

02 EDITORIAL Corner



IEEE CTS Chairman

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As we advance in Central Texas Section Newsletter from one issue to the next, we try to introduce from time to time new feature(s). In this issue we address the restart of a couple of chapters with a great vigor and enthusiasm.

We also going to introduce a new summit that will take place in Austin this year.

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 Fawzi Behmann

07 IEEE Member Development

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05 IEEE CTS EVENTS

Come and see our section events.



EDITORIAL Corner

Chairman, IEEE Central Texas Section

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A. Special Session

Fawzi Behmann the local multi-division coordinator introduces Casey Latham as the new chair if the local IEEE MTT-S chapter. We are delighted that he's stepped in to bring his energy to the local chapter in an effort to build-up the community.

To celebrate the start of the three new chapters AP, MTT-s, and IM supported by IEEE Austin ComSoc & Signal Processing and Computer & EMBS joint chapters, we were pleased to host a special session on July 18, and delighted to have Erik Luther, VP from X-Microwave to be the speaker.

Erik's technical talk focused on the practical side of building high frequency RF and Microwave systems. He started with a brief overview of the many applications where RF and Microwave are increasingly used today touching on 5G, LEO satellite constellations, and quantum computing. He described the traditional design and production processes for RF subsystems and payloads and how it has changed little over several decades. As a local startup into its 6th year, X-Microwave is developing a modular LEGO-like concept for prototyping RF and Microwave systems from DC - 95 GHz. Luther covered numerous technical challenges their engineers have encountered and how they solved them as they pioneer this new approach. DIE and higher frequency MMICs were of particular interest to the audience given its difficulty to use, the special requirements for die attach, and the skill required for wire bonding.

It seems the modular blocks concept (also known as drop-in's) are also being used for production applications to build radar and flight modules as well. The seamless design path the approach enables from simulation to prototype to production was novel and intriguing. We wrapped up with technical discussion and questions surrounding the size and growth strategy of X-Microwave as they build out their manufacturing organization in Austin. It's refreshing to see a cutting RF and Microwave hardware designed and produced in Austin!



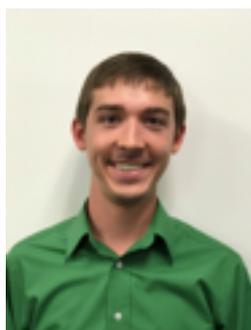
B. Re-start of Three Chapters

As we advance in Central Texas Section Newsletter from one issue to the next, we try to introduce from time to time new feature(s). In this issue we address the restart of a couple of chapters with a great vigor and enthusiasm. These Austin chapters are:

- **AP - IEEE Antennas and Propagation Society**
- **MTT-S IEEE Microwave Theory and Techniques Society**
- **IM - IEEE Instrumentation and Measurement Society**

The person that accepted the challenge to lead these chapters is a new Austinite, young, energetic, and passionate engineer that is ready to serve the members and community at large.

I'd like to introduce you to Casey Latham whom I asked to lead these chapters and talk about some of his plan.



I am pleased to announce that we are officially restarting a joint chapter between the Microwave Theory and Techniques (MTT), Antennas and Propagation (AP), and Instrumentation & Measurement (I&M) Societies. As a new Austinite last year, I was ready to hit the ground running and quickly started looking for different ways I can get involved with the RF and microwave community. I had just left grad school, where we had a vibrant RF and microwave community, which was involved with the Microwave Theory and Techniques Society (MTT). This gave us the resources to bring in distinguished microwave lecturers from around the world to speak at the university. However upon graduating, I discovered that the Austin MTT Society had dissolved over the last few years. The joint society between MTT, AP, and I&M will be a great way for everyone in the wireless community to come together.

The groups have some overlap, but really, they each focus on a different stage of the design cycle. The MTT Society focuses on advancing the theory of anything wireless (including RF, microwave, millimeter-wave, and terahertz technologies). What comes after the theory? That would be design and simulation, which is where AP Society comes into play. APS focuses on antenna analysis, design, and development. After designing and building the antenna comes test and measurement, which is where the I&M Society plays a significant role.

Forming the joint chapter between these three societies isn't an easy task, but it's a challenge that will greatly benefit the members, as well as the community. With 5G on the horizon, this joint chapter is poised for rapid growth. Our first meeting was well attended, and we're looking forward to getting more people involved. Be on the lookout for an invitation to our second meeting, which will be held in late September. If you have any suggestions on speakers, topics, meetings, etc. please don't hesitate to reach out to me! Shoot me an email at Casey.Latham@Keysight.com.

Looking forward to seeing everyone soon.

Brief description of each society:

AP - IEEE Antennas and Propagation Society

Interests include antenna analysis, design, development, measurement, and testing; radiation, propagation, and the interaction of electromagnetic waves with discrete and continuous media; and applications and systems pertinent to antennas, propagation, and sensing, such as applied optics, millimeter and sub-millimeter-wave techniques, antenna signal processing and control, medical applications, radio astronomy, and propagation and radiation aspects of terrestrial and space-based communication. The Society sponsors the annual Antennas and Propagation Symposium.

<http://www.ieeeaps.org>

MTT-S IEEE Microwave Theory and Techniques Society

MTT-S focus is on microwave theory, techniques, and applications of RF, microwave, guided wave, and wireless technologies as they relate to components, devices, circuits, transmission lines, and systems. This includes topics such as active devices and circuits and passive components. Also covered are measurement techniques and complementary computer-aided design. The society sponsors the annual International Microwave Symposium.

<http://www.mtt.org>

IM - IEEE Instrumentation and Measurement Society

The IEEE Instrumentation and Measurement Society's Field of Interest is the science, technology and application of instrumentation and measurement. The Society supports the I&M community with high quality activities, including, but not restricted to, Publications, Conferences, including the annual International Instrumentation and Measurement Technology Conference, Technical Committees and Standards.

<http://www.ieee-ims.org>

C. IEEE ComSoc Summer School

The 5th Edition IEEE ComSoc Summer School was held on 16th-19th July 2019 at National Instruments Corporation, Austin, Texas. It is designed to help kick-start the careers of over 24 new professionals, Ph.D. candidates, and researchers in wireless communications from around the world.

The event features a highly interactive classroom environment with an intense focus on learning the cutting-edge trends in communications technology, as well as laboratory tours, demonstrations, hands-on workshops, poster presentations, and networking activities.

The 4-days program consists of lectures by world-leading professors, industry leaders, and executives.

Among the Speakers from CTS are:

- **July 17 – Speaker: Brian Kelly , UTSA**
“Universal Software Defined Radio Open Platform: 5G, 4G, WiFi, and Advanced Research”
- **July 17 - Speaker: Heena Rathore, Hiller Measurements**
“Deep Learning Based Security Solutions for the Internet of Medical Things”
- **July 19 – Keynote: Fawzi Behmann, TelNet Management Consulting Inc.**
“Collaborative IoT, 5G and AI empower building smart solutions towards Smart Cities”

The 5th Edition IEEE ComSoc Summer School, 16th-19th July 2019



D. Smart City Summit (SCS)

We are pleased to announce the IEEE Smart City Summit (SCS) with the theme of disruptive technologies enabling innovative solutions and use cases. The Summit will take place at TACC in Austin, November 1, 2019. The summit will examine the impact of disruptive technologies onto potential innovative use cases for Smart City, Mobility and Healthcare. Disruptive technologies being considered include IoT, 5G, and analytics AI/ML/DL.

The program includes keynote speakers; panel sessions of distinguished speakers and provide opportunity for networking and reception as well as show case use of technology.

More information is unveiled in this and future issues. Let us know if you wish exhibit/volunteer. Send a message to f.behmann@ieee.org

E. 2019 August Special Events

In August, CTS continue to be active in the community and in outreach activities:

- **Running Deep Learning Models on Smartphones as Real-Time Apps for Signal and Image Processing Applications**
August 5 @ 11:30 am - 1:00 pm
<http://sites.ieee.org/ctx/event/running-deep-learning-models-on-smartphones-as-real-time-apps-for-signal-and-image-processing-applications/>
- **IEEE PI2 Austin, August 2019, ChapComm, Officers Meeting**
August 8 @ 11:59 am - 1:30 pm
<http://sites.ieee.org/ctx/event/ieee-pi2-austin-august-2019-chapcomm-officers-meeting/>
- **IEEE Austin Life Member – 20 Aug 2019 – Smart Home Technology NOTE New Place**
August 20 @ 6:30 pm - 8:30 pm
<http://sites.ieee.org/ctx/event/ieee-ausitn-life-member-20-aug-2019-smart-home-technology-note-new-place/>
- **IEEE Austin Special Session – “Using SDRs and FPGAs to create Advanced Wireless Testbeds”**
August 22 @ 6:00 pm - 8:00 pm
<http://sites.ieee.org/ctx/event/ieee-austin-special-session-using-sdrs-and-fpgas-to-create-advanced-wireless-testbeds/>
- **IEEE Central Texas Section Fall ExCom – SecCom Meeting**
August 24 @ 7:00 am - 3:00 pm
<http://sites.ieee.org/ctx/event/ieee-central-texas-section-fall-excom-seccom-meeting/>
- **IEEE PI2 Austin, August 2019, Tech Meeting, “Lightning Protection 101”**
August 27 @ 6:00 pm - 8:30 pm
<http://sites.ieee.org/ctx/event/ieee-pi2-austin-august-2019-tech-meeting-lightning-protection-101/>

Please view other events/meetings by consulting CTS Calendar

F. Volunteering, Ideas and Suggestions

Central Texas Section offers great opportunities to participate in the growth of the section.

Opportunity to

- Join and grow chapters/Affinity group
- Speak on a subject you are passionate about
- Lead an activity that impact the community
- Help out
- Volunteer for an event
- Start a discussion group
- Invite others to be on the CTS Newsletter mailing list
- Send question

Please send an email to Fawzi Behmann, Chair at f.behmann@ieee.org

Thank you for being part of the CTS mission, in bringing relevant topics, being part of the dialog and discussion and networking events, and in serving our members and communities.

Chairman, IEEE Central Texas Section

Fawzi Behmann

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Message from CTS Chairman



Member Development

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Resource highlights:

- Ebooks
- Salary Comparison
- Employment Navigation
- Others

And it's FREE check it out at:

<http://www.ieeeusa.org/careers/>

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