



BY DAVID KUNKEE

Focusing on IGARSS and Global Activities

About this time, I expected to be returning from the IEEE International Geoscience and Remote Sensing Symposium (IGARSS) that was to be held in Brussels, Belgium, with many stories about the trip and thinking about discussions I had with colleagues. However, once again, we found ourselves attending the conference online and, in many cases, recording presentations that originally were intended to be given live. The continued threat of COVID-19 forced this necessity, which, however, did enable many of us to avoid the heavy rains and flooding that swept through portions of Belgium, The Netherlands, and western Germany and resulted in severe damage and lost lives. While it was not a substitute for an in-person event, having a virtual meeting ensured that our presence did not exacerbate the emergency. I would like to take a moment to congratulate Ramon Hansson, Joost Vandenabeele, Michal Shimoni, and the entire IGARSS 2021 local

WE WILL BE EXPLORING HOW TO BEST LEVERAGE IN-PERSON AND VIRTUAL ENVIRONMENTS FOR IGARSS 2022, IN KUALA LUMPUR, MALAYSIA.

organizing committee for their hard work and excellent results. The key notes, morning special events, and lively discussions made for a great experience and opportunity to network.

At the IGARSS opening session, it was my pleasure to recognize the 2021 IEEE Geoscience and Remote Sensing Society (GRSS) Fellows—Jun Li, Zhao-Liang Li, Xiuping Jia, Jeffrey Piepmeier, Xiao Xiang Zhu, and Lizhe Wang—and announce four GRSS major awards. Kung-Shun Chen received the 2021 GRSS Fawwaz Ulaby Distinguished Achievement Award; Adriano Camps received the GRSS Education Award; Paolo Gamba received the GRSS Outstanding Service Award; and Rafal Modrzewski received the GRSS Industry Leader Award. Congratulations to our Fellows

and award winners. For more about the awards ceremony, please see the article by Alberto Moreira in this issue.

The closing session at IGARSS was highlighted by the GRSS Society Awards and Student Paper Competition (SPC) award announcements. The SPC continued a very successful trend of attracting many high-quality contributions, this year with 239 submissions. Prior to the symposium, 10 finalists were selected to give presentations of their work to the SPC Committee, which selected the winners of the three annual prizes: the Mikio Takagi Student Paper Prize (first place), and the second- and third-place awards. These were presented during the closing session on Friday afternoon, which also included the GRSS Image Analysis and Data Fusion (IADF) Technical Committee's announcement of the 2021 Data Fusion Contest winners and the GRSS Best Reviewers recognition.

Every year at IGARSS, the GRSS recognizes the best reviewers from the previous year as recommended by the associate editors and editors-in-chief of each journal. This year, Antonio Plaza was also recognized for his efforts as editor-in-chief of *IEEE Journal on Miniaturization for Air and Space Systems (JMASS)*, which is co-sponsored by the GRSS. His work resulted in an increase in manuscript submissions and enabled many of the recent journal volumes to be published. As a result, we feel *JMASS* is well positioned to grow concurrently with the importance of and contributions from small satellite missions in remote sensing. We look forward to building on his success.

Of note, for the past two IGARSS events that were held online, there has been a record number of registrations. There is little argument that the online experience is not as satisfying and that, overall, it is limited compared to meeting in person. Another perspective is that virtual events enable many more people to attend and benefit from the discussions and presentations. Furthermore, one might say virtual meetings have been a great benefit to a Society with members spread throughout the

world, enabling a meaningful exchange of ideas to support IEEE's mission of "Advancing Technology for the Benefit of Humanity." We will be exploring how to best leverage in-person and virtual environments for IGARSS 2022, in Kuala Lumpur, Malaysia.

Overall, I am happy to report that the Society continues to experience growth in membership and publications. As I mentioned at IGARSS, GRSS membership numbers for May and June 2021 placed the Society above the median of all 39 IEEE Societies, for what I believe to be the first time. *IEEE Transactions on Geoscience and Remote Sensing (TGARS)* is on track for >3,000 manuscript submissions, and *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing (JSTARS)* should receive >2,000 this year. We have also achieved significant a reduction in the time to a first decision for both: fewer than 40 days for *TGARS* and 38 for *JSTARS*. Congratulations to the editorial staffs for this impressive achievement.

As part of the Society's overall membership and submissions growth, it has been a time of extraordinary expansion in China. One example is the Gaofen Challenge on Automated High-Resolution Earth Observation Image Interpretation. Last year, the event attracted more than 700 teams with about 2,100 competitors from many countries, and the final workshop included 320,000-plus students. One of the results of GRSS involvement is that 2021 membership in China, so far, has more than doubled from last year. This is an important development, and I would like to thank Xian Sun, executive chair of the 2020 Gaofen Challenge, along with Paolo Gamba, Feng Xu, Jun Li, and the IADF chairs, Naoto Yokoya and Ronny Hänsch. I am also pleased to share that the 2021 Gaofen Challenge, as part of the GRSS's academic activities, is underway. We anticipate continued success for the 2021 edition.

Here, I would like to take a moment to thank Anna Guo, our GRSS coordinator in China for the past several years, who has decided to step down to pursue other activities. We have had great success leveraging her help and guidance, and we wish her the best in her endeavors. At our Administrative Committee meeting in July, we welcomed Wen Yan to the position.

Significant GRSS membership and activities growth is also occurring in India. This follows the India Geoscience and Remote Sensing Symposium (InGARSS), which was held online in December 2020. This year, InGARSS will again be virtual, in December, and chaired by Raj Kumar, Shiv Mohan, and Paul Rosen. Other India events planned for 2021 and 2022 include a GRSS School on Artificial Intelligence and Remote Sensing, a Workshop on Spatial Geoinformatics Using Machine Learning approaches, and a Symposium on Geospatial Intelligence.

Further regional activities include GRSS involvement with the Asia Pacific Conference on Synthetic Aperture Radar, the Group on Earth Observation, and the United Nations Initiative on Global Geospatial Information Management. In support of the southern Africa remote sensing community, a GRSS goal is to develop a training program related to Earth observation infrastructure in collaboration with organizations that promote applications of remote sensing science and techniques in the region.

Finally, I would like to mention that Earth observation in the Arctic and Antarctic regions continues to be an interest and priority for the GRSS. Since 2017, IEEE Technical Activities have supported initiatives on the North and South poles. In 2019, the GRSS cosponsored the Arctic and Northern Ocean Forum at the Finnish Meteorological Institute, in Helsinki. This year, it cosponsored the 2021 Antarctic and Southern Ocean Forum with the IEEE Oceanic Engineering Society. The meeting was held online in early August, with 126 attendees and 22 papers addressing technology challenges for the coming decade in polar regions.

To conclude, I am very excited to report on the many aspects of how the GRSS continues to serve the international geoscience and remote sensing communities. Although my focus has primarily been on IGARSS and regional meetings and workshops, GRSS technical committees have also been a significant aspect of our success. Accordingly, I would like to recognize the role of the many individuals who lend their significant technical depth, expertise, and experience to the GRSS community, enabling the Society to have a larger impact than would otherwise be possible.

Along these lines, it is with a heavy heart that I report the passing of one of these key members, Thomas von Deak. He was an advisor to the GRSS Frequency Allocations in Remote Sensing (FARS) Technical Committee and helping to establish GRSS positions in written statements to the U.S. Federal Communications Commission and International Telecommunication Union Working Party 7C, among others. Recently, he contributed detailed background and comments that were included in a letter from the GRSS to the U.S. House Science and Space Technology Committee. His experience in spectrum management enabled FARS to contribute in more substantial ways on multiple topics. He will be sorely missed within the GRSS and FARS communities.

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THE EVENT ATTRACTED MORE THAN 700 TEAMS WITH ABOUT 2,100 COMPETITORS FROM MANY COUNTRIES, AND THE FINAL WORKSHOP INCLUDED 320,000-PLUS STUDENTS.