

Breaking the barriers in STEM.

This April Katie Bouman, a 29 year-old scientist, was recognised for helping to develop the algorithm that created the first ever image of a black hole. Moreover, also this year, an Abel Prize for maths was for the first time awarded to a woman: Karen Uhlenbeck. There is however still a long way to go before women can claim to be on par with men in such the male dominated world of science.

Compared to 572 men, only 17 women have won the Nobel Prize in physics, chemistry or medicine since Marie Curie's award in 1903. Statistics show that of all the world's researchers women make up less than 30% whilst According to UNESCO data only 30% of all female students select STEM-related fields in higher education. Moreover, according to a 2015 study entitled 'Gender Bias without Borders', only 12% of women work in an identifiable Science, Technology, Engineering and Mathematics (STEM) job. This data shows that only a small number of women actually pursue a career in the sector in spite of the fact that there are 96% of women who use technology on a daily basis compared to 92% of men.

To raise awareness on achieving full and equal access to and participation in science for women and girls, the United Nations declared the 11 February as the International Day of Women and Girls in Science. This day contributes to the breaking of stereotypical barriers which discourage women and girls to pursue a career in the sector. Malta, together with the Royal Academy of Science International Trust (RASIT), is the founder of this International Day having put forward a resolution that was adopted by the United Nations in 2015.

In addition, numerous initiatives and campaigns have been set up to further promote gender equality in STEM. RASIT forum has now reached its fourth year. This Forum creates a bridge between women and men and tackles strategies, expertise and resources amongst policy-makers, professionals, civil society and the private sector to invest in women in science and to identify implementation gaps and co-create action plans.

'Girls as Engineers and Girls go Science' is an initiative developed in Poland. It introduces technical and engineering studies to high-school girls and promotes the attractions and long-term potential benefits of a career in one of the tech

professions. There are also a number of other measures directed to younger, recently graduated women or women rethinking their professional careers. These measures include special webinars, women's training programmes, free expert-led training and internships that can lead to opportunities for a paid job. In Poland, a community called 'Geek Girl Carrots' brings together women administrators, analysts, application architects, developers, graphic designers, IT managers, programmers, social media specialists, system architects, start-up innovators, computer science students and many more. Since its inception in 2011, this community had 638 meetups when people gathered to share their knowledge and experiences.

The Bulgarian Centre for Women in Technology (BCWT) inspires, motivates and supports girls and women to find their place in the digital world. In Bulgaria 90% of employees in the IT sector are under the age of 35, and a third of IT specialists are women. This organisation networks and collaborates with IT businesses, business incubators and NGOs in the implementation of regional innovative projects. The objective is to contribute to a much-needed change of mindset and to encourage women to choose ICT and develop a career in the sector. Some NGOs and ICT companies in Bulgaria have combined their efforts to overcome gender stereotypes in order to attract more talented women into ICT, through awareness raising on gender issues at company level and through support measures provided by employers.

In 2018, the eSkills Malta Foundation launched the 'Guidelines to increase and retain Women in ICT'. This Foundation is the National Coalition forming part of the Grand Coalition for Digital Jobs. These guidelines were launched with the understanding that even though studies show that having more women in the digital jobs market will create an annual €16 billion GDP boost for the European economy¹, the ICT gender gap in Europe is still wide. For this reason, and as part of the Digital Agenda, the eSkills Malta Foundation is committed to increase the participation of girls and women in digital jobs an important part of its objectives.

In the EU area, the Commissioner of Digital Economy and Society, Mariya Gabriel, has also launched various initiatives to challenge stereotypes, promote digital skills and education and advocate for more women entrepreneurs. The

¹ <https://ec.europa.eu/digital-single-market/en/women-ict>

‘Declaration on Gender-Balanced Company Culture’ encourages enterprises to adopt a hands-on approach to close the gender gap in digital skills and career opportunities. The ‘No Women No Panel’ is an initiative that aims to bring awareness on gender balanced discussion panels. The European Commission also set up the annual scoreboard to monitor women’s participation in the digital economy. It assesses EU countries’ performance in the areas of internet use, internet user skills, specialist skills and employment.

During the launch of the ‘Guidelines to Increase and Retain Women in ICT’ in 2018, the Minister for European Affairs and Equality, Hon. Helena Dalli said “If more women become involved at decision-making levels, all sectors, including ICT, would experience more gender equality because even at recruitment stage, employers would be less prone to let gender stereotypes take over.” It is in this context that the number of women, like Bouman and Uhlenbeck, can increase by challenging the traditional gender stereotypes and make inroads in this male dominated sector for the benefit of all society.