

## International Day of Women and Girls in Science – 11<sup>th</sup> February 2022

Globally, women make up **33% of scientific researchers**, while according to the 2021 Global Gender Gap Report<sup>1</sup>, in Malta, only **10.3% of female graduates** choose to pursue a career in STEM, compared to **32.5% of men graduates**.<sup>2</sup>

The United Nations General Assembly established the 11<sup>th</sup> February as the **International Day of Women and Girls in Science** to acknowledge the contribution girls and women make to science and to highlight the importance of gender equality.<sup>3</sup>

To commemorate this day, the National Commission for the Promotion of Equality (NCPE) interviewed two female scientists, namely **Prof Cristiana Sebu**, Associate Professor in Biomathematics, from the Department of Mathematics at the Faculty of Science of the University of Malta, and **Dr Alexandra Bonnici**, who heads the Department of Systems and Control Engineering at the Faculty of Engineering of the University of Malta. Both women shared their stories on their academic career in STEM.

*“Being endowed with an analytical mind and a vivid curiosity nurtured by growing up in a family of scientists, studying exact science subjects”* was a natural choice for Prof Sebu. Her parents fully supported her decision to study Theoretical Physics and Applied Mathematics at undergraduate and postgraduate levels. On the other hand, Dr Bonnici explained that what attracted her most to Maths and Physics was the problem-solving aspect of the subjects and the way that the two could be used together to describe physical phenomena.

When asked to mention some of the hurdles they encountered in their career compared to their male colleagues, Prof Sebu said that *“following an academic career in Mathematics is never easy irrespective of gender”*. She admitted that on the way she had to make many sacrifices most of them in her personal life. Dr Bonnici explained that her development from an undergraduate student, to a post-graduate researcher, from an assistant lecturer to a senior lecturer, and as a Head of Department was based on merit and neither hindered nor aided by

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<sup>1</sup> <https://trello.com/c/dupjrgqN/82-scientific-researchers>

<sup>2</sup> [https://www3.weforum.org/docs/WEF\\_GGGR\\_2021.pdf](https://www3.weforum.org/docs/WEF_GGGR_2021.pdf)

<sup>3</sup> <https://en.unesco.org/commemorations/womenandgirlinscienceday>

her gender. Nevertheless, she recalled instances when she felt out of place since she was always outnumbered by male colleagues. *“I felt this, in particular, during a summer internship when I and another student were the first two females the company had ever employed in a technical capacity. As a student, I used to feel this awkwardness more than I do today - I think confidence in being able to hold my own as well as better balance in numbers helps to make things easier.”*

More needs to be done to encourage more girls to study science and become the next generation of female scientists. Parents/guardians are the primary source of influence when it comes to career choices, followed by educators. Additionally, Prof Sebu stressed that the *“the mentality of the society as a whole has to change”*, and more public and private resources must be invested in research development and innovation, and promotion campaigns.

Dr Bonnici reiterated that when talking to girls about pursuing careers in science, the focus should not be on how to overcome hurdles, as this *“may give the impression that pursuing a career in science is particularly hard for women.”* Although women are under-represented in some science areas, the number of women entering STEM careers is increasing. *“So, while it is good to talk about hurdles, it is also important to not let these frighten or dampen the enthusiasm of students.”*

Furthermore, role models have considerable potential for influencing girls to choose STEM careers. Prof Sebu emphasized that *“female role models should be promoted alongside male role models and be presented in a very realistic manner without being raised on high pedestals impossible to reach for others.”* Otherwise, *“there is the danger that these female role models could be perceived as exceptions leading unusual lives emphasizing even more the existent gender gap.”* Both scientists highlighted that true role models are people we can relate to directly through common experiences and life stories such as family members or educators. *“By normalising the fact that women have an active role in science, girls can start having female as well as male scientists to aspire to,”* argued Dr Bonnici.

Their advice to girls who aspire to become scientists or researchers is to follow their dreams and aspirations no matter how hard the journey might seem. Dr Bonnici added that any student

*“needing career advice can approach the respective Faculties or the Student Advisory Services at the University of Malta and guidance will be offered.”*

To sum up, as Audrey Azoulay, Director-General of UNESCO, and Phumzile Mlambo-Ngcuka, Executive Director of UN Women said in their joint message on the *International Day of Women and Girls in Science 2021*, *“to be truly transformative, gender equality policies and programmes need to eliminate gender stereotypes through education, change social norms, promote positive role models of women scientists and build awareness at the highest levels of decision-making.”*<sup>4</sup>

Moreover, they also emphasized that it is important to *“ensure that women and girls are not only participating in STEM fields, but are empowered to lead and innovate, and that they are supported by workplace policies and organizational cultures that ensure their safety, consider their needs as parents, and incentivize them to advance and thrive in these careers.”*<sup>5</sup>

The National Commission for the Promotion of Equality (NCPE) can be contacted on: 2276 8200 [equality@gov.mt](mailto:equality@gov.mt) or our Facebook page.

26<sup>th</sup> January 2022

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<sup>4</sup> <https://en.unesco.org/commemorations/womenandgirlinscienceday>

<sup>5</sup> Ibid