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## Women in GRSS Activities at IEEE IGARSS 2019 in Yokohama, Japan

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 2019 IEEE International Geoscience and Remote Sensing Symposium (IGARSS) held 28 July to 2 August at the Pacifico Yokohama, Japan. On Tuesday morning, the third annual Women in GRSS Forum included a diverse panel of GRSS women in science, technology, engineering, and math (STEM), each offering her own perspective on this year’s forum theme, “Building a Successful Career in STEM.” The eighth consecutive IEEE IGARSS Women in GRSS luncheon followed and featured a short informal program and networking opportunities organized by IDEA Committee Chair Dr. Keely Roth, as well as, of course, a delicious meal in good company.

This year’s forum covered a range of topics, from networking to leadership to pursuing new opportunities, and was moderated by Kevin Corbley of Corbley Communication. This year’s panel included a selection of exemplary women: both those in academic careers, such as teaching, applied research, and coordination, and others who cofounded industrial enterprises. The forum first featured Dr. Erin Hestir, associate professor in the Department of Civil and Environmental Engineering at the University of California, Merced, who presented the talk “Identifying and Connecting to New Opportunities in Your Career: Connecting Your Core Values and Passions With Your Skills and Professional Network.” Hestir’s expertise spans geospatial analytics, hyperspectral and satellite remote sensing and sensor networks for inland and coastal waters and wetlands, the application of remote sensing for water resources and ecosystem management, and facilitating remote sensing adoption for environmental reporting.

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The Women in GRSS Forum poster at IEEE IGARSS 2019. (Source: GRSS Social Media Team and IGARSS 2019 Publicity Team.)



Dr. Erin Hestir, associate professor in the Department of Civil and Environmental Engineering at the University of California, Merced. (Source: Dr. Erin Hestir; used with permission.)



Prof. Hestir at the podium of the Women in GRSS Forum. (Source: GRSS Social Media Team and IGARSS 2019 Publicity Team.)

Next in our lineup was Dr. Sarah Graves, coordinator for the Environmental Observation and Informatics Master of Science program in the Nelson Institute for Environmental Studies at the University of Wisconsin–Madison. Her presentation was “Mastering Space and Time to Build Your Professional Network.” Graves’s work as coordinator focuses on recruiting and training students to become

**GRAVES'S WORK AS COORDINATOR FOCUSES ON RECRUITING AND TRAINING STUDENTS TO BECOME LEADERS IN USING OBSERVATIONAL DATA TO ADDRESS PRESSING ENVIRONMENTAL ISSUES.**

leaders in using observational data to address pressing environmental issues.

Dr. Graves gracefully summed up her experience in the forum: "Participating on the panel was an incredibly valuable experience. I am in the early stages of my career and in a position that looked very different from many conference participants. I think it's important to acknowledge and

recognize not all careers end in being a tenured professor. I was proud and honored to be part of a panel highlighting different specialties, paths, and backgrounds of women in this field and will take this information with me in training a new generation of geospatial and remote sensing professionals."

Concluding the forum was Dr. Marta Yebra, senior scientist at the Fenner School of Environment and Society

and mission specialist with the Institute for Space, both at the Australian National University, whose lecture was "Contributing to Scientific Excellence Through Engagement With Publications and Proposal Reviews: Take It or Leave It?" Yebra's research focuses on using remote sensing data to monitor, quantify, and forecast natural resources, natural hazards, and landscape function and health. She is also an associate editor for *Remote Sensing of Environment*. Her thoughts on work-life balance and the importance of peer review were also featured in the June 2019 "Women in GRSS" column [1] and she brought much of the same perspective to share as part of her participation in the Women in GRSS Forum at IGARSS 2019.

Following these first contributions, the forum then turned from career examples based in the academic sector (with professor, researcher, and coordinator profiles) to industry examples of successful STEM careers. Julie Baker, cofounder and chief operating officer of Ursa Space, delivered the presentation "Growing As a Leader: Managing From Your Strengths and Confronting Your Weaknesses." She shared perspectives from 30 years of experience in the software industry, including 15 years in engineering and technical management.

Dr. Qian Zhan, a Chinese researcher and member of the IDEA Committee was most impressed by Baker's speech tracing "her extraordinary experiences from a high school music teacher to a software engineer, then to a cofounder in a high-tech company." From this presentation and an earlier conversation they had, Dr. Zhan said Baker's story demonstrates that, if the first step in the career does not satisfy you, you do not need hang there miserably but can change the direction. "What an inspiring message!"

Baker was followed by Dr. Kimberly Scott, cofounder and vice president of Data Science at Astraea. Her presentation, "Think Like a Scientist, Act Like a CEO: How to Develop Business Acumen in STEM Industries," reflected on her 16 years of experience in creative problem solving by leveraging data, machine learning, and best practices in scientific methodology.

The Women in GRSS luncheon, at its eighth consecutive IGARSS in 2019, immediately followed the Women in



Dr. Sarah Graves, coordinator of the Environmental Observation and Informatics Master of Science program in the Nelson Institute for Environmental Studies at the University of Wisconsin-Madison. (Source: Dr. Sarah Graves; used with permission.)



Dr. Marta Yebra, senior scientist at the Fenner School of Environment and Society and a mission specialist in the Institute for Space, both at the Australian National University. (Source: Dr. Marta Yebra; used with permission.)



Julie Baker, cofounder and chief operating officer of Ursa Space. (Source: Julie Baker; used with permission.)



Dr. Kimberly Scott, cofounder and vice president of Data Science of Astraea. (Source: Dr. Kimberly Scott; used with permission.)



Forum panel (seated) with moderator Kevin Corbley (left) discussing selected topics about women in STEM and fielding questions and comments from the audience at the Women in GRSS Forum. (Source: GRSS Social Media Team and IGARSS 2019 Publicity Team.)



Networking in action at the Women in GRSS luncheon, with participants looking to complete their bingo cards. (Source: GRSS Social Media Team and IGARSS 2019 Publicity Team.)



Dr. Keely Roth, chair of the IEEE GRSS IDEA Committee, introduces some of the related activities to luncheon participants, such as the WMW program, led by Dr. Heather McNair and Prof. Alina Zare. (Source: GRSS Social Media Team and IGARSS 2019 Publicity Team.)



Women in GRSS luncheon participants at IGARSS 2019, including Sandra Cauffman (left), NASA's Earth Science acting division director. She was a panelist at the Women in GRSS Forum two years ago and was this year's IGARSS plenary speaker. Dr. Heather McNair (right), one of the GRSS WMW organizers, also participating in networking activities. (Source: GRSS Social Media Team and IGARSS 2019 Publicity Team.)



Participants sharing thoughts on the Women in GRSS Forum from earlier in the morning. (Source: GRSS Social Media Team and IGARSS 2019 Publicity Team.)

GRSS Forum. As a new feature at this year's luncheon, the incoming chair of the IDEA Committee, Dr. Keely Roth of The Climate Corporation, introduced various Women in Engineering activities organized by the IDEA Committee, including the Women Mentoring Women (WMW) program, and also guided the luncheon participants in an informal networking game, GRSS Networking Bingo. Of the luncheon, Dr. Zhan, a WMW mentee, noted that, while 95% of the attendees were women, attendees came from various countries, including the United States, Canada, Pakistan, Japan, and China. We take this as an opportunity to remind everyone that these Women in GRSS activities are open to everyone, and indeed we encourage and welcome everyone to join in to support and participate in "A More Inclusive GRSS," which was the title of the first message from the current president of the GRSS, Paolo Gamba, published in *IEEE Geoscience and Remote Sensing Magazine* [2].

Regarding the luncheon, Dr. Zhan also added that "the food was delicious, but I couldn't remember what I ate be-

cause I focused on talking to others at the table." She noted that this was her fourth Women in GRSS luncheon and it has always been a valuable experience where she has "found a place for women to exchange their working experiences in no matter what the stage of your career." She met people who had "confronted similar problems and had similar difficulties and so maybe needed similar guidance and similar help." Finally, Dr. Zhan added that the luncheon is also a great opportunity for people to get to know the WMW program because the attendees will probably become future participants in the program.

## REFERENCES

- [1] S.C. Kefauver, M.S. Burgin, and L.M. Bruce, "Dr. Marta Yebra: Balancing a thriving career and a rich personal life," *IEEE Geosci. Remote Sens. Mag.*, vol. 7, no. 2, pp. 182-184, June 2019.
- [2] P. Gamba, "A more inclusive GRSS," *IEEE Geosci. Remote Sens. Mag.*, vol. 7, no.1, pp. 5, 102, Mar. 2019.

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