

02 EDITORIAL Corner



IEEE CTS Chairman

Larry Larson.

Larry.Larson@IEEE.org

Whew!! I think we all can agree that March and April were unique months for the Central Texas Section and for all of us. We started the Spring pretty much in the normal manner [In like a lamb...] then pandemic events just kept coming in, cancelling meetings and events well into the future [Out like a Lion]. Many of us know that the IEEE provides Web Conferencing capability when requested for appropriate meetings; I will be encouraging Technical Society leaders to use this opportunity and work to arrange meetings that we can attend remotely. I actually have ambitions that I can attend more than the normal meetings just because I won't have to

drive and only devote the meeting time to attendance! Watch the Analog and the mid-month Newsletter for notices of meetings to come although they can be viewed on vTools Events at your leisure.

03 IEEE Member Development

NOT AN IEEE MEMBER AND HAVE BEEN WAITING TO JOIN?

So, what is IEEE doing now that things have collapsed? Well, we seem to be migrating to that new area, on-line conferencing and meetings. And, we seem to be getting the hang of it, so this is not the time for us to give up our IEEE memberships.

In fact, if you know someone who is not an IEEE member but should be, this is a good time to encourage that person to join because for the price of ½-year, the new member will get 10-months of membership!

Or, if you know someone who's membership lapsed in 2017 or earlier, this might be the time to consider reconnecting for the same reason. Pass the word around!

04 IEEE EVENTS

Come and see our section events.

<https://r5.ieee.org/ctx/>

<https://r5.ieee.org/lonestar/>



EDITORIAL Corner

Larry Larson

Chairman, IEEE Central Texas Section

Larry.Larson@IEEE.org

Whew!! I think we all can agree that March and April were unique months for the Central Texas Section and for all of us. We started the Spring pretty much in the normal manner [In like a lamb...] then pandemic events just kept coming in, cancelling meetings and events well into the future [Out like a Lion]. Many of us know that the IEEE provides Web Conferencing capability when requested for appropriate meetings; I will be encouraging Technical Society leaders to use this opportunity and work to arrange meetings that we can attend remotely. I actually have ambitions that I can attend more than the normal meetings just because I won't have to drive and only devote the meeting time to attendance! Watch the Analog and the mid-month Newsletter for notices of meetings to come although they can be viewed on vTools Events at your leisure.

Of course, several meetings were cancelled, but a number of leaders took the challenge and converted their meeting and technical presentation to on-line web presentations. I'm particularly happy as the TX-State Student Chapter has continued online, pretty much without missing a beat and I've been receiving invitations from the Houston Chapter for really interesting meetings that I wouldn't have a chance to consider otherwise. [I'm seeing an opportunity here for us to consider events and meetings that we would have tossed off as "too far" previously!] As is my habit - I would like to highlight three of the meetings held in the last months:

IEEE CTS LIFE MEMBER AND CONSULTANTS NETWORK JOINT MEETING - APRIL 22, 2020 - EMERGENCY COMMUNICATIONS

At the recent IEEE Rising Stars Conference (<https://ieee-risingstars.org/>) in Las Vegas, Nevada, Phil Bautista took over 100 undergraduate and graduate level Engineering students through a "Zombie Apocalypse" workshop. In it they were introduced to the International Telecommunications Union (ITU) alphabet used in Emergency Communications (EMCOMM), radio operation, serial voice communications nets, and made their very first VHF/UHF radio contacts. Following the workshop an FCC licensing exam session was held and twice the expected number of people passed with their newly minted FCC Amateur Radio licenses. Walk with Phil through the workshop highlights and see the amazing results, what worked, what the bottlenecks were and what failed.

In addition, learn what happens on a weekly basis behind the scenes in Austin, Travis County, across the State of Texas and at our Nation's Capital to prepare for loss of communication and handle a surge in transporting and managing patients across hospitals in emergencies to keep our Nation, State, County and City from being unable to communicate in the event of a failed infrastructure.

In a demonstration that "Local" Chapter Events don't have to be truly local:

AUSTIN-DENVER/BOULDER IEEE COMSOC CHAPTERS BRING JOINTLY VIRTUAL EVENT ON "BLOCKCHAIN FOR TELECOMMUNICATIONS"

The Austin-Denver/Boulder IEEE ComSoc Chapters cooperated to jointly bring a special webinar on "Blockchain for Telecommunications"

TOPICS:

1. "Blockchain Applied to Telecom" - Claudio Lima, Ph.D., Co-Founder Blockchain Engineering Council, BEC
2. "Distributed Ledger use in Telecommunications for Certificate Management" - Chris Gorog, CTO Blockframe
3. "5G and blockchain impact in shaping the future smart cities and telecommunications"

Fawzi Behmann, DL, MBA, M. Comp.Sc, President TelNet Management Consulting Inc.

IEEE CTS Life Member and CTCN Joint Virtual Meeting - March 25 - 5G Overview

5G technology has the ability to radically change how we interact with the world. Not only will the new technology allow for higher speeds and throughput, the additional capability will unlock multitudes of different applications. This includes everything from remote surgeries to live VR sporting events to autonomous vehicles. But the big question is how this will be done. This presentation covers an overview of 5G, including how this new technology will work. The presentation covers topics such as carrier aggregation, frame and protocol structure, beamforming, and network architecture.

A special note I'd like to make: Our Editor, Prof. Semih Aslan, is proposing to include a special, general-interest, technical note feature to reward you for making it all the way through! We would welcome your feedback both on the relative interest in this sort of technical treat and also if you would have a short note that might be of interest to include.

Message from the CTS Chairman
Larry Larson
Chairman, Central Texas Section
Larry.Larson@IEEE.org

A. 2020 Highlighted Events

The Central Texas Section is building a program of excellent events into the Spring of 2020. In this message I intend to highlight a few of these for your consideration. Pay attention to this and the mid-month Newsletter as more events are being booked each week.

B. IEEE CTS LIFE MEMBER MAY 19, 2020 JOINT WEB EX MEETING - EDISON VS TESLA: WHEN IP RULED ... STILL DOES

Edison vs Tesla: When IP ruled ... still does

Tales of two of the greatest engineering minds. From Edison vs. Tesla to Apple vs. Qualcomm. Why inventor technical breakthroughs fail to become successful businesses. In a world where innovation is not confined by geographic boundaries intellectual property (IP) has become a game changer. All patents are not created equal: good patents vs. bad patents. From engineer to subject matter expert.

C. IEEE PI2 AUSTIN, MAY 2020, TECH MEETING, "THE ROLE OF SECTOR COUPLING IN RENEWABLE INTEGRATION"

This presentation briefly introduces traditional planning and operation of the electricity system to motivate consideration of sector coupling in the context of increased renewables. The notion of fuel endowments and temporal endowments is introduced and then adaption to temporal endowments to enable higher levels of renewable integration.

Several events are scheduled into May and June. I'm going to defer writing on them simply as the Shelter in Place" guidelines and how we react to them are in flux as of this writing. I will still encourage you to find events of interest and sign up for them - - but then watch carefully to see if they will be held and, of course, attend only if you feel safe doing so!



Member Development

Not an IEEE member and have been waiting to join?

So, what is IEEE doing now that things have collapsed? Well, we seem to be migrating to that new area, on-line conferencing and meetings. And, we seem to be getting the hang of it, so this is not the time for us to give up our IEEE memberships.

In fact, if you know someone who is not an IEEE member but should be, this is a good time to encourage that person to join because for the price of ½-year, the new member will get 10-months of membership!

Or, if you know someone who's membership lapsed in 2017 or earlier, this might be the time to consider re-connecting for the same reason. Pass the word around!

Not sure if you've renewed for 2020, please go to www.ieee.org/renew or call the IEEE Contact Center at 1 800 678-4333.

If you are a new member to IEEE OR just want to refresh yourself on the GREAT benefits the IEEE offers to its members, check out the site and the IEEE members orientation.

Senior Membership Upgrade

Now that all the technical and social meetings we could have gone to are cancelled, now is a very good time to work on your IEEE Senior Membership Upgrade Application. Senior Membership is the only advanced membership or award that a member may apply for directly.

Are you eligible? Do you have at least 10-years of professional experience including your college degree? Well, you might just qualify. Send your resume to James Mercier, jmercier@ieee.org the CTS Senior Member Upgrade Coordinator; he'll get back to you on what more you need.

Please go through him. Let the Section nominate you, and James will supply your References as well as proof your application. It can save you a bunch of work! The cutoff for the upcoming cycle is about June 17th.

James J. Mercier, P.E.
CTS Membership Development Chair
jmercier@ieee.org
512 971-1974 (You may need to leave a message)

IEEE LSS\CTS May 2020 EVENTS

4 LONE STAR SECTION EXECUTIVE COMMITTEE MEETING

Time: 4:00 pm - 5:00 pm -- **MORE INFO AND REGISTRATION:** <https://meetings.vtools.ieee.org/m/222539>

Monthly Executive Committee Meeting

Please join us via WebEx (instructions will be provided separately).

Location:

San Antonio, Texas
United States

18 CTS WIE, TEMS, YP AND EDSOC: CAREER NIGHT

Time: 6:30 pm - 8:00 pm -- **MORE INFO AND REGISTRATION:** <https://meetings.vtools.ieee.org/m/218647>

IEEE Event, brought to you by IEEE Young Professionals, Women in Engineering, Technology and Engineering Management Society and Education Society.

Career Night! We'll have discussions of behavior-based interviewing and opportunities for mock interviews and resume writing. Whether you are the interviewee or the interviewer, there's something here for everyone.

We'll have

Networking

Great food and drinks!

Join us for great food and drinks, good company and a fantastic discussion. No charge for this event! Bring your friends! And make new ones!

Agenda:

6:30 Snacks, drinks and networking!

7:00 Discussions

8:00 Adjourn

Mark Your Calendar: Join us on the 3rd Monday of each month at Cirrus Logic, 800 6th St. Austin, TX 78701 THANK YOU to our friends at Cirrus for hosting our event. Park free on the street after 6PM. The room is at 7th and West Ave, just to the right of the Cirrus Employees' Parking Garage.

Location:

Cirrus Logic
702 West Avenue
Austin, Texas
United States 78701

Building: Just North of the Parking Garage. Park near West & 7th.

19

IEEE CTS LIFE MEMBER MAY 19, 2020 JOINT WEB EX MEETING - EDISON VS TESLA: WHEN IP RULED ... STILL DOES

Time: 6:00 pm - 8:30 pm **MORE INFO AND REGISTRATION:** <https://meetings.vtools.ieee.org/m/229423>

WebEx online meeting. **Connection information will be emailed to you before the meeting.**

Edison vs Tesla: When IP ruled ... still does

Tales of two of the greatest engineering minds. From Edison vs. Tesla to Apple vs. Qualcomm. Why inventor technical breakthroughs fail to become successful businesses. In a world where innovation is not confined by geographic boundaries intellectual property (IP) has become a game changer. All patents are not created equal: good patents vs. bad patents. From engineer to subject matter expert.

Topic: Edison vs Tesla: When IP ruled ... still does

Speaker: Dr. Edwin De Angel of Invention Matters

Tales of two of the greatest engineering minds. From Edison vs. Tesla to Apple vs. Qualcomm. Why inventor technical breakthroughs fail to become successful businesses. In a world where innovation is not confined by geographic boundaries intellectual property (IP) has become a game changer. All patents are not created equal: good patents vs. bad patents. From engineer to subject matter expert.

Biography:

Dr. De Angel is a seasoned inventor with more than 30 patents issued. Dr. De Angel is the founder of Invention Matters, a company focused on IP licensing, patent infringement analysis, patent valuation, prior art research and claim chart developing. He has worked for several Fortune 500 technology firms, law firms and startups. Dr. De Angel has more than 20 years of experience working for semiconductor and technology firms including Honeywell, Intel, Cirrus Logic, RFMicron, Freescale and Qualcomm. During this time he led teams as Design Manager and VP of Engineering creating, developing and licensing intellectual property. Between 2005-2009 Dr. De Angel served as a program evaluator for the Accreditation Board of Engineering and Technology (ABET). Dr. De Angel has a Ph.D. in Electrical Engineering from the University of Texas at Austin and a Master of Science in Electrical Engineering from Stanford University. He is a professional engineer (PE) licensed in the state of Texas and a certified licensing professional (CLP). Dr. De Angel is a board member of Quantum interface and co-chair of the Licensing Executive Society Austin/Hill Country Chapter.

Email: edwin.deangel@inventionmatters.com

Address: Austin, Texas, United States

Agenda:

6:30 - 6:40 PM Speaker Introduction

6:40 - 8:00 PM - Presentation

- Research Experience at UTSA
- Professional Societies
- Officer involvement in IEEE

Location:

Web Ex Meeting Platform

26

IEEE PI2 AUSTIN, MAY 2020, TECH MEETING, “THE ROLE OF SECTOR COUPLING IN RENEWABLE INTEGRATION”

Time: 6:30 pm - 7:30 pm -- **MORE INFO AND REGISTRATION:** <https://meetings.vtools.ieee.org/m/229581>

IEEE PI2 Austin, May 2020, Tech Meeting

Virtual Meeting Only - WebEx details will be communicated via email.**Abstract:**

This presentation briefly introduces traditional planning and operation of the electricity system to motivate consideration of sector coupling in the context of increased renewables. The notion of fuel endowments and temporal endowments is introduced and then adaptation to temporal endowments to enable higher levels of renewable integration.

Topic: The Role of Sector Coupling in Renewable Integration**Speaker:** Ross Baldick of UT

Tales of two of the greatest engineering minds. From Edison vs. Tesla to Apple vs. Qualcomm. Why inventor technical breakthroughs fail to become successful businesses. In a world where innovation is not confined by geographic boundaries intellectual property (IP) has become a game changer. All patents are not created equal: good patents vs. bad patents. From engineer to subject matter expert.

Biography:

Ross Baldick is Professor Emeritus in the Department of Electrical and Computer Engineering at The University of Texas at Austin. He received his B.Sc. and B.E. degrees from the University of Sydney, Australia and his M.S. and Ph.D. from the University of California, Berkeley. From 1991-1992 he was a post-doctoral fellow at the Lawrence Berkeley Laboratory. In 1992 and 1993 he was an assistant professor at Worcester Polytechnic Institute. Dr. Baldick has published over 100 refereed journal articles and has research interests in a number of areas in electric power. His current research involves optimization, economic theory, and statistical analysis applied to electric power system operations and electricity markets, the public policy and technical issues associated with electric transmission under electricity market restructuring, the robustness of the electricity system to terrorist interdiction, electrification of the transportation industry, and the economic and technical implications of integration of renewables. His book, Applied Optimization, is based on a graduate class, “Optimization of Engineering Systems” that he teaches in the electrical and computer engineering department at The University of Texas. He also teaches a three-day short-course “Introduction to Electric Power for Legal, Accounting, and Regulatory Professionals” and a one-day short-course “Locational Marginal Pricing” for non-technical professionals in the electricity industry. He is a former editor of IEEE Transactions on Power Systems and former chairman of the System Economics Sub-Committee of the IEEE Power Engineering Society Power Systems Analysis, Computation, and Economics Committee. He is an Associate Editor of Operations Research. Dr. Baldick is a Fellow of the IEEE and the recipient of the 2015 IEEE PES Outstanding Power Engineering Educator Award.

Agenda :

Program 6:30 to 7:30 PM

Location:Via WebEx
Austin, Texas

29

IEEE LSS TEMS MEETING: GUEST SPEAKER - HOW ADVANCES IN DIGITAL PATHOLOGY MIGHT IMPACT BUSINESS OPERATIONS IN HEALTH

Time: 12:00 pm - 1:30 pm -- **MORE INFO AND REGISTRATION:** <https://meetings.vtools.ieee.org/m/229316>

Virtual Meeting Only - WebEx details will be communicated via email.

Topic: How Advances in Digital Pathology Might Impact Business Operations in Health

The Technology and Engineering Management Society (TEMS) of the IEEE Lone Star Section is hosting a guest speaker, Hakima Ibaroudene. The spread of COVID-19 has highlighted challenges both in diagnosis accuracy as well in the US healthcare's response capacity to large scale outbreak. There is some thought that recent advances in medical imagery analysis could be used to automated the analysis of chest CT scans, specifically coronavirus induced inflammation and infection in the lungs. Hakima Ibaroudene with SwRI will discuss some recent experience applying image analysis techniques to breast cancer biopsy slide analysis in an effort to improve test accuracy and diagnosis, increase lab throughput, and address pathologist labor shortages. The discussion will delve into the impact digital pathology can have on the business operations of healthcare.

Registration Required at: <https://swri.webex.com/swri/onstage/g.php?MTID=efe464f065b83bca5b3d1dfd06e7c6d98>

Speakers: Hakima Ibaroudene

The spread of COVID-19 has highlighted challenges both in diagnosis accuracy as well in the US healthcare's response capacity to large scale outbreak. There is some thought that recent advances in medical imagery analysis could be used to automated the analysis of chest CT scans, specifically coronavirus induced inflammation and infection in the lungs. Hakima Ibaroudene with SwRI will discuss some recent experience applying image analysis techniques to breast cancer biopsy slide analysis in an effort to improve test accuracy and diagnosis, increase lab throughput, and address pathologist labor shortages. The discussion will delve into the impact digital pathology can have on the business operations of healthcare.

Biography:

Ms. Ibaroudene is currently responsible for leading a team at SwRI that has various expertise in computer vision and machine learning to provide solutions to the medical and sports industry. She led a team that recently collaborated with UT Health San Antonio pathologists to develop an automated method to detect breast cancer cells and placed first in an international challenge.

Location:

webex event
San Antonio, Texas