	2 600
UH: host	958	965	950	950
Other member organizations	611	611	650	620
External (including investments)	1 900	1 853	1 200	855
TOTAL	6 078	6 048	5 600	5 055

University of Helsinki takes care of general services.

HIP funding is for **operations**:

M&O costs, salaries of HIP researchers and students, travels, computing.

Investments (like upgrades):

we apply for **external, competitive research infrastructure funding** from the Research Council of Finland.

2018: Funding received for 2019-2021 for CMS-, ALICE-, TOTEM-, Computing-upgrades (completed 2022)

2023: Funding for CMS and ALICE upgrades

2024: Funding through RCF Roadmap for CMS-upgrade, ALICE-upgrade

2024: Cosmology Data Center to the Roadmap

2021&2023: Funding received for the FAIR 2015 and 2019 extra cost cash contribution (not shown in the table)

2025: Funding for FAIR in-kind contributions

Issues for SAB to consider in 2026...

1) A new project has been proposed to the CMS programme: **FCC Studies**. This is project improves the familiarity with the planned CERN FCCee-project with electron and positron beams. The personnel are largely overlapping CMS-projects, and funding will be coming from the CMS Programme funding.

Question: Does SAB recommend starting this new project?

2) A new project has been proposed to the Technology programme: **Radiation Damage: Integrated Atomistic-to-TCAD for Silicon**. The project is planned to improve the predictability of the radiation hardness of the detectors.

Question: Does SAB recommend starting this new project?

...Issues for SAB to consider in 2026

3) The ISOLDE project has been proposed to continue for another 3 years.

Question: Does SAB support the continuation of the ISOLDE project based on the 3-year plan?

4) Materials for particle accelerators (MAT)-project has been proposed to continue for another 3 years.

Question: Does SAB support the continuation of the MAT project based on the 3-year plan?

5) As proposed by SAB in 2025, the FAIR Operations -project was reviewed in 2026. The review report is in the SAB material folder.

Question: Does SAB endorse the recommendations?

6) As usual, any other recommendations by SAB are much appreciated.