



# Women in Microwaves

## Women in Microwaves Panel at ICMAC: A Remote Connection

■ Aqeela Saghir 

I am a researcher at the LINKS Foundation within the Politecnico Di Torino, providing a detailed account of a unique joint Women in Microwaves (WIM) and Young Professionals (YP) panel discussion that was held in the first International Conference on Microwave, Antennas and Circuits (ICMAC) in 2021 (Figure 1). Key points in the article are summarized below.

As many challenges as COVID gave us, it also taught us ways to be connected despite the distances between us. WIM is a community that connects women across the world and one can visualize the diversity scrolling down to the WIM subcommittee members on the IEEE Microwave Theory and Technology Society (MTT-S) webpage. To further unite the WIM and YP subcommittee members' mission for women's success, a unique virtual panel discussion was held at the first ICMAC in 2022. This session, titled



©SHUTTERSTOCK.COM/ELENABSL

“Challenges and Opportunities for Women in Microwave Engineering and the Role of Young Professionals for the Betterment of the Community,” held in Islamabad, Pakistan at the Research Institute for Microwave and Millimeter-Wave Studies at the National

University of Sciences and Technology, connected women from three different time zones and discussed ways to help women working in the microwave field. The session was moderated by Dr. Wala Saleem Mustafa Saadeh of Lahore University of Management Sciences in Pakistan, who with her well-structured questions managed to bring back memories and struggles of panel members Prof. Dominique Schreurs, Sherry Hess, Inês Inácio, and Sara Barros (Figure 2).

Wala, after giving a quick introduction, asked the panelists questions

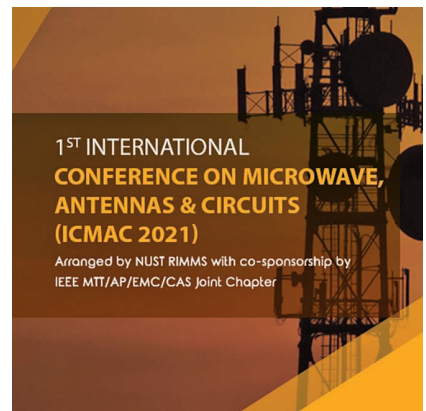


Figure 1. Conference website banner.

Aqeela Saghir ([aqeela.saghir@linksfoundation.com](mailto:aqeela.saghir@linksfoundation.com)) is with the Links Foundation, 10138 Torino, Italy.

Digital Object Identifier 10.1109/MMM.2023.3332328  
Date of current version: 11 January 2024

about their careers in the RF and microwave field, which helped disclose some of the more personal thoughts of the panelists. Questions included:

- What motivated you to join the RF and microwaves field?
- Working in industry vs academia: How did you know which was right for you?
- What are the main challenges of being a woman working in this field?
- How do you maintain a work/life balance?
- What key advice would you give to young women starting off in the field?
- How to motivate females toward microwaves?

A quick summary of some of the answers follows.

### What Motivated You to Join the Field of RF and Microwaves?

Sherry explained how the math puzzles in her childhood pulled her; she was attracted to the challenges of the mathematical equations and was nurtured in an environment of an engineer father that aligned her with engineering.

Dominique expressed the struggles that she had to endure going through the entrance exam for engineering, as the quota for boys taking the exam

was high and boys actually had extra preparation classes just for this exam. Dominique, however, was not allowed to attend these classes but still managed to clear the entrance exam.

Inês had a similar story to that of Sherry. However, she was introduced in this field by her grandfather, who was taking some engineering courses at that time and would take

her along, from the time she started to walk. Inspired by the engineering field, she also fixed home items.

### Working in Industry Versus Academia: How Did You Know Which Was Right for You?

Sara replied that she liked both industry and academia, so when she chose industry she did not go to the production side, she went with the research sector of the industry. She was not only doing research for new products but also could see the products come to life. In radar development for the navy sector, which is her field, that

could take as much as 10 years, but it is very special to see it on the ship.

Wala asked the same question of Dominique. She replied that she was interested in undertaking a Ph.D. degree, but after the Ph.D. it was difficult to choose between industry or academia. She went to work for four months in an R&D sector of a multinational company, where she realized that academia was the best approach for her because she was used to defining her own research. Sherry commented that doing a summer internship in business attracted her toward the business prospective as to how we learn and how we apply, so industry became really attractive to her. She commented that she has tremendous respect for people who go deep in the topic.

### What Are the Main Challenges That You Faced, Particularly as a Woman Working in This Field?

Sherry recounted that her first job was at Intel and, despite having other job offers, she chose Intel partially because it was the one place where other females interviewed her. She also commented that as her career progressed, she realized that the IEEE can also help to connect her to other women in technology.

### How Do You Maintain a Balance Between Your Family and Work?

Sara advised that one should from the start make sure to have defined boundaries, keeping in mind that it is one's responsibility to have a balance between personal life and work. If the boundaries are set from the start, one does not have to redefine them in case of a life-changing event or responsibilities to sick children, and one can have a life at home with family and kids.

Wala asked Sherry the same question, who commented that it never gets easier. After becoming a parent, you can expect to always have new lessons in time management. Delegate tasks to other people to help out, and realize that it is okay to ask other people for help both at work and at home.

**Sherry recounted that her first job was at Intel and, despite having other job offers, she chose Intel partially because it was the one place where other females interviewed her.**



Figure 2. The panelists and moderator for the discussion.

## What Is the Key Advice That You Have for Young Women Starting a Career in the RF Field?

Dominique suggested to not to be shy in a male-dominated place. Speak up and contribute. Often, we tend to be withdrawn when we are in an environment that is new to us, where we don't feel comfortable, but we need take a step forward and go beyond what makes you comfortable.

Inês advised that the first thing in her opinion is being curious and staying curious. Keep asking "why?". Don't let down until you find the answer. Wala agreed that it is very motivating for young engineers that they will learn step by step and not to be afraid of asking questions, because no one knows everything right from the beginning: it is a lifelong process that's keeps on adding to your knowledge.

## How to Motivate Females Toward Microwaves?

Sherry said that, as Inês pointed out, it is a good thing to remain curious and inquisitive and don't be afraid to ask questions. Her advice is to remain curious as well as consciously building a network, a connection of people, like the WIM group within the IEEE. Wala agreed that building these connections really helps one to grow both personally and professionally. Dominique commented that we are half of society, and without female involvement we will be missing that half of the progress that could be made and added to scientific growth.

Inês replied that considering that we are 50% of the population, and that men and women are different, that is where the diversity comes. It is already proven that diversity can improve: it has effects in many ways, like talent, performance, and innovation. It is true that we cannot change the past, but we can learn from it and improve the future.

## Audience Questions

The discussion was then open to questions from the audience (Figure 3), and one student commented that research shows that women in tech often



Figure 3. A group picture with the audience (top right corner of the screen).

underestimate their skills as compared to their male colleagues, and asked how a woman in tech can succeed. Sherry said that as you are looking for your future employer, whether in industry or academia, making sure they are very supportive of women in technology is key. Inês commented that her company has a number of programs to ensure that it attracts women engineers, and we mentor them, we partner them, we give them resources so that they are not left behind. We cannot overlook that they are a critical fabric of the company. So, she advised that when you are seeking your job outside of academia to be mindful of that, and build that network so you can have role models who you can look up to and you can have mentors who can guide you in the right direction.

Dominique added that she has noticed in academia that to become a professor is usually in stages and females especially are reluctant to apply for promotion, because they think that they do not qualify because they may have performed well in one criterion and less well in other. Her recommendation is not to be shy but to try, and maybe you will get the next promotion. She said that she has had to en-

courage and convince her coworkers to apply. Just try to get to the next stage.

## Conclusion

This unique opportunity to support and encourage women engineers in the field of RF and microwaves was a huge success, despite the challenges of COVID. Women from around the world were able to connect, despite the distances and time differences, and learned from the valuable insight shared by four prominent and amazing women in industry and academia.

Continue to explore this article and learn more about WIM at [mtt.org/wim](http://mtt.org/wim).

## Acknowledgment

This session would not have been possible without the help of Mariam Manzoor, general secretary IEEE, from the School of Electrical Engineering and Computer Science- National University of Sciences and Technology (SEECS-NUST), Prof. Maira Islam (SEECS-NUST), and Prof. Noshawan (SEECS-NUST). I thank all the panelists whose thought-provoking inputs were the shine of this discussion. I would also like to acknowledge the LINKs Foundation, Torino, Italy, for providing me with the support needed for the correspondence.