



President's Column

Focus on Education and Mentoring

■ Gregory Lyons

IEEE is a nonprofit organization incorporated in the state of New York, United States, formed in 1963 from the merger of the American Institute of Electrical Engineers and the Institute of Radio Engineers (IRE). Today, IEEE is a truly international organization. It is the world's largest association of technical professionals whose objectives are the educational and technical advancement of electrical and electronic engineering, telecommunications, computer engineering, and allied disciplines.

IEEE produces more than 30% of the world's literature in the electrical and electronics engineering and computer science fields, publishing approximately 200 peer-reviewed journals and magazines as well as more than 1,200 conference proceedings every year. It may seem to many that IEEE is a professional society formed to benefit the engineering profession. However, the overarching mission and vision of IEEE is to



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secure the benefits of technology for the advancement of society. Education and mentoring play key roles in this IEEE mission and vision, and that role has grown tremendously in importance.

The IEEE Microwave Theory and Techniques Society (MTT-S) was founded in 1952 as the IRE Professional Group on Microwave Theory and Techniques. A lot has changed in 69 years. For many decades, the main role of the MTT-S was to provide opportunities to network with other microwave/RF engineers at conferences and Chapter meetings, publish new advances in microwave technology, and provide a means to pass information among Society mem-

bers to keep them informed of technological advances.

Today, these functions of the Society are still important, but the role of the MTT-S has evolved, with education and mentoring becoming much more core to both the IEEE and MTT-S missions. The MTT-S activity in education and mentoring has increased significantly in 2021 and can be grouped into the following four areas.

MTT-S Education Committee

The MTT-S Administrative Committee (AdCom) consists of 16 standing committees. One of the most important is the Education Committee. The 2021 Education Committee is chaired by Wenquan (Cherry) Che and consists of four subcommittees:



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- Webinar Subcommittee, chaired by Xun Gong
- Student Activities Subcommittee, chaired by Raafat Mansour
- Microwave and Wireless Education Initiative Subcommittee, chaired by Jose Rayas-Sanchez
- Education Resources Development Subcommittee, also chaired by Xun Gong.

The MTT-S began producing technical webinars in 2016. The webinar topics and content continue to be the responsibility of the Education Committee. The MTT-S Marketing and Communications Committee hosts our webinars in collaboration with the ON24 platform and our marketing partner, Naylor Association Solutions. The MTT-S hosted 18 webinars in 2020. An effort is continuing in 2021 with our Young Professionals (YPs) hosting webinars with career/personal mentoring content.

The Student Activities Subcommittee includes MTT-S graduate fellowships; MTT-S undergraduate/pregraduate scholarships; and the Ph.D. Initiative, which supports attendance at our IEEE International Microwave Symposium (IMS) and other conferences. It also offers the Graduate Student Challenge, IMS STEM activities, and Project Connect for students from underrepresented groups.

The MTT-S Microwave and Wireless Initiative is focusing efforts on Region 9 in 2021. This initiative has been very successful in Region 10, providing low-cost RF/microwave educational hardware kits and developing educational CAD RF/microwave learning modules. The effort was formerly led by Shiban Koul and was known as the Special Interest Group on Microwave and Wireless Education.

Finally, the Education Resources Development Subcommittee is working in 2021 to create several tutorial/review article eBooks by IEEE Press/

Wiley and to initiate a Distinguished Microwave Instructor (DMI) program. This DMI program is focused on undergraduate students and aims at providing more educational resources to encourage them to become involved in the RF/microwave community.

MTT-S Resource and Learning Centers

In June 2020, the MTT-S launched our IEEE Resource Center online portal. All of our past MTT-S webinars and other educational digital content are now hosted in the MTT-S Resource Center (<https://resourcecenter.mtt.ieee.org>) following the live broadcast of the webinars or video recording of the event. The MTT-S Learning Center (<https://iln.ieee.org>) hosts content that is more tutorial in nature, such as video recordings of IMS short courses.

Content in the MTT-S Resource Center and the MTT-S Learning Center are offered free to MTT-S members. Both are becoming key member benefits as their technical scope grows. The most popular MTT-S webinars offer a mix of technical information and career or personal mentoring tips and experience sharing. These MTT-S webinars will all be accessible in the Resource and Learning Centers.

YPs Within the MTT-S

Our YP members are eager to connect with experienced MTT-S members for career and professional mentoring. These interactions do not necessarily need to be official mentoring sessions in order for YPs to highly value the contact facilitated through MTT-S networking. Many companies do not offer mentoring networks, even though such networks have become a recognized benefit. YPs turn to their MTT-S network to fill the gap.

The 2021 MTT-S YP Presidential Initiative has increased the visibility

of the valuable role that YPs have come to play within the MTT-S and our AdCom. The Member and Geographic Activities YP Subcommittee was elevated to the ad hoc committee level with the approval of the AdCom, YPs are now members of most of our MTT-S AdCom committees, and three of our YP leaders (Tushar Sharma, Kim Eilert, and Sara Barros) now have a vote on the AdCom.

The goal is to enhance the MTT-S environment to provide a stronger community for our YPs, with mentoring playing a key role. Keep in mind that mentoring can be a two-way interaction. The AdCom will mentor our YPs, while our YPs will mentor the AdCom.

MTT-S Task Force on Mentoring, Diversity, and Inclusion

The MTT-S has a 2021 Task Force on Mentoring, Diversity, and Inclusion, led by Sherry Hess. The main goal is to encourage diversity and inclusion in MTT-S conference organization. A good sign of success would be Women in Microwaves events at a majority of MTT-S financially sponsored conferences. Similar goals can be achieved through MTT-S webinars that include elements of career mentoring, where diversity and inclusion topics can be combined with technical features and information.

Mentoring is synergistic with diversity and inclusion. Diversity and inclusion are really about the culture of an organization. Mentoring ensures full engagement and accesses the full potential of the members of a diverse and inclusive organization.

The MTT-S is a very active IEEE Society. I encourage you to visit our website at <https://mtt.org> for more information. If you would like to be involved as a volunteer in the MTT-S, fill out a contact form at <https://mtt.org/connectme>, and we will make sure you get connected.

