GENDER EQUALITY IN STEM (science, technology, engineering, and mathematics)

Why does it matters?

Diversity and inclusion: Gender equity can foster diversity and inclusion, leading to more innovative solutions to societal challenges.

Economic growth: Losing the gender gap in STEM can help address the skills gap in the STEM workforce, leading to economic growth and job creation.

Improved research: Increasing gender diversity in STEM fields can lead to improved research outcomes, as diverse perspectives can provide unique insights into research questions.

Improved products and services: Greater gender diversity in STEM fields can lead to the development of products and services that better meet the needs of all consumers.

Social progress: Narrowing the gender gap in STEM can contribute to broader social progress, as greater gender equity can lead to a more just and equitable society.

STEM education, encompassing science, technology, engineering, and mathematics, has evolved significantly due to technological and societal shifts

- More girls are in school today than ever before, but they do not always have the same opportunities as boys to complete and benefit from an education of their choice.
- Women are particularly under-represented in science, technology, engineering and mathematics (STEM) education. Only 33% of STEM graduates are women and only 1 in 5 are in ICT (Information and Communications Technology)
- This gender disparity is alarming, especially as STEM careers are often referred to as the jobs of the future, driving innovation, social wellbeing, inclusive growth and sustainable development.

Factors contributing to the gender gap in STEM

- Stereotypes: Many individuals still associate STEM fields with masculine qualities, leading to stereotypes that can discourage girls and women from pursuing STEM education and careers.
- Lack of role models: Women remain underrepresented in STEM leadership positions, which makes it harder for girls and women to find role models and mentors in the field.
- Unconscious bias: Unconscious biases in hiring, promotion, and grant funding can disadvantage women and lead to their disproportionately low representation in STEM.
- Work-life balance imbalance: STEM careers can be demanding, and some women may opt out or choose to work part-time to handle family responsibilities, which can impact career advancement.

Strategies for closing the gap from chilhood to carrier advancement

- Encouraging girls to pursue STEM education: It is essential to introduce girls to STEM subjects early on to help dispel the stereotypes associated with STEM and provide them with role models.
- Promoting female role models: Having visible female role models in STEM is crucial to inspiring and encouraging girls and women to pursue STEM careers.
- Providing professional development opportunities: Initiatives that include training, mentorship, and networking events can help women develop the skills and confidence needed to succeed in STEM fields

- Addressing structural barriers: Breaking down structural obstacles, such as the gender pay gap, lack of family-friendly policies, and gender bias in grant funding is crucial in closing the gender gap in STEM
- Encouraging women to stay in STEM careers: It is important to create a supportive environment that spurs women to remain in STEM careers.

How to do this?

Case study: Romanian Women in Mathematics

The network Romanian Women in Mathematics was created at the end of 2020 by a team of six women mathematicians from University of Pitești, University of Craiova, "Alexandru Ioan Cuza" University Iași, "Alexandru Ioan Cuza" University Iași, University of Oradea, Romania and Alpen-Adria University of Klagenfurt, Austria.

The aim of the network is to bring together as many Romanian women mathematicians as possible and provide them a mean to keep in touch, to support each other, to exchange ideas regarding topics of common interest.

In this moment Romanian Women in Mathematics consists of 49 women mathematicians from 24 academic institutions, 22 from Romania and 2 from abroad.

What we are doing

- Encourage girls to pursue STEM education:

Activities in Schools (since primary to high school level)

- Promote female role models:

Meetings with important mathematicians

- Provide professional development opportunities:

Information, support to participate to competitions, conferences…

- Address structural barriers:

Personalized support to overcome obstacles related to professional development

- Encourage women to stay in STEM careers:

Presentation of career opportunities