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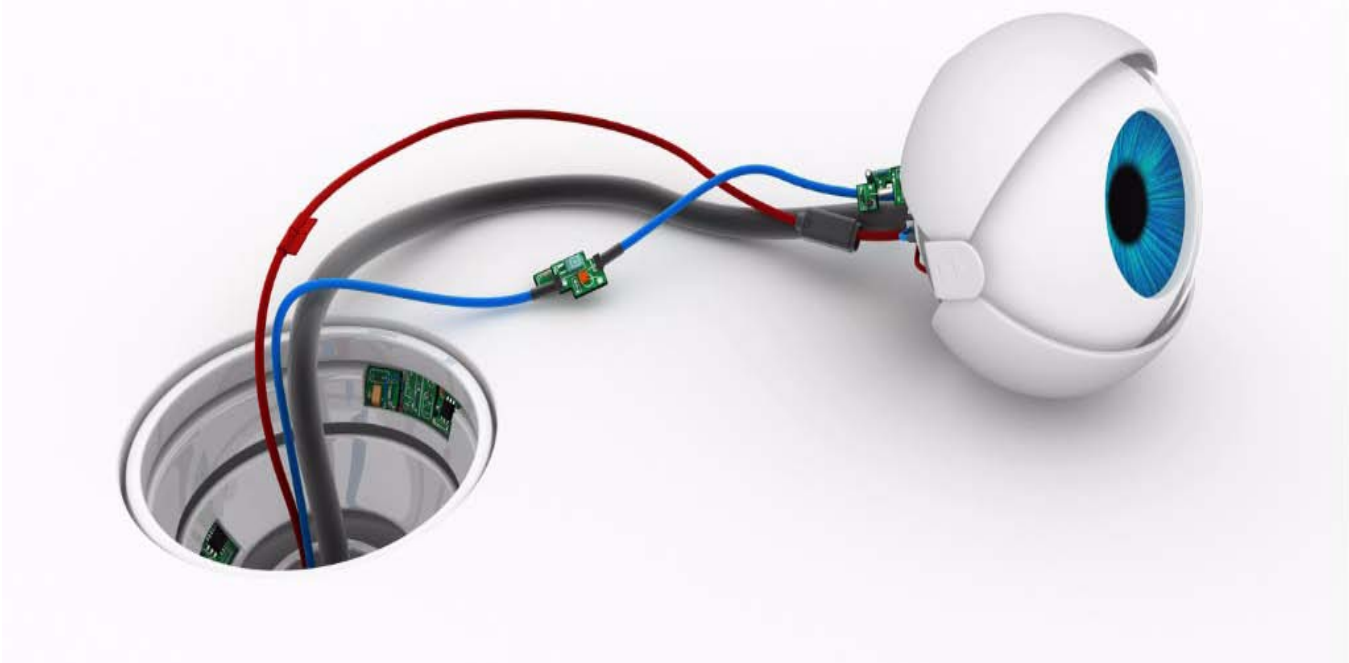

IEEE
Advancing Technology for Humanity

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Remembering Amelia

by Karen Panetta, Reflector Editor

I have been to the Smithsonian Museums in Washington, DC many times. For many of my visits, I typically like to avoid the crowds and seek out the less popular attractions. For instance, I have no desire to see the popular Hope Diamond, since there is no hope I will ever own one that big. Plus, the Hope Diamond is blue and that is not my color.

My favorite museum in DC is the Air and Space Museum. I would have liked to say that the Museum of Natural History was my favorite, but my heart breaks for all those stuffed animals and dead creatures on display for the education and amusement of humans. I'd rather go to a zoo and see them all alive.

One attraction that was hardly ever busy in the Air and Space museum was Amelia Earhart's red Lockheed Vega 5b plane, in which she made her historic solo flight across the Atlantic Ocean.

I brought my Dad with me the first time I saw it and he said, "You know, Amelia used to live across the street from our family in Medford, MA." I thought he was joking, so I asked my grandmother if this was true. She confirmed that it was indeed the truth. I asked her what Amelia was like and she responded, "She was rather odd."

"What exactly made Amelia odd?", I asked. My grandmother answered, "She wore pants."

I chuckled to myself thinking, "What a trailblazer Amelia was for being brave enough to wear pants, never mind making a solo flight across the Atlantic with a cracked manifold."

This year, I had the opportunity to go back to the Smithsonian and found that the exhibit area where Amelia's red plane was on display was extremely busy. I waited in line and noticed that the crowd gathered around her plane was full of women and young girls of all ages. Everyone was excited to take a picture next to Amelia's life-sized cardboard cut-out picture in front of her plane.

Amelia had finally arrived to become an immortalized rock star role model for young girls and women. This got me thinking about how much courage it actually did take for her to wear pants and the other societal pressures Amelia took head-on in order to pursue becoming a pilot.

Now, fast forward to 2016. You would think things have changed quite a bit since then, but our young people do experience quite a bit of the same societal pressures to appear in a certain manner. Seeing Amelia's exhibit reminded me of this, and it made me realize that I too, am guilty of inflicting stereotypes on my students by asking them to "conform" to socially acceptable standards.

I have brilliant students come into my office and ask me for career advice and interviewing tips. In the past, I would ask my students to abandon wearing "balloon" pants, tank tops, flip-flops and give up cigarette smoking. I would remind them that Mari-

juana was considered a drug and usage of it would be detected by a drug test.

Wow, how things have changed in such a short time! I used to even beg students to cover their tattoos during interviews, but now everyone except me, seems to have one, so it appears that tattoos are no longer a social taboo for prospective job candidates.

Today, after telling students the basics such as, “look people in the eye”, “smile” and avoid the “dead fish” handshake, I actually beg the student to take out all the body piercing jewelry on her/his face. Especially, if the student has a nose ring, which reminds me of the ring farmers use to lead a bull around by the nose. The eyebrow piercings are distracting enough for me, but the worst is a tongue piercing, which makes me want to curl up into a fetal position.

I find myself wanting to ask, “Wasn’t that painful? Does it interfere with eating and speaking? Doesn’t that have adverse health effects?”

One student responded, “Professor, this is who I am and if a company is that shallow and judgmental on my appearance, then I don’t want to work for them.”

“A nice and brave sentiment,” I thought to myself, “but can every student afford to take this attitude?”

I thought of all the student loans I had when I graduated from college and all the sacrifices my parents made to send me to school. No, there was no way I would have risked my financial future by losing a job because of my appearance. So, I did conform to appear “normal”, which consisted of confining my mile high blown dried hair, which was popular in the 90’s, to lower altitudes, taking out the football player sized shoulder pads out of my jacket and removing 9 out of 10 of the gold chains I wore around my neck that made me look like a gangster from the “hood”. I never looked back and didn’t miss giving up those things to get the dream job that changed my life. Okay, I lied, I still miss the big hair.

Today, corporations and academic institutions talk about diversity and valuing differences in employees. Over time, what constitutes normal and a socially acceptable appearance has changed exponentially, yet it appears that people are still judged by their appearance or even gender.

It could be said that today, we operate in a global economic community, and putting a person, who visually appears like a walking traffic light, in front of a client from a country, where there are culturally rigid protocols for business, could damage a business relationship. However, remember that not too long ago, simply putting a well-qualified woman in front of a client or a class of students from a culture, where women were not expected to be in engineering was also a risk, but clearly, it was and remains the right thing to do.

IEEE Women in Engineering recently sent out free sample copies of the IEEE Women in Engineering Magazine to all IEEE members via email. As the Editor-In-Chief of the IEEE WIE magazine, it made me pleased to see how many male members wrote back to me saying that they initially thought the magazine was “just for women”, but found the stories relevant to their own careers and helpful for them to support the girls and women in their lives.

The IEEE Boston Section has one of the most successful and active IEEE WIE affinity groups and has won awards for their outstanding efforts. It is not just a group of women, but a community of IEEE Boston members who want to encourage engineering as career options for everyone, as well as help create better work environments for all employees.

IEEE WIE welcomes everyone to attend events and you can wear shorts, pants, flip-flops, and show off your tattoos and nose ring. We celebrate your individuality!

This is a reprint of the editorial originally publshed in the June 2016 Reflector

IEEE Boston Section Online Courses:

(Students have 90 day access to all online, self-paced courses)

Verilog101:Verilog Foundations
Full course description and registration at ,
http://ieeeboston.org/verilog-101-verilog-foundations-online-course/

System Verilog 101: Design Constructs
Full course description and registration at ,
http://ieeeboston.org/systemverilog-101-sv101-design-constructs-online-course/

System Verilog 102: Verification Constructs
Full course description and registration at ,
http://ieeeboston.org/systemverilog-102-sv102-verification-constructs-online-course/

High Performance Project Management
Full course description and registration at ,
http://ieeeboston.org/high-performance-project-management-online-course/

Introduction to Embedded Linux Part I
Full course description and registration at ,
http://ieeeboston.org/introduction-to-embedded-linux-part-i-el201-online-course/

Embedded Linux Optimization - Tools and Techniques
Full course description and registration at ,
http://ieeeboston.org/embedded-linux-optimization-tools-techniques-line-course/

Embedded Linux Board Support Packages and Device Drivers
Full course description and registration at ,
http://ieeeboston.org/embedded-linux-bsps-device-drivers-line-course/

Software Development for Medical Device Manufacturers
Full course description and registration at ,
http://ieeeboston.org/software-development-medical-device-manufacturers-line-course/

Fundamental Mathematics Concepts Relating to Electromagnetics
Full course description and registration at ,
http://ieeeboston.org/fundamental-mathematics-concepts-relating-electromagnetics-line-course/

Reliability Engineering for the Business World
Full course description and registration at ,
http://ieeeboston.org/reliability-engineering-business-world-line-course/

Design Thinking for Today's Technical Work
http://ieeeboston.org/design-thinking-technical-work-line-course/

Fundamentals of Real-Time Operating Systems
http://ieeeboston.org/fundamentals-of-real-time-operating-systems-rt201-on-line-course/

Entrepreneurs' Network – 7:00PM, Tuesday, November 3

IP Strategy: How to Make the Most of Patents, Copyrights, and Trademarks

Online Webinar

Intellectual Property (IP) includes patents, copyrights, trademarks, and trade secrets. An IP strategy for a startup or early stage company should describe how and when to allocate scarce resources – human and financial resources – to many areas, including IP. IP strategies will necessarily differ depending on the vertical market the company is addressing – high tech, mobile, medical devices, and biotech, for instance.

Questions that our panel of experts will address include:

- What are patents, trade secrets, copyrights, and trademarks?
- What protections do each of these forms of IP offer to the company, its investors, and shareholders?
- What are the tradeoffs between investing in IP, product development, and getting to market?
- What are the technology and market differences in the timing of investing in IP?
- When do investors care about IP?
- When and where should companies consider protecting IP in foreign countries?

This meeting's presentations and discussion will cover the importance of IP to various people and aspects of startup companies, including, founders, investors, inventors, engineering, product development, and marketing. A question and answer session will follow the panel discussion, and panelists will be available afterward for responses to individual questions.

Agenda: (all times are USA Eastern Daylight time)
5:30 – 6:45 PM – Open networking (Online), attendees should register at https://grapevine.today/ before the meeting
7:00 - 7:10 PM - ENET Chairperson's announcements
7:15 - 7:25 PM – eMinute Pitch - Up to 2 Startup companies' presentations - E-Minute Pitches are short 90-second presentations enable young startup entrepreneurs to gain experience in presenting their summary business plans to expert panels and audiences.
7:25 - 8:25 PM - expert panelists, discussing the night's topic
8:25 - 8:45 PM – Audience Q&A with the speakers

Speakers

Anita M. Bowles, Ph.D. | Special Counsel, McCarter & English, LLP
Dr. Anita Bowles has more than 14 years of experience as a patent professional. Her practice focuses on the fields of physics, software, electrical and mechanical engineering, medical devices, and the interface between biology and electrical, mechanical and computer technologies. Anita has assisted clients in developing IP strategy and patent protection in a broad range of technologies, including semiconductor processing and devices, optical systems, machine vision systems, software, sports equipment, mechanical systems, microelectromechanical systems, medical devices, surgical tools, medical implants, and modeling of biological systems. Anita assists clients with patent drafting, worldwide patent prosecution, patentability analysis, infringement analysis, and freedom to operate analysis. Anita has also supported patent litigation in the Federal courts and proceedings in the International Trade Commission addressing infringement of patents.

Anita graduated as salutatorian from Suffolk University Law School. Prior to law school, Anita received her Ph.D. from Harvard University's physics department for her work quantifying thermo-mechanical properties of organic thin films. While in graduate school, she also conducted research at Lawrence Livermore National Laboratory, exploring high energy density materials under ultrahigh pressure. As an undergraduate at the University of Colorado at Boulder, she researched particle identification cuts for data produced in high energy particle accelerator experiments.

J. Peter Fasse, Principal at Fish & Richardson P.C.
Peter Fasse is a Principal in the Boston office of Fish & Richardson (Fish), and has been working at Fish since 1987. Peter has two B.S. degrees from MIT, in Life Sciences and Bioelectrical En-

gineering. His practice emphasizes client counseling, opinion work, and patent prosecution in a wide variety of technologies, with an emphasis on healthcare, Life Sciences, medical devices, and other biomedical fields. Peter helps clients from start-ups to multinationals to develop competitive worldwide patent strategies and to establish solid and defensible patent portfolios. He performs competitive patent analyses, IP due diligence to support company acquisitions, identifies third-party patent risks, and provides patentability and freedom-to-operate opinions. Peter also has experience in opposing and defending patents in U.S. litigation and post-grant proceedings and before the European Patent Office. Peter has experience in various fields including medical therapeutics, diagnostics, devices, imaging, microfluidic systems, RNAi and CRISPR therapeutics, dendritic cell- and DNA- based vaccines, liquid biopsy, engineered AAV systems, next generation sequence analysis, nanoparticle and vector-based delivery, cell culturing and bioprocessing, optics, and lasers.

Moderator and Speaker:

Bob Weber, Managing Director, Patent Kinetics, LLC

Bob Weber is an intellectual property professional, inventor, serial entrepreneur, senior executive, and management consultant. Presently, he is Managing Director, Patent Kinetics, LLC, a company that helps entrepreneurs and patent owners build and monetize valuable patent portfolios. Weber is an inventor with 28 issued US patents and a number of foreign counterparts assigned to Intertrust Technologies where he served as SVP Business and Technology Strategy, 1996-1999. The Intertrust portfolio was characterized in the Wall Street Journal as a “once in a generation billion-dollar licensing opportunity.” Weber has also been a Principal Consultant at Northeast Consulting Resources, Inc. At NCRI, his consulting practice focused on strategies for information creation, access and distribution; clients included Fortune 50 companies. Weber divides his time between Silicon Valley and Boston. He served on the Advisory Board of the IEEE Boston Entrepreneurs Network (“ENET”) at various times between 2004 until June, 2019. Weber has been a member of the Silicon Valley Chapter of the Licensing Executives Society since 2010 and presently serves on the chapter’s Board of Directors and Program Committee. Weber also served on the organizing committee for the ConnectedThings2015 and ConnectedThings2016 IoT conferences produced by the MIT Enterprise Forum.

Co-Meeting Organizers:

William R. Byrnes

Bill's legal practice assists entrepreneurial companies with the legal issues they face with a focus on day-to-day commercial issues involving customers, vendors, and other third-party relationships. Bill received his undergraduate degree in English Literature and Creative Writing from Boston University, a J.D. from Suffolk University Law School, and a L.L.M. degree in Taxation from Boston University Law School, Graduate Tax Division. He is also a member of Boston ENET’s Advisory Board and Executive Committee.

William Mansfield, Secretary Of Boston ENET

Attorney Mansfield is a patent attorney and is a lawyer in MA & NY; high bar exam scores allowed him to waive into the D.C. Circuit. He won the CALI Award for perfect grades in an IP course, and he has passed the Fundamentals of Engineering Exam covering all types of engineering. He assists clients with corporate and intellectual property law using trademarks, trade dress, copyrights, licensing, patents, trade secret protection, strategic partnerships, and succession planning.

From 2004, he has worked on legal matters & he has counseled entrepreneurs/startups since 2009 thru Mansfield Law. He has worked on patent prosecution, especially business method, business process, electrical, mechanical, telecommunications, and e-commerce patents. He has filed for global IP protection and has a network of foreign IP professionals.

Registration:
https://boston-enet.org/event-3892650/Registration

- ***ENET Member - Free***
- ***Non-ENET Member – $10.00***

Sensors Council Chapter and Solid-State Circuits Society Chapter – 5:00PM, Thursday, November 5

IEEE Boston Brain Data Bank Challenge 2020

The 2020 Brain Data Bank Challenge (BDBC-2020) is targeted to expose, discuss and accelerate on-going brain research from around the world.

The Boston session is part of a series of events held with judging locations in Taiwan, Russia, and United States. Some teams from these preliminary rounds will be invited to participate in the final round in Santa Clara, CA, USA.

Others with like interest and curiosity are invited to be in the audience and take advantage of this borderless sharing of state-of-the-art brain research and development.

This meeting will be held virtually. Zoom contact information will be provided to registered attendees.
Purpose:
The 2020 Brain Data Bank Challenge (BDBC-2020) invites topics on brain data analytics to improve the quality of life and safety of senior citizens. Knowing the senior population has been severely impacted by COVID-19, this year's focus will be on the "Aging Brain".

We seek to address (some or all) questions below, regarding the aging brain:

How effectively do MRI, EEG, fNIRS, and/or fMRI datasets capture the aging brain?

How does the aging brain respond to non-verbal signal (e.g., vision, facial expression, body language and temperature)?

How can emerging techniques, e.g., Big Data Analytics, Artificial Intelligence, and Deep Learning, enhance the prediction of brain aging?

How to facilitate ease of use, reliability and protection of brain datasets?

Furthermore, lessons learned from past BDBC presentations have led us to believe:
Using Machine Learning can localize EEG dimensionality with optimized spatial temporal correlation to compress data by 280 fold.

Using AI/Deep Learning can improve dataset performance and prediction sensitivity to above 90%.
Low power CNN microchip with nano-sensor can be implanted for real-time prediction.

3D model manufacturing can make comprehensive brain display cost-effective.

Registration:
We invite you to sign up as a participant (competing and presenting results) or as an observer (in the audience, not competing) to the challenge.

Registration form to enter the IEEE Brain Data Bank Challenge for the IEEE BDB Challenge can be found here. https://docs.google.com/forms/d/e/1FAIpQLSfcj3mrtNJiyz5Bm0tWnN6-itqref7_8DNIuDAzlfUkVv-xBw/viewform

Registration to attend as a listener for the Boston session - please use the registration button on this form.

Organizers:
Nan Chu, CWLab International, IEEE Consumer Electronics Society Representative in Brain Initiative and Sensors Council
Seth Elkin Frankston, U.S. Army CCDC Soldier Center
Bruce Hecht, VG2PLAY – Contact: Contact: bruce.hecht@ieee.org
Saraju Mohanty, University of North Texas
Joseph Wei, Technology Ventures

Reliability Society - Boston/Providence/New Hampshire and co-sponsoring Electron Devices Chapter – 1:00PM, Tuesday, November 10

Failure Mode & Effects Analysis: The New 7 Step Approach

Angelo Scangas of Quality Support Group, Inc.

FREE Webinar

Failure Mode and Effects Analysis (FMEA) is an analytical methodology used to ensure that potential problems have been considered and addressed throughout the product and process development process. Part of the evaluation and analysis is the assessment of risk. FMEA is the most commonly used risk analysis method in the automotive and aerospace industries, and helps manufacturers and suppliers to predict and prevent failures in both the product development and part production processes.

In the Automotive industry, OEMs (US and Europe) have harmonized their regional FMEA manuals into an international guide on Failure Mode and Effects Analysis (FMEA). The revised handbook represents the culmination of a four-year project updating the FMEA process for automotive suppliers. The project was a joint effort between OEMs and Tier 1 supplier members of the Automotive Industry Action Group (AIAG) and Verband der Automobilindustrie (VDA), Germany's association for automotive manufacturers and suppliers. The result is one common foundation for FMEAs across all global automotive sectors represented by AIAG and VDA.

In addition to making it easier for suppliers to meet their customers' needs during the FMEA development process, the handbook features major changes such as a new process for FMEA development – the 7-Step Approach. Important changes include the following:

• Totally revised Severity, Occurrence and Detection Tables.
• The Action Priority (AP) methodology and Tables to replace RPN.
• New Form Sheets (spreadsheet users) and Software Report Views (software users).
• Change point highlights from both the AIAG 4th edition FMEA Manual and the VDA Volume 4 FMEA Manual.

Join us as we discuss this very important topic!

To view complete details for this event, click here to view the announcement and to register,
https://events.vtools.ieee.org/m/225363

Date and Time: All times are US/Eastern
• Date: Tuesday, 10 November 2020
• Time: 1:00 PM to 2:00 PM

• This Webinar is tentatively planned to be delivered through Google Meet, but may be switched to Zoom. At registration, you must provide a valid e-mail address to receive the Webinar Session link approximately 18 hours before the event.
Contact:
• Email event contact
• Michael W. Bannan, Chair
• Boston/Providence/New Hampshire Reliability Chapter
Registration:
• Starts 1 October 2020 12:00 AM
Ends 9 November 2020 6:00 PM
• All times are US/Eastern
• No Admission Charge

Speaker: Angelo Scangas of Quality Support Group, Inc.
Angelo Scangas; President; Quality Support Group, Inc. - an International Consulting and Training organization. Angelo has worked in the Automotive, Aerospace, Medical and Electronic industries for close to 30 years, holding positions in Operations, Quality and Engineering. He has a B.S. in Chemical Engineering from WPI, M.S. in Manufacturing Engineering from UMASS.

Agenda:
1:00 PM Technical Presentation
2:00 PM Adjournment

The meeting is open to all. You do not need to belong to the IEEE to attend this event; however, we welcome your consideration of IEEE membership as a career enhancing technical affiliation.
There is no cost to register or attend, but registration is required. Register, https://events.vtools.ieee.org/m/225363org

Photonics Society – 7:00PM, Thursday, November 12

Computational 3D Microscopy

Please Join us on Thursday, November 12th, at 7 pm for the November installment of the 2020-2021 IEEE Photonics Society Boston Chapter's Lecture Series! Prof. Laura Waller of U.C. Berkeley will be speaking about Computational 3D Microscopy.

Due to the COVID-19 situation we will be meeting via zoom. Zoom link and registration info (registration is free) will be posted to our website one week before the talk. See below for more details. We hope you can make it!

We describe a computational microscope that encodes 3D information into a single 2D sensor measurement, then exploits sparsity or low-rank priors to reconstruct the volume with diffraction-limited resolution across a large volume. Our system uses simple hardware and scalable software for easy reproducibility and adoption. The inverse algorithm is based on large-scale nonlinear optimization combined with unrolled neural networks, in order to leverage the known physical model of the setup, while learning unknown parameters. We demonstrate whole organism bioimaging and neural activity tracking in vivo.

Laura Waller is the Ted Van Duzer Associate Professor of Electrical Engineering and Computer Sciences (EECS) at UC Berkeley, a Senior Fellow at the Berkeley Institute of Data Science, and affiliated with the UCB/UCSF Bioengineering Graduate Group. She received B.S., M.Eng. and Ph.D. degrees from the Massachusetts Institute of Technology (MIT) in 2004, 2005 and 2010, and was a Postdoctoral Researcher and Lecturer of Physics at Princeton University from 2010-2012. She is a Packard Fellow for Science & Engineering, Moore Foundation Data-driven Investigator, Bakar Fellow, OSA Fellow and Chan-Zuckerberg Biohub Investigator. She has recieved the Carol D. Soc Distinguished Graduate Mentoring Award, Agilent Early Career Profeessor Award (Finalist), NSF CAREER Award and the SPIE Early Career Achievement Award.

More info, including registration will be posted shortly at: http://www.bostonphotonics.org/seminar.aspx?seminar=334

IEEE Boston Section Social Media Links:

Twitter: https://twitter.com/ieeeboston

Facebook: https://www.facebook.com/IEEEBoston

YouTube: https://www.youtube.com/user/IEEEBostonSection

LinkedIn: https://www.linkedin.com/groups/IEEE-Boston-Section-3763694/about

Magnetics Society and co-host Magnetics Society Richmond Chapter – 4:00PM, Tuesday, November 17

Methods for Permittivity, Permeability, and Loss Measurements of Polymer Composite Magneto-dielectric Laminates

Please Join us on Tuesday, November 17th, at 4 pm for the November installment of the 2020-2021 Boston's IEEE Magnetics Society! Due to the COVID-19 situation we will be meeting via zoom/WebEx. Zoom/WebEx link and registration info (registration is free) will be posted to our website one week before the talk. See below for more details.

Registration: https://events.vtools.ieee.org/m/245884

Allen F. Horn III, Research Fellow
Christopher J. Caisse, R&D Engineer
Patricia A. LaFrance, Sr. Engineering Assistant
Karl E. Sprentall, Business Development Manager
Rogers Corporation, Advanced Connectivity Solutions, Lurie R&D Center, Rogers, CT USA

It has been well known for more than 50 years to use high dielectric constant copper clad laminates to reduce the size of wavelength dependent microstrip structures such as patch antennas. In the general case, the material's impedance is $(\sqrt{(\mu_R/\varepsilon_R)})x(\sqrt{(\mu_0/\varepsilon_0)})$ where μ_R and ε_R are the relative permeability and permittivity, respectively, and the subscript 0 values are those of free space. The miniaturization factor (by which the material decreases the wavelength of an EM signal) is $\sqrt{(\mu_R \varepsilon_R)}$. While all-natural solid materials exhibit an ε_R value > 1, most materials are non-magnetic, with a $\mu_R = 1.0$. Thus, the high dielectric constant results in a material impedance significantly lower than free-space and a reduction in both bandwidth and antenna efficiency of microstrip patch antennas.

A recently developed PTFE – ferrite powder composite laminate exhibits $\mu_R \sim \varepsilon_R \sim 6$ and low electrical and magnetic loss values at frequencies up to 500 MHz. This material has a miniaturization factor of a dielectric material with permittivity of 36, but with an impedance essentially matched to free space. Accurately measuring the permittivity, permeability, and loss values, however, presents challenges.

In the present work, we compare data from widely different test methods, including the Keysight Impedance Analyzer with 16453A and 16454A permittivity and permeability fixtures, coaxial airline perturbation, "full sheet resonance," and phase length, insertion loss and impedance of microstrip transmission lines over a frequency range of 40 MHz to 4 GHz. We explain the causes of both random measurement error and systematic error in the various test methods.

BIO: Allen F. Horn, III Research Fellow, received a BSChE from Syracuse University in 1979, and a Ph. D. in chemical engineering from M.I.T. in 1984. Prior to joining the Rogers Corporation Lurie R&D Center in 1987, he worked for Dow Corning and ARCO Chemical. He is an inventor/co-inventor on 17 issued US patents in the area of ceramic or mineral powder-filled polymer composites for electronic applications.

Entrepreneur's Network – 7:00PM, Thursday, November 17

Building A Cohesive Team

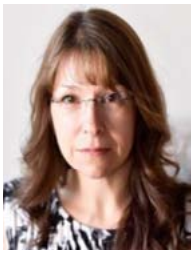
Location: Webinar

You have validated your business idea, have a co-founder, now you need to build a team. Building a team for your Start-up can be a daunting task that can make or break the company. It is also a time for reflection. What tasks or positions will the co-founders keep while growing the company? What roles do you need to hire for? How do we determine the best candidate? How do we ensure diversity when hiring? How do we engage and onboard employees during the COVID pandemic? These questions and more will be discussed and answered in this Webinar.

Agenda:
5:30 – 6:45 – Networking on Grapevine.today
7:00 - 7:10 PM - ENET Chairperson's announcements
7:10 - 7:25 PM – eMinute Pitch - Up to 3 Startup companies' presentations
7:25 - 8:10 PM - 4 expert speakers on the night's topic
8:10 - 8:30 PM – Moderator and Audience Q & A with the speakers
8:30 – 9:00 PM - Networking on Grapevine.today
(all times are USA Eastern Daylight time) (all times are USA Eastern Daylight time)

A question and answer session will follow the panel discussion, and panelists will be available afterward for responses to individual questions.

Panel Members



Melissa Jurkoic, Chief Customer Experience Officer, addapptation
With over two decades' experience as a technologist, her mix of technical savvy and business strategy is unique for a former software engineer. Melissa's fusion of technology and conversational techniques connect with both technical and business audiences to lead strategic initiatives to the best outcomes.
Driven by her passion to increase the number of women in STEM, she volunteers extensively to educate and encourage women and girls to pursue careers in technology. Melissa's slogan is Empowering women to succeed in technology while transforming your business strategy into tangible outcomes. Melissa is also Co-Founder of Diversify Thinking.
https://www.linkedin.com/in/melissajurkoic/

Ryan Sylvia, Chief Executive Officer, Envisage Inc.
Envisage is a trusted partner to many clients for delivering on complex technology solutions. Our resources provide hands on expertise and strategic consultation that enable firms to complete projects efficiently and more effectively. For more than a decade now, we have demonstrated our expertise and proven our capability through a passion for delivering quality solutions, outcome certainty and transparency to our partners. Ryan received a BA degree in Psychology and Economics from Williams College
https://www.linkedin.com/in/ryan-sylvia/

STEPHEN ZARUBAIKO, ESQ. LAW OFFICE OF STEPHEN ZARUBAIKO
Stephen Zarubaiko is a Business, International Business and Immigration Law Attorney with a law practice in North Andover, MA. Attorney Zarubaiko works with emerging companies and business development issues in the US and overseas. He is Licensed in Massachusetts and New York. He received his law degree from Suffolk University Law School and his BA in Russian with an International Relations Concentration from the University of New Hampshire.
https://www.linkedin.com/in/stephen-zarubaiko-2408271/

Allyn R. Gardner, Principal Brookside Coaching Partners
A Career Management Consultant with proven success assisting others to manage their careers and achieve their goals. Highly skilled at using dialogue and perspective to help clients gain a better understanding of their strengths and achieve optimal performance in their careers. An effective workshop facilitator who engages, motivates, and informs clients. An empathetic listener who delivers objective feedback and provides additional perspective

to help clients formulate and execute successful career strategies. A Career Coach with extensive experience in Human Resources and in all aspects of corporate recruitment. In depth knowledge of talent selection and acquisition provides clients with a clear understanding of job search and career planning strategies from the employer's point of view.
https://www.linkedin.com/in/argard
nercoaching/

Co-Organizer
Maureen Mansfield, ALM
CSO, MANSFIELD LAW ~ Protect Your Passion ~
Vice-Chair, IEEE Boston Entrepreneurs' Network (IEEE Boston ENET)
Maureen is passionate about protecting passions and implementing strategies to protect, build, scale, and commercialize startups, inventions, and early-stage companies with MANSFIELD LAW ~ Protect Your Passion ~.

Her experience helps entrepreneurs build innovative products and services, often with cutting-edge technologies. Maureen co-founded and bootstrapped a startup to a funding event that launched during her graduate studies. After sharing her startup story at ENET, Maureen was asked to volunteer and now serves as a Vice-Chair, Alliance Partners. After starting her career with her dream job, she has helped companies, from family-owned businesses to Fortune 50s, on projects of local, national, and international scope, in both the public and private sectors. During this journey, many companies enjoyed their most successful years to date as Maureen initiated and implemented systems that improved business processes, analytics, and contract compliance, often discovering new, profitable markets while building efficiencies for both the companies and their clients, saving time and money to bottom lines. Through prior board appointments at nonprofits, Maureen co-founded two charities that continue today. Maureen holds several BAs in selective programs from The University of Iowa and earned a Masters with honors from Harvard University. Scholarships and Dean's Lists enabled Maureen to complete her degrees. Also, Maureen holds certificates in Project Management.
You can follow Maureen on Twitter @MaureenManALM.

Co-Organizer and Moderator:
Dan Skiba, Managing Director Skiba Advisory Associates,
VP Printed Electronics Chasm Advanced Materials, Vice-Chair Boston ENET
As a Product Development Company Executive, I provide strategic leadership in product innovation and managing global teams, delivering award-winning products to the international market. My ability to problem solve, direct the entire product development lifecycle, and gain commitment to a common goal have driven faster release of products and market penetration. By building synergies across all Product Life Cycle disciplines, we have delivered products that result in 100% product utilization and seamless integration into customer environments. My skills in optimizing international resources have significantly reduced costs and streamlined production, delivering product excellence.

Register: https://boston-enet.org/event-3892655

(Please note capacity is limited, so pre-registration is necessary)

IEEE Boston Section Social Media Links:

Twitter: https://twitter.com/ieeeboston

Facebook: https://www.facebook.com/IEEEBoston

YouTube: https://www.youtube.com/user/IEEEBostonSection

LinkedIn: https://www.linkedin.com/groups/IEEE-Boston-Section-3763694/about

Call for Articles

Now that the Reflector is all electronic, we are expanding the content of the publication. One of the new features we will be adding are technical, professional development, and general interest articles to our members and the local technology community. These will supplement the existing material already in our publication.

Technical submissions should be of reasonable technical depth and include graphics and, if needed, any supporting files. The length is flexible; however, a four to five page limit should be used as a guide. An appropriate guide may be a technical paper in a conference proceeding rather than one in an IEEE journal or transaction.

Professional development or general interest articles should have broad applicability to the engineering community and should not explicitly promote services for which a fee or payment is required. A maximum length of two to three pages would be best.

To ensure quality, technical submissions will be reviewed by the appropriate technical area(s). Professional/interest articles will be reviewed by the Publications Committee for suitability.The author will be notified of the reviewers' decision.

The Reflector is published the first of each month. The target submission deadline for the articles should be five weeks before the issue date (e.g., June 1st issue date; article submission is April 27). This will allow sufficient time for a thorough review and notification to the author.

We are excited about this new feature and hope you are eager to participate!
Submissions should be sent to;
ieeebostonsection@gmail.com

Call for Course Speakers/Organizers

IEEE's core purpose is to foster technological innovation and excellence for the benefit of humanity. The IEEE Boston Section, its dedicated volunteers, and over 8,500 members are committed to fulfilling this core purpose to the local technology community through chapter meetings, conferences, continuing education short courses, and professional and educational activities.

Twice each year a committee of local IEEE volunteers meet to consider course topics for its continuing education program. This committee is comprised of practicing engineers in various technical disciplines. In an effort to expand these course topics for our members and the local technical community at large, the committee is publicizing this CALL FOR COURSE SPEAKERS AND ORGANIZERS.

The Boston Section is one of the largest and most technically divers sections of the IEEE. We have over 20 active chapters and affinity groups.

If you have an expertise that you feel might be of interest to our members, please submit that to our online course proposal form on the section's website (www.ieeeboston.org) and click on the course proposal link (direct course proposal form link is **http://ieeeboston.org/course-proposals/** . Alternatively, you may contact the IEEE Boston Section office at ieeebostonsection@gmail.com or 781 245 5405.

- **Honoraria can be considered for course lecturers**
- Applications oriented, practical focused courses are best (all courses should help attendees expand their knowledge based and help them do their job better after completing a course
- Courses should be no more than 2 full days, or 18 hours for a multi-evening course
- Your course will be publicized to over 10,000 local engineers
- You will be providing a valuable service to your profession
- Previous lecturers include: Dr. Eli Brookner, Dr. Steven Best, Colin Brench, to name a few.

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IEEE Boston Section

Last Notice, Please Register Now!!!

Ansys

Electronic Reliability Tutorial Series

(co-hosted by IEEE Boston Section and Ansys Corporation)

Web-based Course with live Instructor!

(12 total hours of instruction!)

Times & Dates: Each session starts at 11:00 ET November 2, 3, 9, 10, 16, 17 & 18

Speakers: Greg Caswell, Dock Brown, Ansys

Series Overview:

Electronics perform critical functions in every major industry vertical, whether in automotive, aerospace, consumer, medical or industrial segments. With the advent of newer technologies (both at the component and material levels), shrinkage of feature sizes, more stringent environments and sophisticated power requirements, electronics face increasing reliability risks. The cost of reliability assurance activities is often a fraction of the cost of failure, with compounding benefits from conducting these activities early in the design process.

This set of five tutorials is aimed at organizations in every industry vertical, who would like to mitigate electronic failures.

Learn how to mitigate electronic reliability risks and prevent failures from industry renowned and award-winning experts.

Benefits of attending the series:

- Understand common failure mechanisms at the electronic component/ package level and the printed circuit board assembly level
- Learn about actionable mitigation methods for relevant failure modes/mechanisms
- How to conduct reliability assessment for electronics
- How to conduct a five-step design activity assurance for electronics
- Electrostatic Discharge (ESD) failures and how to mitigate them
- The Importance of Printed Circuit Board Cleanliness: How to Prevent No Fault Found Failures

Series Tutorial Session Ttiles

You can view detail session descriptions once you click on the individual sessions once you access the main series webite. See the link at the end of the course notice.

1. Thermally Induced Failures and Reliability Risks created by Advancements in Electronic Technologies (1day, 2 hours)

2. A Methodology for Understanding the Reliability of Electronic Packaging (1 day, 2 hours)

3. Electronic Reliability 360: How to Verify Design Robustness Early in the Process (2 days, 1.5 hours hours each)

4. Electrostatic Discharge (ESD) for Electronics– What is it? Where Does it Come From? And How do You Obviate ESD Failures? (2 days, 1.5 hours each)

5. Contamination and Cleanliness Issues in Printed Circuit Board Assemblies (1 day, 2 hours)

Speaker Bios:

Greg Caswell, a Lead Consulting Engineer for Ansys Corporation, is an industry recognized expert in the fields of SMT, advanced packaging, printed board fabrication, circuit card assembly, and bonding solutions using nanotechnology. He has been well-regarded as a leader in the electronics contract manu-

facturing and component packaging industries for the past 50 years. He has presented over 270 papers at conferences all over the world and has taught courses at IMAPS, SMTA and IPC events. He helped design the 1st pick and place system used exclusively for SMT in 1978, edited and co-authored the 1st book on SMT in 1984 for ISHM and built the 1st SMT electronics launched into space. Be on the lookout for his new book entitled Design for Excellence in Electronics Manufacturing due out in September 2020. Greg has won several awards including the IMAPS Lifetime Achievement Award in 2018, the ISHM Daniel C. Hughes Award (highest award given to an individual), ISHM Fellow of the Society Award and the Tracor Technical Innovation Award.

Dock Brown brings his more than 30 years of electronics reliability experience to clients of Ansys. Prior to joining Ansys, he spent 20 years at Medtronic where he most recently concentrated on cross business unit implementation of reliability initiatives for Class III medical devices. He was also responsible for supplier assessment and approval, on-going supplier audits, failure analysis, corrective actions, MRB, sampling, and ultimately full accountability for quality and reliability of COTS and custom parts and assemblies from a worldwide supplier base. Earlier in his career, Mr. Brown also spent time at Sundstrand Data Control where he led the implementation of the Boeing AQS program and with Olin Aerospace.

As a volunteer, he has been involved with ASQ, IEEE, IPC, and SMTA. He was the keynote speaker at the SMTA Cleaning Conference. He has taught design for reliability, tin whiskers, statistics, design of experiments, and contributed to standards development. He has won the SMTA Distinguished Speaker award and the SMTA Microelectronics Conference Best Paper award.

Individual tutorial/session abstract, goals, benefits of attending, target audience can be found by clicking on the title of each tutorial/session once the main series site is accessed (see below)

Upon entering the registration page, you will have the option of registering for one or more tutorials/sessions. We offer a 15% discount for 2-3 tutorials and 25% discount for 4-5 tutorials. You will be able to choose your tutorials/sessions from the registration page.

Decision (Run/Cancel) Date for this Course is Monday, October 26, 2020

2 hour sessions	
IEEE Members	**$80**
Non-members	**$100**
3 hour sessions	
IEEE Members	**$120**
Non-members	**$150**

http://ieeeboston.org/electronic-reliability/

Consumer Technology Society - Boston Chapter (formerly Consumer Electronics)

Message from Outgoing Char:
Dear CTSoc Member,

It was November 21, 2011—almost 9 years ago that the Boston Chapter of the IEEE Consumer Electronic Society had its inaugural event at the Bose Corporation in Framingham. Besides Bose doing their thing and showing some of their great audio products, Dr. Tom Coughlin, CESoc Distinguished Lecturer taught us about storage and petabytes. At that time a petabyte was more than one could imagine.

The Boston Chapter had a number of notable meetings over the years, including venues at Philips Lifeline, Herb Chambers BMW, MIT EECS, Mitsubishi NERL and more. A Steering Committee of Bob Frankston, Matt Hickcox, Stu Lipoff, Nat Sims, Anthony Vetro and myself planned and executed the meetings, some of which were co-sponsored by sister Societies.

I'm writing to announce that effective September 15 your leadership has transitioned. I have stepped down and would like you to welcome Aakash Deliwala as the new Chair. Aakash is a Product Manager at eClinicalWorks, USA. He is currently involved in pharmacy integration in the development of seamless solutions for prescribed drugs. He received his Bachelor of Engineering degree from South Gujarat University in India and an MBA with 'High Honors' from Oklahoma City University.

Aakash met with the Steering Committee on Zoom who unanimously agreed that he is well-qualified to lead what is now the Consumer Technology Society as its new Chair.

Below are his words to you. Please join me in welcoming Aakash Deliwala to our 'Club'.

I believe that CTSoc is in the right place at the right time. It is well poised to bring value to you and to your career, and to help you to bring new Consumer Technology products to life.

Best wishes, stay safe,
L. Dennis Shapiro, Past Chair Boston Chapter
IEEE Consumer Technology Society
IEEE Life Fellow

Message from Incoming Chair:
Dear Fellow Members (Bostonians),

I am honored to have an opportunity to serve as the new Chair of the IEEE Consumer Technology Society (formerly Consumer Electronics Society) for the Boston Chapter. I am excited and pleased to share society's move to a new mission that focuses on engaging members in exchanging engineering and scientific information on advancement in consumer technologies. The primary goal would be to add more value to the membership and the community and exploring how cutting edge technologies can be integrated, produced, and brought to the market effectively.

As with any organization, it's the members of CTSoc that can help make the mission viable and credible. I would need your support in revitalizing the society and accelerating its success. With your help, we can develop new programs in response to emerging needs and complement our core programs that include best practices for integrating complex technologies; product, project, and engineering management; user-focused design; and basic business and management principles.

To enrich the lives of current and potential members, CTSoc is committed to connecting people, inspiring ideas, enabling learning and creation that is relevant to today's dynamic consumer electronics space. As Chair of the CTSoc-Boston Chapter, my top priority would be to add value to your membership through programs, events, publications, training, and courses exclusively available to the members.

In the coming years, I plan to focus on engaging more and more members by providing a platform through the membership in creating a professional development roadmap that would help channel CTSoc expertise to the career growth of the members.

I am thrilled and looking forward to working with you all in developing a community that not only embraces the latest and emerging consumer technology trends but fosters professional growth, learning, and value addition for its members. Together we can make a difference!
Thank you for your continued support,
Aakash Deliwala; aakash_deliwala@yahoo.com

Preliminary Notice

Artificial Intelligence Webinar Series

AI - What's in it for me?

Artificial Intelligence has found its way into many areas of our lives and promises to be central in the future of engineering and technology. Research and development efforts proliferate and there is a real need to acquire knowledge by those practicing in the field and by those who desire to do so. IEEE Boston's main effort has been to provide engineers and scientists with the tools needed in their careers and AI is no exception.

IEEE Boston's interest includes organizing, managing and producing a series of one day AI virtual events. In doing so, IEEE Boston is providing a pulpit to experts in the AI field to present their expertise and knowledge to other technologists, engineers and scientists. The goal of these one day events is to provide cost effective dissemination of AI knowledge to engineers, decision makers and concerned individuals worldwide. The format of these events are one day virtual seminars lasting approximately one hour. Access to streaming of these event during and after the seminar will be available.

The plan, beginning in January 2021, is to have a 60 - 90 minute webinar each month on various topics pertainign to AI. See the confirmed speakers below. As more speakers/sessions are finalized, we will update our series notice on the IEEE Boston Section website; **ieeeboston.org,**
and on all the IEEE Boston Section notification media

Registration will be active on November 16, 2020.

Confirmed Speakers:

Steve Wozniack - Co founder, Apple Computer

Vinton G. Cerf - Vice President and Chief Internet Evangelist, Google

Alton D. Romig, Jr. - Executive Officer, National Academy of Engineering

Helen Greiner - co founder. iRobot

David Cox - Director, MIT-IBM AI Laboratory

Manuela Veloso - Managing Director, Head of J.P. Morgan AI Research