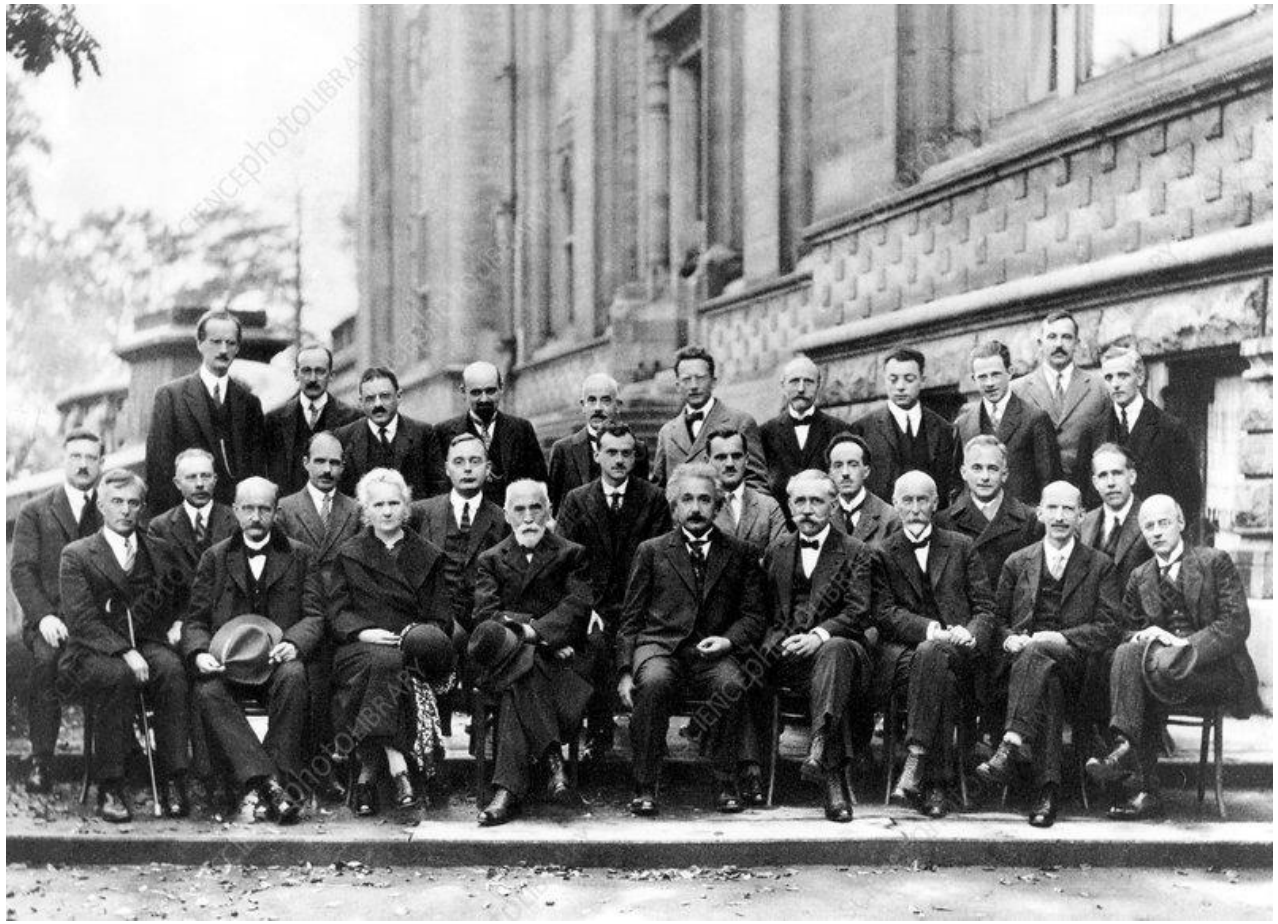
Diversity, Equity, and Inclusion

What does it mean in Physics context ?

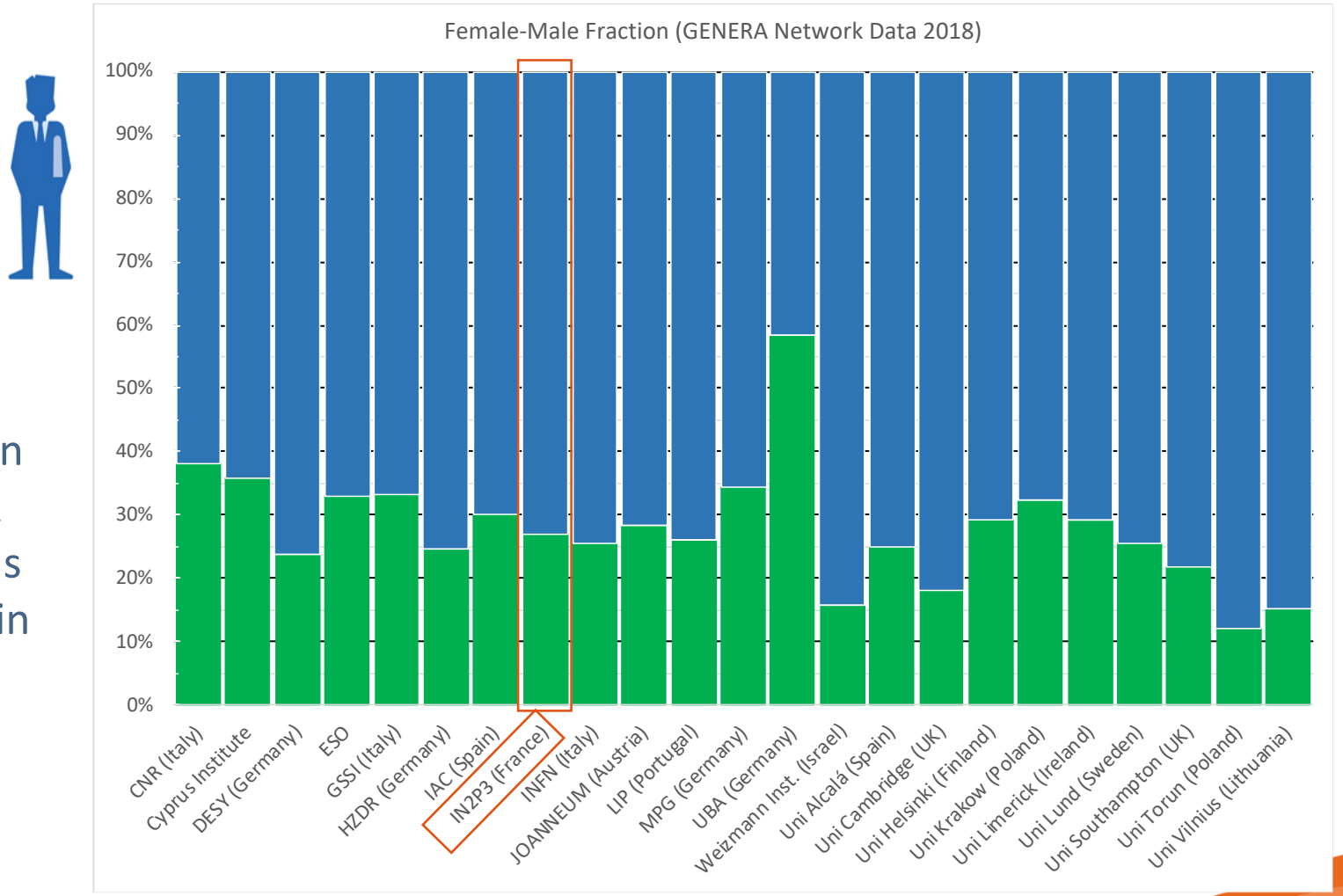
Solvay conference in 1927



@sciencephoto.com

GENERA Network data collection 2018 - Europe

Fraction of female (green) /male (blue) in the GENERA Network member organisations (Physics institutions) in 2018



Physics and other stem fields in France

	Physics	Engineering	Maths
PhD graduates (2014, MESRI)	30%	30%	26,5%
Qualif MCF (range in recent years)	CNU group 6: 23% to 29%	CNU group 9: 25% to 28.5%	CNU group 5: 25% to 29.4%
Recruitments Univ 2009-2018 (Deschamps 2018)	21%	6%	14%
Recruitments CR CNRS 2014-2018	INP 22.5% IN2P3 32.1%	INSIS 20.6%	INSMI 22%
Current workforce CNRS (CR + DR)	INP 21% IN2P3 25%	INSIS 23.5%	INSMI 18.5%

Thanks to Mathieu Arbogast, Mission pour la Place des Femmes, CNRS

Case of symphony orchestras

Major symphony orchestras, including the prestigious Boston symphony orchestra and those of New York or Cleveland, began in the 1950s to have a curtain for the first round of auditions.

→ Very sharp increase in the proportion of women (from 5% to 25%)

→ Improve excellence, reducing bias

Ref: Goldin, Claudia & Cecelia Rouse, "Orchestrating Impartiality: The Impact of 'Blind' Auditions on Female Musicians", *The American Economic Review, vol.*90, no. 4, 2000, p.715- 741.

Thanks to Mathieu Arbogast, Mission pour la Place des Femmes, CNRS

NASA changes the allocation of observation slots

2001-2012 application success rate: Men 24%, Women 18%

Since the new double-blind policy: Men 8%, Women 8.7%

NEWS IN FOCUS

POLICY

NASA switches how it divvies up telescope time to reduce bias

The move to double-blind peer review will affect projects worth roughly US$55 million.

BY ALEXANDRA WITZE

NASA has changed the way in which reviewers evaluate requests for viewing time on the agency's space

hold prestigious positions or who haven't received NASA grants before.

"You can never completely eliminate unconscious biases, but you can greatly reduce them," says Michael New, deputy associate

bias," she says. "But study after study has shown that it exists."

Some journals, including *Nature*, offer authors a double-blind review option, but using such a system to allocate scientific

Nature, July 11th, 2019

We can think we are objective… and be biased – 3

Thanks to Mathieu Arbogast, Mission pour la Place des Femmes, CNRS

- In astronomy conferences men ask more questions (1.8 x more, because they are more confident)

  HinsleyA, Sutherland WJ, Johnston A, "Men ask more questions than women at a scientific conference", PLoSONE, 12(10), 2017 https://doi.org/10.1371/journal.pone.0185534

- Women are more often interrupted, and more often to be criticized/contested

  Blair-Loy M, Rogers LE, Glaser D, Wong YLA, Abraham D, CosmanPC., "Gender in Engineering Departments: Are There Gender Differences in Interruptions of Academic Job Talks?", Social Sciences, 2017; 6(1):29. https://doi.org/10.3390/socsci6010029

The feeling of imposture is gendered

Thanks to Mathieu Arbogast, Mission pour la Place des Femmes, CNRS

- The feeling of imposture is more common in women and minorities.

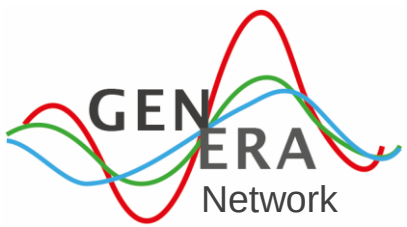
  Muradoglu et al, "Women—Particularly Underrepresented Minority Women—and Early-Career Academics Feel Like Impostors in Fields That Value Brilliance", Journal of Educational Psychology, 2021
  http://dx.doi.org/10.1037/edu0000669

- Women attribute their failures more to a lack of qualities, men rather to external factors

  Napp & Breda, " The stereotype that girls lack talent: A worldwide investigation", Science Advances, vol.8(10), March 2022
  https://www.science.org/doi/pdf/10.1126/sciadv.abm3689

EUROPEAN ACTION in PHYSICS

GENERA Network



- What is GENERA Network?
- Who is participating?
- What are our activities?
- Outlook

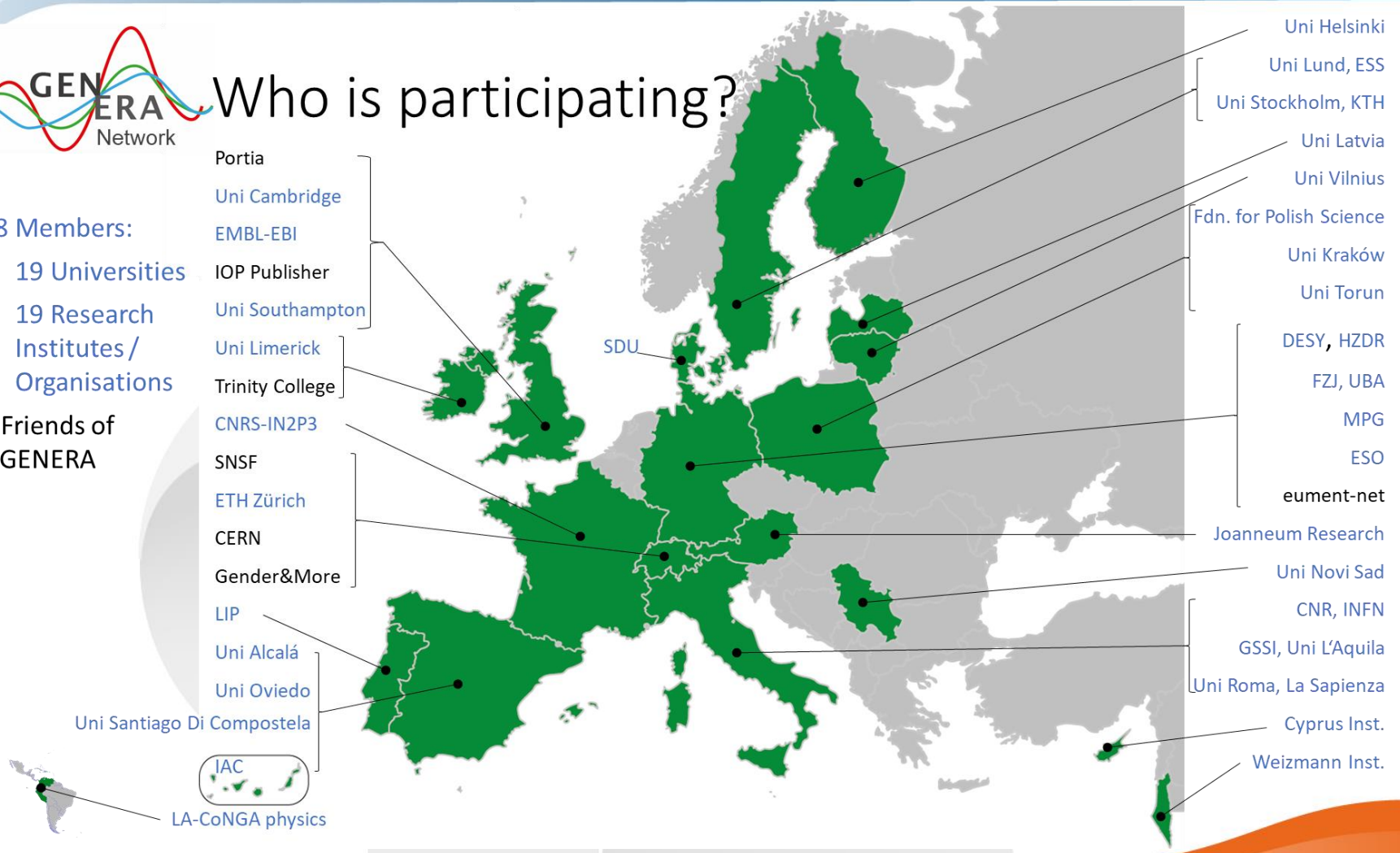
Who is participating?

GENERA Network

38 Members:

- 19 Universities
- 19 Research Institutes / Organisations

7 Friends of GENERA



What are our activities?

GENERA Network is organized as a Community of Practice with well structured activites:

- **Monthly online meetings** (invited speakers, exchanges, discussions, news …)
- **Annual working meetings** and **General Assembly meetings**
- **5 GENERA Working Groups:**
  - data collection & analysis
  - strategy & vision
  - dissemination
  - career development
  - gender dimension

FRENCH ACTION in SCIENCE

Example of action on mentoring

careers & recruitment

Check for updates

CAREER FEATURE

When mentoring matters: a French mentoring program for women in science

An innovative program addresses the need for support, encouragement and guidance on the part of women scientists in the early years of their career, during their PhD.

In the European Union in 2017, 44.4% of the knowledge-intensive workforce was female. However, in many countries women are severely under-represented in scientific research; for example, they accounted for 33% in the European Union and 28% in France[1–3]. Of researchers employed by European companies, 20% are women, a trend followed by France[1–3] (Fig. 1).

At French universities, the proportion of female students studying science varies according to discipline, with a clear preference for life and biomedical sciences (62% of female science students) over fundamental and applied sciences including mathematics, physics, chemistry and computer sciences (26% of female science students)[4]. While young women are not

Fig. 1 | Proportion of female researchers in France and in 24 Organization for Economic Co-operation and Development (OECD) countries.

their careers by providing them with an opportunity to benefit from unique and tailored advice from experienced scientists, to meet and learn from role models and to participate in group discussions and training sessions.

Setting the stage: content and structure

The mentoring program consists of three complementary schemes: regular one-on-one mentor–mentee meetings, group meetings to discuss issues concerning women in science or to attend presentations by established female scientists (testimonies), and career development workshops (Fig. 2a). The sequence of mentoring circles, testimonies and career development workshops is deliberately

Mission pour la Place des Femmes - CNRS

National board	→ Decides on Equality-Parity policy
Equality-Parity committee	→ Assess and recommends
Mission pour la Place des Femmes	→ Creates Equality-Parity action plan → Performs the action plan → Training and communication actions → Annual reports → International and European projects…
Network of 18 equality correspondents in regional delegations	→ Regional actions (communication, reports, evaluations…)
Network of contact persons in laboratories	→ Local actions (communication…)

Thanks to Mathieu Arbogast, Mission pour la Place des Femmes, CNRS

Thanks to Mathieu Arbogast, Mission pour la Place des Femmes, CNRS

2021-2023 Action Plan

https://mpdf.cnrs.fr/roadmap/**02.02.23P 12**

5 AXES SET BY LAW

- Assessing, preventing and addressing pay gaps
- Ensuring equal access of women and men to bodies, ranks and jobs
- Work, personal and family life balance
- Combating sexual and gender-based violence, harassment and discrimination
- Governance of professional equality policy

FRENCH ACTION in PHYSICS

At national level

INP Action Plan

- Survey
- Actions (training for women on career and self-confidence)

In progress → Benoît Blossier

IN2P3

In discussion

At local/non local levels

Project coordinators and participants: opportunities of French Agency and/or European Commission funds

- Promotion actions for schools
- Promotion actions for universities
- Promotion actions for peers

THANK YOU