

University Women of Europe (UWE), Rome Conference 2018

Women in STEM professions, Challenges - Support – Education

by Saskia Voortman, Coordinator European Relations of GWI-NL

Almost a hundred graduate women from different European countries attended the UWE Conference in Rome, 22-24 June 2018. We were welcomed in the beautiful building of Spazio Europa of the European Parliament. The Conference was dedicated to the theme of Women in Science, Technology, Engineering and Math (STEM) professions. Edith Lommerse, President of UWE, stressed the importance of the theme: "innovation is generated by technology, if women miss the opportunity to participate in this field, they will miss a lot of interesting and well-paid jobs in the future – it is important that women are more active in this field. Especially in this field there is so much gender-bias". GWI President, Geeta Desai, provided a video message expressing her concern about STEM fields becoming increasingly male centric, failing to serve half of the global population without female contribution, the overwhelming number of women who are currently unable to take advantage of STEM opportunities because, from an early age, they have been discouraged from studying these male dominated subjects.

Searching for role models

Elizabeth Strickland, mathematician and Professor at the University of Tor Vergata in Rome, stated that one of the causes of underrepresentation of women in STEM-professions is stereotyping. The idea is that this field is difficult to master. The need for women in the IT sector is enormous and the salaries are quite good. Even though only a few women respond to vacancies and come to assessments. The lack of role models is also one of the causes of underrepresentation of women in this field. It is important that there are role models. And there are good role models, but they need more exposure.



Ada Byron Lovelace was a mathematician at the beginning of the 19^e century who is known for her work on the computer of Charles Babbage. She was the first to recognise that the machine had "computing machine" and the first computer programmer.

Other role models Strickland mentioned were *Fabiola Gianotti*, an Italian particle physicist and now Director-General at the CERN (European Organization for Nuclear Research). She is the first woman to hold this position. Mathematician *Maryam Mirzakhani* received the Fields Medal, the top honour in mathematics, in 2014 for her work on geometry, the first and to-date only female winner of the Fields Medal. *Samantha Cristoforetti* is an Italian European Space Agency astronaut, Italian Air Force pilot and engineer. She holds the record for the longest uninterrupted spaceflight of a European astronaut (199 days, 16 hours), and until June 2017 held the record for the longest single space flight by a woman until this was broken by *Peggy Whitson*.



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Laure Saint-Raymond is a French mathematician, specializing in partial differential equations. She is a professor of mathematics at École normale supérieure in Lyon. In 2008 she received one of the ten prizes of the European Mathematical Society.

New technologies – new opportunities for women

Marie-Christine Oghly, awarded a diploma in Hydrology and an MBA at the Business School of Nancy, began her career in 1980 in Public Relations in *ELF Group*. In 1986 she entered Amazon Technology as Marketing Manager Europe, and pursued her ascent to Managing Director. In March 2017 she was elected World President of Femmes Chefs d'Entreprises (FCEM). She was trained originally as a geologist, stimulated by her father, although her mother found that profession too dangerous ("no separate toilets in the field") and thought it was better to be a teacher. That made her insecure. There are too few females in ICT, she says. We need to encourage women, we need to start at school. The culture has to change. There is lots of evidence that girls are much better at maths. The new generation is less modest, but they need to promote themselves better. Men fight to keep their position. Women are not so good in networking, teamwork and they suffer from the complex of imposter (the fear of success). Women still have to take care of their children. It is getting better, but it takes a lot of time. The new technology and science offer many new opportunities for women. A start-up is a good place for women. Working with computers is clean ("compared to mining"). New technologies are a new opportunity for women!

Street names, women and algorithms



Rosanna Olivia de Conciliis is president of "Rete Per la Parita". Only 12% of women choose science or technology. Especially after the age of 15-16 the interest in science diminishes. One of the causes is lack of role models. And also language: there is no feminine equivalent of "engineer". When you look at the street names only 8% are named after women. When you leave out saints only 1,3% are named after women. In Wikipedia there are not many female scientists represented. We have to show that technical professions can also be performed by women. According to Rosanna we have to change our way of thinking. Representations on the internet are often very stereotypical. The research of Rosanna shows that nearly 66% of the women would prefer STEM if there were equal opportunities in the technical sector. Algorithms are the work of people, if there are no women involved, then that is a risk to society. We need more girls who choose science. The importance of choosing STEM subjects should be emphasized at schools. Rosanna proposes to develop a T-shirt with an algorithm to promote STEM at schools and to promote the representation of female scientists in street name signs.

Marie Curie, Jane Goodall and other female scientists

Cynthia Burek, geologist by training, worked on the European Socrates project: the role of History of Science in secondary education. The project tried to search for women in math and women in geology



Everybody knows the name of *Marie Curie* (photo), Jane Goodall or Florence Nightingale. But after that it becomes difficult to name female scientists: Rosalind Franklin, Ada Lovelace, Marie Stoops, Mary Anning ("She sells seashells by the seashore"), Lise Meitner ("our Madame Curie" according to Einstein). It is important that at school we should be hearing and learn more about female scientists.

Physicist is not a male job

Marcella Diemoz is head of the Rome section of the National Institute of Nuclear Physics. There is gender balance amongst Phd Graduates in all fields in the EU. But in computing, math and engineering the figures are much lower. Women don't seem to be interested in science and are underrepresented in science-classes. Possible actions: anonymous job application, gender balance in selection committees, equal parental leave, mentors for young people, discuss gender issues, fight the imposter syndrome, good teachers. Physicist, is it a male job? Curiosity is important, solving problems - Miss Marple is a woman! Why is it important? We know so little yet. There has to be so much more research and why give up then half of all the brains in the world?

If you can cook, you can also do chemical experiments



During the workshop **Giovanna Gattuso** (musician) and **Ania Lopez** (National Council of Engineers) talked about the importance of creativity and fantasy and the relationship between music and mathematics, the lack of special skills and the importance of (boys) toys who develop that capacity. Science is not complicated and engineering is not only about building bridges. We should use social networks to influence girls and go to schools to promote STEM for girls. Mothers can be role models: "if you can cook, you can also do chemical experiments".



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UWE Annual General Meeting – Rome 23 June 2018

On Saturday the AGM was held. After six years of presidency Edith Lommerse was thanked for all her important work for UWE and the inspiration she gave to the AGM's.

A new President, Anne Negre, was elected. She gave an update about the collective complaint of UWE on the pay gap, which has been until now quit successful.

The activities of UWE at the European Women's Lobby (EWL) and the Council of Europe were highlighted. All the NFA's presented their reports and gave insights into their activities. There was also a delegation of the Israel Association of Graduate Women present, who have the ambition to associate with UWE. The next AGM will be held in Geneva during the Triennial Conference of the GWI. 25-28 July 2019.

In 2019 a Meet & Greet will be organised by the Scottish Federation.



At the end there was a presentation and invitation from GWI, by Eileen Focke-Bakker, Vice-President Membership of GWI, announcing the 33rd Triennial and Centenary Celebration in Geneva, Switzerland, followed by a GWI drink of prosecco with a GWI-cake opening the GWI Centenary Celebration of GWI.

Later on we gathered for the gala dinner on a wonderful luxury roof top of a one Michelin Star Restaurant, with great views of the city of Rome and shared impressions, gifts and thanked our hosts from the Italian Federation, Fildis: Gabriella Anselmi and Pina Foti. The British Federation of Women Graduates were awarded the prize of 2018 UWE Association of the Year for surviving for 111 years and providing hundreds of post graduate research scholarships to women since 1912.

For further information go to the UWE website: <https://uweboard.wordpress.com>