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Women in GRSS Activities at IEEE M2GARSS 2020

In this “Women in GRSS” column, we spotlight the activities organized by the IEEE Geoscience and Remote Sensing Society (GRSS) Inspire, Develop, Empower, and Advance (IDEA) Committee during the 2020 IEEE Mediterranean and Middle-East Geoscience and Remote Sensing Symposium (M2GARSS) held 9–11 March at the Ramada Plaza Tunis, Tunisia.

On Monday, a Young Professionals (YP) and Women in GRSS (WinGRSS) mixer was held. The mixer was a great opportunity to bring researchers of different nationalities and ages together and build a networking forum for sharing ideas and experiences. Organizing the mixer with the GRSS YP team added a special perspective to the event, shedding light on the position of young women researchers and engineers in the geoscience and remote sensing field in the Middle East and North Africa (MENA) region, the challenges they are facing, and strategies to overcome such challenges and build a successful career.

This was also an opportunity to share ways of responding to and reducing inequality in career opportunities between women and men in the field of geoscience and remote sensing, especially in developing countries, where the number of women working in the sector remains significantly low. While female scientists and engineers are a minority in this discipline, many successful women working in the sector have broken gender stereotypes and demonstrated that strength and success are definitely possible.

The forum featured Dr. Fatima Zohra Benhalouche, junior researcher at the Algerian Space Agency, Center of Space Techniques (CTS), and associate researcher at the Research Institute in Astrophysics and Planetology (IRAP) Toulouse, France (Figures 1 and 2). She gave a talk about the evolution of women’s contributions to the field of geo-

science in Algeria. Her research focuses on linear/nonlinear spectral unmixing techniques in remote sensing imagery and the fusion of multispectral and hyperspectral imaging. She is currently studying urban environments and mineral mapping from remote sensing data.

Dr. Benhalouche highlighted that women are starting to take a large part in geospatial and remote sensing activities in Algeria, as well as in many North African

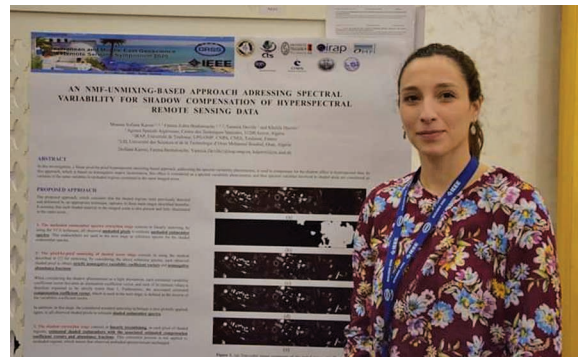


FIGURE 1. Dr. Fatima Zohra Benhalouche, junior researcher at the Algerian Space Agency, CTS, and associate researcher at IRAP.



FIGURE 2. Dr. Benhalouche at the podium of the YP and WinGRSS mixer.



FIGURE 3. Young female mixer participants from Algeria, Morocco, and Iran: (from left): Khedidja Oukali, University of Science and Technology Houari Boumediene, Algeria; Aisha Moumni, Cadi Ayyad University, Morocco; Neda Abbassi, Philipps-Universität Marburg and TH Köln, Germany; and Salma El Idrissi Essebtay, Ph.D. student, Office National d'Etudes et de Recherches Aéropatiales and Centre d'Etudes Spatiales de la Biosphère, Toulouse, France.



FIGURE 4. Dr. Benhalouche with mixer organizers Chayma Chaabani (left) from the M2GARSS local organizing team and Fairouz Stambouli (right), GRSS YP ambassador and M2GARSS YP events organizer.

countries. However, they are active mainly in research, teaching, and supervising activities, in comparison to men who are far more dominant in industry and management. She stressed the importance of empowering women and overcoming the gender gap by raising awareness of women's strengths and ambitions.

She summed up her experience in this way: "My participation in the YP mixer was my first experience as a speaker in such an event. It was a remarkable experience in the context of both a scientific and informal meeting, where we met eminences in the field of geoscience and remote sensing as well as young researchers, all linked by the common research theme and by the Mediterranean culture and legacy. If I could give a piece of advice to young female researchers, it would be to always believe in yourself, be confident, tenacious, strong, brave, and patient, while keeping your

authentic self. Even if you face challenges during your career path, especially during a Ph.D., it is essential to have patience and surround yourself with positive people who encourage you and help you overcome your moments of doubt, because it is natural to have moments of doubt about your choices, like doing a Ph.D., but keep in mind that it is worth it."

Dr. Benhalouche's talk echoed the audience's concerns over the involvement of women in the world of geoscience and motivated them to exchange ideas and start a discussion about the empowerment of women. Many female researchers shared their experiences, including Dr. Laila Nasraoui, an assistant professor at the National School of Computer Sciences, Tunisia, who mentioned that it can be a tough way to reach career goals and that in developing countries it is uncommon to see many successful women engineers. But she is always encouraging her students and motivating

them to keep fighting for their ambitions and was happy that, during the conference, the number of female researchers participating illustrated the advancement of women in science and engineering in Tunisia, as well as many other developing countries. It was also recognized in the discussion that women are as effective as men, can manage multiple tasks successfully, and have the drive to pursue and achieve their goals. Male researchers attending the events spoke up as advocates, sharing their opinions that women are hardworking and should have the same status as men.

The discussion highlighted that the gender stereotypes may be less an obstacle, from a woman's perspective, to achieve her dreams. Identifying the true passion and pursuing it are the keys to success, as long as societies uplift the cultural and social norms to improve the status of women and make changes in opportunities and attitude. Also, expanding one's professional network and opening up to new connections are definitely essential factors toward career success and are, in fact, one of the GRSS's missions.

In addition to the mixer, a Chapter microgrants initiative was launched this year by the IDEA Committee to support the attendance of female researchers and students at regional GRSS conferences (Figures 3–8). During M2GARSS, grants were offered to local researchers from Tunisia and the mixer's speaker from Algeria, as well as to a Ph.D. student from Spain. Another microgrant was offered to a researcher from the European Space Agency, European Space Operations Center (ESA-ESOC), Germany, to join the mixer as a guest speaker. Unfortunately, she was not able to attend the conference due to the Covid-19 crisis.

Grant recipient Maria Luisa Buchailot (Figure 9) from the University of Barcelona shared her feedback: "The experience was great. I participated in the 3MT [Three Minute



FIGURE 5. A group photo of YP and WinGRSS mixer attendees at M2GARSS.



FIGURE 6. Discussions about the status of women in geoscience and remote sensing in the MENA region: (clockwise, from top left): Emna Ghodbani and Chayma Chaabani, Ph.D. students, COSIM Lab, SUP'COM, Tunisia; Dr. Moussa Sofiane Karoui, senior researcher, Algerian Space Agency, Center for Space Techniques; Salma El Idrissi Essebtay (right); Fairouz Stambouli, GRSS YP ambassador; and Dr. Laila Nasraoui, assistant professor, National School of Computer Sciences, Tunisia.



FIGURE 7. Networking in action at the YP and WinGRSS mixer.



FIGURE 8. Attendees enjoying the opportunity to meet informally: (from left): Salma El Idrissi Essebtay, Neda Abbassi, Aisha Moumni, and Khedidja Oukali.



FIGURE 9. Maria Luisa Buchailot, Ph.D. student at the University of Barcelona and the GRSS Spain Chapter microgrant recipient.



FIGURE 10. Dr. Meriem Barbouchi from the National Agronomic Institute of Tunisia and the GRSS Tunisia Chapter micro-grant recipient.

Thesis] competition, and it was an opportunity to start to get over my fear to talk in front of a conference. And it was really nice because I met wonderful colleagues, with whom maybe I could work in the future."

Dr. Meriem Barbouchi (Figure 10), from the National Agronomic Institute of Tunisia, also shared her experience of receiving the microgrant: "I really appreciate the opportunity that I had to receive the IDEA microgrant. This grant helped me to attend M2GARSS 2020 and present my research work. During the conference, I contacted several experts in my research field, and this helped me to develop new research ideas. The topics of tutorial sessions were extremely beneficial and introduced me to the domains of machine learning and small satellites. The YP and WinGRSS mixer event was a favorable occasion to extend my network and know more about the opportunities and the challenges that women and young professionals are facing in my region."

Furthermore, the Women Mentoring Women program was very much appreciated by young female researchers from the MENA region, and many of them expressed their interest in joining the program. It's a great opportunity for them to be in touch with mentors, encouraging them and helping them pave the way to success.

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