

BOSTON



2019 IEEE PHASED
ARRAY SYMPOSIUM
CALL FOR PAPER DEADLINE
MAY 17, 2019

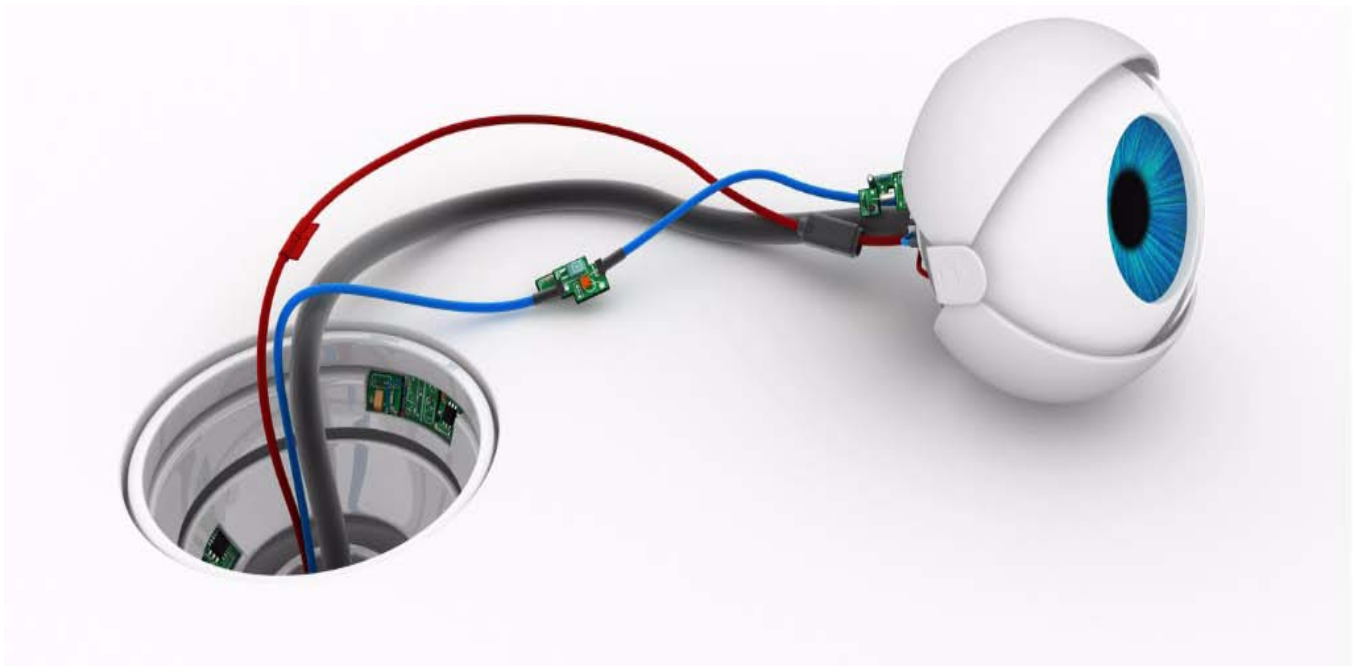
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IEEE HOMELAND
SECURITY SYMPOSIUM
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HIGH PERFORMANCE
EXTREME COMPUTING
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2018 Outstanding Section Membership
Recruitment and Retention Performance

Boston Section

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Proud to be a member of IEEE Boston

By Ramon De la Cruz

I'm proud to be a member of IEEE Boston.

The journey begun over twenty years ago, during my sophomore year at ISU after having been a member of a couple of student organizations, I attended my first IEEE meeting.

Amongst some noticeable features that stood up from having attended meetings with other organizations, were that the IEEE audience was somewhat smaller but at the same time more focused and much better organized and personal.

Instead of being just one more person showing up to this event, then leave with barely having interacted with other attendees, the personal interaction was very noticeable. Within moments of having arrived and not knowing a single person, the organizers came over and introduced themselves to me and described their positions within the organization.

At that meeting I also met the IEEE student advisor, Professor Glenn Hillesland, who became a life friend. Soon after the personal greetings, the program started with announcements, introductions and a technical presentation followed by chapter officer elections.

At that meeting there was an opening for the "publicity" officer, whose duties included the advertising and communication of all chapter activities, plus the responsibility to put together the monthly newsletter called "The Relay".

So at that meeting I became the publicity officer, without having ever published a newsletter, let alone having the responsibility of choosing the theme, selecting the

feature articles and personal interviews, then editing and formatting the content to make a master ready for print-press. After publishing my first issue, each of the subsequent issues seemed easier to put together than the previous one.

As the chapter leadership was comprised mostly of seniors, soon the opportunity came to run for chapter chair. At that time, it seemed a bit of a challenge as most of the chapter members would be gone and now it was up to those of us to continue the mission. Thankfully, a new crop of volunteers stepped up to the call for joining the chapter leadership and an almost completely new, but very enthusiastic and capable team came ready to work.

Having learned from the good example of our predecessors and having a budget and the willingness to organize, that year the chapter membership grew substantially as well as the number of activities. As chapter chair, I had the opportunity to interact with the professional chapter members and leadership, which lead to more and better joint activities and events.

A new year came by and it was time to pass on the torch, but the members almost unanimously requested to remain as chair for another term. Those months up until graduation time were very exciting and filled with professional, technical activities, plant trips and visits from industry leaders.

Fast forward to a few years after graduation, when after having been away from the IEEE scene due –in part- to a new job, relocation, new born child, new house, after things had settled one of my colleagues at work invited me to an IEEE Boston chapter meeting.

Just like during my first IEEE Chapter meeting a few years back, the IEEE Boston chapter leaders were very well organized and friendly and they invited me to join one of the chapter leadership Advisory Committee meetings. There I met the remaining AdCom members and after attending a couple of those, I became a “member-at-large” for the IEEE Boston Reliability Chapter.

Just like in the past, as the next term came up, I became vice chair and then after the current chair term ended, I became chair for three years.

During those terms, it became my goal to find and invite members that would be good candidates to join the leadership and eventually become chair.

One common theme that has always been characteristic of those strong organizations is the personal touch. As it has been indicated by feedback from colleagues and guests, to meet and greet and know –almost- everyone that attends the monthly chapter meetings on a first name basis makes a big difference.

There are lots of other kinds of events out there, too many at times. But what often make the difference are the personal touch and the desire to network and interact with peers on a periodic basis while at the same time enjoy the technical or professional presentation and have a good time.

More recently, the journey has landed me on the IEEE Boston Section Executive Committee where I’ve been lucky to have met the pillars of the organization: a group of tireless, extremely successful and smart people who paved the way for where we are today.

Just like I’m grateful to have met Prof. Glenn Hillesland at Iowa State University back in college, I’m grateful and proud to be on the group where Arthur Winston, Harold Goldberg, Fausto Molinet, Gilmore Cooke, Paul Zorfass, Ted Kochanski, Len Long and many others have left a legacy.

Come join me at IEEE Boston to continue the legacy. You can find us at: <http://www.ieeeboston.org>

Call for Articles

Now that the Reflector is all electronic, we are expanding the content the publication. One of the new features we will be adding are technical and professional development articles of interest 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 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 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

IEEE Boston Section Spring 2019 Professional Development Program

Last Notice Before the Course Begins, Please Register Now!

DSP for Software Radio (13 hours of instruction!)

Time & Date: 6:00 - 9:00PM, Wednesdays, May 15, 22, 29, June 5, 12

Location: Crowne Plaza Hotel, 15 Middlesex Canal Park Road, Woburn, MA

Speaker: Dan Boschen

Course Summary

This course builds on the IEEE course “DSP for Wireless Communications” also taught by Dan Boschen, further detailing digital signal processing most applicable to practical real-world problems and applications in radio communication systems. Students need not have taken the prior course if they are familiar with fundamental DSP concepts such as the Laplace and Z transform and basic digital filter design principles. The course title has been changed with some minor additions but this is the same course that was previously taught titled “More DSP for Wireless Communications”, with the addition of Python demonstrations using Jupyter Notebooks.

Now with Jupyter Notebooks!

This long-running IEEE Course has been updated to include Jupyter Notebooks which incorporates graphics together with Python simulation code to provide a “take-it-with-you” interactive user experience. No knowledge of Python is required but the notebooks will provide a basic framework for proceeding with further signal processing development using that tools for those that have interest in doing so.

Target Audience:

All engineers involved in or interested in signal processing for wireless communications. Students should have either taken the earlier course “DSP for Wireless Communications” or have been sufficiently exposed to basic signal processing concepts such as Fourier, Laplace, and Z-transforms, Digital filter (FIR/IIR) structures, and representation of complex digital and analog signals in the time and frequency domains. Please contact Dan at boschen@loglin.com if you are uncertain about your background or if you would like more information on the course. **See Page 32**

Full description at, <http://ieeeboston.org/digital-signal-processing-dsp-wireless-communications-2/>

IEEE Boston Section Social Media Links:

Twitter: <https://twitter.com/ieeeboston>

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

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

Google+: <https://plus.google.com/107894868975229024384/>

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

Submission Deadline is extended until May, 17, 2019!!!



CALL FOR PAPERS

2019 IEEE International Symposium on Phased Array Systems and Technology

Revolutionary Developments in Phased Arrays



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Our Blog



15–18 October 2019

Westin Waltham Hotel, Greater Boston, Massachusetts, USA

www.array2019.org

About the Symposium

Phased array systems continue to be a rapidly evolving technology with steady advances motivated by the challenges presented to modern military and commercial applications. This symposium will present the most recent advances in phased array technology and provide a unique opportunity for members of the international community to interact with colleagues in the field of Phased Array Systems and Technology.



Sessions

- Array Design
- Array Measurements
- Beamforming and Calibration
- T/R Modules
- Radar Systems
- Communications Arrays
- Metamaterial Phased Arrays
- Signal Processing and Architectures
- Millimeter Wave and Terahertz

Special Sessions

- European Phased Array Systems and Technology
- Asia-Pacific Phased Array Systems and Technology
- Radio Astronomy and Geospace Arrays
- Dual-Polarization Weather Radar Arrays
- 5G (5th Generation Wireless) Phased Arrays
- Wideband Array Apertures

See website: www.array2019.org for details

General Paper Submission Information

All paper submissions will be peer reviewed and must be received in PDF format via the symposium web site on or before **Friday, May 17, 2019**. Papers must be in IEEE dual-column format and must be 2 pages (minimum) to 8 pages (maximum) in length including figures. Additional instructions are on the website.

www.array2019.org/call-for-papers

Paper Template and Submission Procedures

Template and submission procedures are available at www.array2019.org/call-for-papers

Technical Program Schedule

Please note: Our submission process and dates have been streamlined – plan accordingly.

19 April 2019 – Full paper submission deadline

- Submitted paper must be final and in IEEE dual-column format, not an abstract
- Submitted paper must be 2–8 pages in length including figures

01 June 2019 – Author notification of paper acceptance

01 Sept. 2019 – Conference registration deadline for accepted authors

Conference Committee

Conference Chair:

Jeffrey S. Herd, MIT LL

Vice Chair:

William Weedon, Applied Radar

Technical Program Chair:

Alan J. Fenn, MIT LL

Technical Program Vice Chair:

David Mooradd, MIT LL

Honorary Chair:

Eli Brookner, Raytheon (retired)

Secretary:

Duane J. Matthiesen, Technia

Publicity:

Glenn Meurer, MITRE
Don McPherson, SRC, Inc.

Publications:

Raoul Ouedraogo, MIT LL
Mark McClure, STR

Plenary Session:

Bradley T. Perry, MIT LL
Eli Brookner, Raytheon (retired)

Tutorials:

Will Moulder, MIT LL
Wajih Elsallal, MITRE

Student Program:

Justin Kasemodel, Raytheon
Honglei Chen, The MathWorks

International Liaison:

Alfonso Farina, Selex (retired)
Alberto Moreira, DLR

Sponsorships

Dan Culkun, NGC

Social Media:

Andrew Zai, Raytheon

Special Sessions:

Sean Duffy, MIT LL
Glenn Hopkins, GTRI

Web page:

Kathleen Ballos, Ballos Associates
Kenneth E. Kolodziej, MIT LL

5G Advisors:

Jonathan Williams, Teradyne
Tony Fischetti, RADA Technologies

Exhibits Chair:

Matt Facchine, NGC

Local Arrangements/Finance:

Robert Alongi, IEEE Boston

Poster Session:

Pierre Dufilie, MIT LL

Advisors:

Greg Charvat, Humatics Inc.
Greg Arlow, Lockheed Martin

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://ieeeeboston.org/verilog-101-verilog-foundations-online-course/>

System Verilog 101: Design Constructs

Full course description and registration at ,
<http://ieeeeboston.org/systemverilog-101-sv101-design-constructs-online-course/>

System Verilog 102: Verification Constructs

Full course description and registration at ,
<http://ieeeeboston.org/systemverilog-102-sv102-verification-constructs-online-course/>

High Performance Project Management

Full course description and registration at ,
<http://ieeeeboston.org/high-performance-project-management-online-course/>

Introduction to Embedded Linux Part I

Full course description and registration at ,
<http://ieeeeboston.org/introduction-to-embedded-linux-part-i-el201-online-course/>

Embedded Linux Optimization - Tools and Techniques

Full course description and registration at ,
<http://ieeeeboston.org/embedded-linux-optimization-tools-techniques-line-course/>

Embedded Linux Board Support Packages and Device Drivers

Full course description and registration at ,
<http://ieeeeboston.org/embedded-linux-bsps-device-drivers-line-course/>

Software Development for Medical Device Manufacturers

Full course description and registration at ,
<http://ieeeeboston.org/software-development-medical-device-manufacturers-line-course/>

Fundamental Mathematics Concepts Relating to Electromagnetics

Full course description and registration at ,
<http://ieeeeboston.org/fundamental-mathematics-concepts-relating-electromagnetics-line-course/>

Reliability Engineering for the Business World

Full course description and registration at ,
<http://ieeeeboston.org/reliability-engineering-business-world-line-course/>

Design Thinking for Today's Technical Work

<http://ieeeeboston.org/design-thinking-technical-work-line-course/>

Fundamentals of Real-Time Operating Systems

<http://ieeeeboston.org/fundamentals-of-real-time-operating-systems-rt201-on-line-course/>

May Chapter Meeting Summary

Electromagnetic Compatibility Society, 6:00PM, Wednesday, 1 May

Accumulated Damage from Thousands of Small ESD Events. A SKYPE presentation - Doug Smith, EMC Consultant. We test devices and systems with a relatively few large ESD hits and see if the equipment fails or not, on the order of a few hundred ESD hits for an IEC 61000-4-2 test of a system. But what happens if we subject a system to thousands or tens of thousands of small ESD events. Such events happen every time two conductors come in contact except under special conditions of ESD control. Meeting Location: Bose Corp., 100 The Mountain Road, Framingham, MA. **See Page 10.**

Entrepreneurs' Network – 6:30PM, Tuesday, 7 May

Brand Building on a Budget

PRE-MEETING DINNER at 5:15 PM (sharp) at Bertucci's, Waltham

How do you build a brand for your product and attract customers? Much of brand building is about marketing and communication. This can be done in three ways: paid, owned, and earned media. Paid is advertising including social media ads; examples of owned are company produced content placed on its web site, social platforms, and sent via email; and earned is associated with PR/story placement and social. In this session, our panel will focus on earned and owned media, and a catchall term for most of earned and owned media is content marketing. Content that is more informational than promotional. It's a mindset change from decades of brochures and ads which are designed for promoting more than appealing to prospects' issues and needs. Our speakers will address the why, what, when, where and how of content marketing. Meeting Location: Constant Contact, Inc., Reservoir Place, 3rd Floor Great Room, 1601 Trapelo Rd., Waltham, MA. **See Page 11.**

Reliability Society – 5:30PM, Wednesday, 8 May

An Introduction to Use Case 7

Adam Bahret, Apex Ridge Reliability Consulting Services

This presentation will discuss the concept of using the "Use Case 7" principal to improve product robustness. This principal looks to define a use case, or set of use cases, that would normally be considered too extreme to be viable design input. The result is often discovering modifications for base use cases or identifying all the little percentages of outlier use that add up to a noticeable failure rate in a large population. Check out online article "Introduction of Use Case 7" that gives a full introduction to the method (apexridge.com/introduction-of-usecase7). Meeting Location: MIT Lincoln Laboratory, 3 Forbes Rd, Lexington, MA, 02421. **See Page 13.**

IEEE Boston Section - 12:00PM (noon), Tuesday, May 7

IEEE Publications - Learn how to have your Paper Included in an IEEE Publication

2019 Vice President – Publications, Dr. Hulya Kirkici

Dr. Hulya Kirkici will give an overview of IEEE publications and policies including current changes in publication models, such as open access publishing. She will discuss new projects and tools including author/reviewer education, preprint services, conference publications and other strategic activities and goals of IEEE publications.

See Page 14

Entrepreneurs' Network - Cambridge Meeting – 6:00PM, Tuesday, 14 May

How / When to Scale your Business

You have a successful startup; business is booming. How do I scale the company for the next growth wave? This panel discussion will provide a path forward. The business scaling plan will include conversations on; ensuring you have the proper finances in place, how to include partners, how to staff the growth, how do build high performing teams, and how to include diversity in your growth plan. These discussions will focus on real-world examples from CFOs, Staffing, Operations, Team Building, and Diversity and Inclusion experts. We will end with a discussion on how to measure business scaling success. Meeting Location: Draper, Hill Building, One Hampshire Street, Cambridge, MA. **See Page 15.**

Power & Energy Society – 6:00PM, Tuesday, 21 May

2019 ANNUAL BANQUET - Come and join us for an evening of fun and networking!!!

Grid Modernization to Enable A Clean Energy Future

Featuring: Buffet style dinner, cash bar and live music by “Jazz in the Air” Speaker: Aftab Khan, Senior Vice President Engineering, Eversource Energy. Pre-dinner drinks at 6:00 pm; program commences at 6.30 pm

Meeting Location: The Inn at Brookline 1200 Beacon Street Brookline, MA 02446. **See Page 17.**

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 diverse 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.

Electromagnetic Compatibility Society, 6:00PM, Wednesday, 1 May

Accumulated Damage from Thousands of Small ESD Events

A SKYPE presentation

Doug Smith, EMC Consultant



We test devices and systems with a relatively few large ESD hits and see if the equipment fails or not, on the order of a few hundred ESD hits for an IEC 61000-4-2 test of a system. But what happens if we subject a system to thousands or tens of thousands of small ESD events. Such events happen every time two conductors come in contact except under special conditions of ESD control.

Applying small stresses to circuits can help predict circuit failure in the field at both the IC and PCB level. Accumulating damage has been demonstrated from thousands of very small ESD events resulting in field failure. In addition, application of small ESD like stresses can also find weak spots in a design that can lead to soft errors as well as damage. These topics and related issues will be discussed with examples and stories from the field to give context to the principles covered. Also discussed will be a new E-field probe optimized for debugging circuits as opposed to EMC measurements. When used in a small amplitude ESD-like generator, one can find E-field pulsed immunity problems in designs.

ESD simulators are not appropriate for generating the pulses because of a limited life mechanical relay used. That relay also does not deliver a continuous ESD pulse at low voltages. Drop-outs in the waveform will affect the results so a different simulator is needed. Some of the requirements on this new simulator will be discussed.

Doug will not be on-premises, but will be communicating live by Skype. Questions will have live responses.

Biography: Mr. Smith held an FCC First Class Radiotelephone license by age 16 and a General Class amateur

radio license at age 12. He received a B.E.E.E. degree from Vanderbilt University in 1969 and an M.S.E.E. degree from the California Institute of Technology in 1970. In 1970, he joined AT&T Bell Laboratories as a Member of Technical Staff. He retired in 1996 as a Distinguished Member of Technical Staff. From February 1996 to April 2000 he was Manager of EMC Development and Test at Auspex Systems in Santa Clara, CA. Mr. Smith currently is an independent consultant specializing in high frequency measurements, circuit/system design and verification, switching power supply noise and specifications, EMC, and immunity to transient noise. He is a Senior Member of the IEEE and a former member of the IEEE EMC Society Board of Directors.

Meeting Details: The meeting of the EMC Society will be held on Wednesday May 1, 2019 at Bose Corp., 100 The Mountain Road, Framingham, MA. The remote style, live technical presentation will commence at 7:00PM following a social hour at 6:00 PM. Food is provided.

DIRECTIONS TO BOSE CORPORATE HEADQUARTERS: The address is; 100 The Mountain Road, Framingham, MA, 01701 From Mass Pike (I-90); Take Exit 12 (Route 9 West) toward Worcester. Keep left at the fork on the ramp and get on Route 9 West. At the first set of lights take a right onto California Ave. (sign reads "Framingham Technology Park"). Go straight, over the railroad tracks, and through the next set of lights. The road curves around to a stop sign at the foot of the mountain. Take a left onto the Mountain Road and follow it to the next stop sign at the top of the mountain. The tall glass building before you is the Bose Corporate Center. Take a right at the stop sign, drive to the front of the Corporate Center and park. For more information, please contact Mike Royer at Michael_Royer@bose.com

Entrepreneurs' Network – 6:30PM, Tuesday, 7 May

Brand Building on a Budget

Location: Constant Contact, Inc., Reservoir Place, 3rd Floor Great Room, 1601 Trapelo Rd., Waltham, MA
 PRE-MEETING DINNER at 5:15 PM (sharp) at Bertucci's, Waltham

How do you build a brand for your product and attract customers? Much of brand building is about marketing and communication. This can be done in three ways: paid, owned, and earned media. Paid is advertising including social media ads; examples of owned are company produced content placed on its web site, social platforms, and sent via email; and earned is associated with PR/story placement and social.

In this session, our panel will focus on earned and owned media, and a catchall term for most of earned and owned media is content marketing. Content that is more informational than promotional. It's a mindset change from decades of brochures and ads which are designed for promoting more than appealing to prospects' issues and needs. Our speakers will address the why, what, when, where and how of content marketing.

Agenda:

6:30-7:30 PM - Registration & networking
 7:30-7:40 PM - ENET Chairman's announcements
 7:40-7:55 PM - E Minute - Up to 3 Startup companies' presentations
 7:55-8:45 PM - 4 expert speakers on the night's topic
 8:45-9:00 PM - Audience / Speakers Q & A
 9:00-9:30 PM - Final networking includes meeting presenting speakers

A question and answer session follow the presentation, and panelists will be available afterward for responses to individual questions. As with every ENET meeting, you will also get the chance to network with the panelists and other meeting attendees, both before the start of the meeting and afterward.



Speakers:

Bob Cargill, Copywriter, Social Media Marketer, President, American Marketing Association

Bob has been a creative director for sev-

eral marketing agencies in the Greater Boston area and - most recently -director of social media at Overdrive Interactive. Not only has he presented and spoken in public many times about social media, copywriting and marketing in general, he has been published or quoted in countless media outlets about his areas of expertise. He started publishing his blog in 2004 (<https://thebobcargill.com/>), hosts his own podcast (<https://bobcargill.podbean.com/>) and owns a YouTube channel (<https://www.youtube.com/bobcargill>) with hundreds of videos – all on the subject of marketing. His work has been recognized with over 40 awards from the New England Direct Marketing Association (NEDMA), including Gold for his blog, Gold for Best Tweets and Silver for Best Copywriting. Bob is the current President of the American Marketing Association Boston. He was named Direct Marketer of the Year for 2009 by NEDMA. You can follow him on Twitter at @cargillcreative.



Manejah Terzi, Public Relations Strategist, Manejah PR.

For almost 20 years, Terzi has worked to develop and execute public relations programs across the tech, medical, food and beverage industries. During her career, she's served a wide variety of brands including Crest, ThermoCare, S.Pellegrino, Restylane, Hershey's, Marriott Rewards, TROVE Data, Sakon, Simplot, Valtrex, Tyson, and Nestlé Waters.

Terzi understands that creating a positive brand halo requires a constant production of fresh and creative content to capture the attention of media, customers and online influencers. This content needs to not only stand out from the mountains of information being communicated on a daily basis but also be clever enough to keep interest levels high through each news cycle.



Tom Spring, Editor-in-Chief, Threatpost

Tom Spring has reported on technology for almost 20 years. He heads the award-winning cybersecurity news website Threatpost.com. Tom leads an editorial team charged with reporting on breaking cybersecurity news and offering actionable insights into

business-critical security topics.

He served as Senior Technical Editor at CRN magazine for three years, where he covered breaking IT news and the products and services of Dell, IBM, Intel, and Microsoft. Prior to that, Tom spent 14 years with IDG's PCWorld magazine as Executive News Editor. Tom began his journalism career at several daily newspapers, including the MetroWest Daily News in Framingham, Mass., covering business technology news, where he served as Technology Editor.

Tom's work has been honored by the Society of Professional Journalists, American Business Media, American Society of Business Publication Editors, and the Western Publishing Association.



Moderator

Howard Sholkin, Principal, Sholkin Consulting

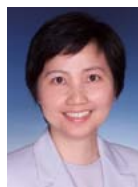
Howard Sholkin has more than 40 years of journalism and marketing communication experience. In 2014, he formed Sholkin Consulting to deliver strategy and tactical

marketing services to influence an organization's prospects, grow its business, and elevate a firm's brand and its products and services. He joined International Data Group (IDG)—the world's leading technology media, event, and research company -- as director of corporate communications in 2003 providing PR support for Founder and Chairman Pat McGovern and subsidiaries. Sholkin was later promoted to a director's position for communication and marketing programs for the CEO of IDG Communications, the media and events subsidiary, and for the CEO of IDG Global Solutions.

Prior to IDG, Sholkin held senior marketing and communication positions at technology companies, which included Computervision, Technology Concepts (a subsidiary of Bell Atlantic), Digital Equipment Corp./Compaq, and Getronics (successor to Wang). He is also an instructor at Lasell College in Newton. Before entering the tech industry in 1981, he was a news producer at WCVB-TV in Boston. Since 1990, Sholkin has been active in the Public Relations Society of America (PRSA) where he became president of the Boston chapter.

Organizer

Millie Kwan, President, The WSI Touch



Millie Kwan is Founder and President of The WSI Touch (<https://thewsitouch.com>), a digital marketing agency that has been serving small to medium-sized businesses in Greater Boston since 2009. Millie has over 20 years' experience in IT development, management, education, and research. She received her Doctor of Business Administration degree from Boston University and M.S. in Computer Science from Washington University in St Louis. She has taught at Babson College, University of Hong Kong and Boston University. She has published research on knowledge management, process redesign, and workflow management. In her early career, she specialized in the field of library automation and has led the implementation of various library systems for the University of Rhode Island, the HELIN Library Consortium of Rhode Island, and Washington University in St Louis.

E-Minute Presentations will be given at the start of the meeting. These very short presentations enable young startup entrepreneurs to gain experience in presenting their summary business plans to expert panels and audiences.

Directions: Constant Contact is adjacent to RT 128 / 95 at Exit 28B.

Registration:

ENET Member Rate - Free

MDG Member – \$15.00

Non-ENET Member Rate – \$20.00

Student – \$10.00

Register at

<https://www.boston-enet.org/event-3097507/Registration>

ENET Constant Contact meetings are free to ENET members and \$20 for non-members. No reservations are needed for the pre-meeting dinner. To expedite sign-in for the meeting, we ask that everyone -- members as well as non-members -- pre-register online. Pre-registration is available until midnight the day before the meeting. If you cannot pre-register, you are welcome to register at the door.

REFRESHMENTS: Snacks and soft drinks will be served at the meeting

Reliability Society – 5:30PM, Wednesday, 8 May

An Introduction to Use Case 7

Adam Bahret, Apex Ridge Reliability Consulting Services



This presentation will discuss the concept of using the “Use Case 7” principal to improve product robustness. This principal looks to define a use case, or set of use cases, that would normally be considered too extreme to be viable design input. The result is often discovering modifications for

base use cases or identifying all the little percentages of outlier use that add up to a noticeable failure rate in a large population. Check out online article “Introduction of Use Case 7” that gives a full introduction to the method (apexridge.com/introduction-of-usecase7)

AUTHOR BIO: Adam is the founder of Apex Ridge Reliability Consulting Services. He is a Mechanical and Electrical Systems Reliability expert with 20 years of experience in product development across many industries. He has worked extensively with reliability program strategy, accelerated testing methods HALT/HASS/QALT/ALT, system reliability measurement and improvement, predictive analysis, education programs, and organizational culture and practices. He has specialized experience in medical, robotics, consumer

electronics/appliances, Ion Implantation, and Diesel Systems. Adam has an MS in Mechanical Engineering from Northeastern University, is an ASQ nationally certified reliability engineer and a member of IEEE. More information on Adam and Apex Ridge Reliability can be found at www.apexridge.com

MEETING LOCATION: MIT Lincoln Laboratory, 3 Forbes Rd, Lexington, MA, 02421

Registration: [click here](#)

Copy and paste link <http://ewh.ieee.org/r1/boston/rl/events.html>

Directions to 3 Forbes Road, Lexington, MA:

- Take Route 128/I-95 to Exit 30B, Route 2A Westbound.
- At the first traffic light, turn left onto Forbes Road.
- Go to the end of the street.
- At the traffic circle, turn right.
- Go halfway around the traffic circle and turn into the parking lot for MIT Lincoln Laboratory
- The main entrance is straight ahead, shared with “agenus”.

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IEEE Boston Section – 12:00PM, Tuesday, 7 May

IEEE Publications -

Learn how to have your Paper Included in a IEEE Publication

Dr. Hulya Kirkici will give an overview of IEEE publications and policies including current changes in publication models, such as open access publishing. She will discuss new projects and tools including author/reviewer education, preprint services, conference publications and other strategic activities and goals of IEEE publications. The 1 hour talk and discussion with Dr. Kirkici will include variety of other topics ranging on publishing in IEEE journals, and her experiences as an IEEE volunteers, academic researcher, and educator. Questions from the audience are strongly encouraged.

Speaker: Dr. Hulya Kirkici, Professor and the Department Chair of Electrical & Computer Engineering at the University of South Alabama.

Dr. Hulya Kirkici is the Department Chair and Professor of Electrical and Computer Engineering at the University of South Alabama. She is also the 2019 IEEE Vice President – Publications, IEEE Director (member of the Board of Directors) and the Chair of Publications Services and Products Board (PSPB). Dr. Kirkici has served on a variety of high level IEEE Committees, and was the President of IEEE Dielectrics and Electrical Insulation Society, the Vice President of IEEE Sensors Council, and Treasurer and Finance Chair of IEEE PSPB, among other volunteering positions.

Dr. Kirkici received B.S. and M.S. in physics from Middle East Technical University (METU), Turkey; and Ph.D. in electrical engineering from Polytechnic University (currently NYU), NY. Previously, Dr. Kirkici was Professor at Auburn University, visiting scholar / consultant / Research Faculty Fellow at the Air Force Research Laboratory – Wright Patterson Air Force Base and NASA, Marshall Space Flight Center, Huntsville, AL.

Dr. Kirkici is a Fellow of IEEE, recipient of the IEEE Eric O. Forster Distinguished Service Award and the IEEE William G. Dunbar Award (Technical award). Dr. Kirkici's research interests span from electrical insulation and high-frequency dielectric breakdown to repetitive pulsed power. She has published her work widely and given plenary and invited talks nationally and internationally over the years.

Contact: Charlotte Blair, IEEE CT – cblair@ieee.org and Donald McMenemy, IEEE CT - donald.mcmenemy@ieee.org

Meeting Location: Tufts University, 200 College Avenue, Medford, MA 02155 – Anderson Hall, Room 206

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Entrepreneurs' Network, Cambridge Meeting – 6:00PM, Tuesday, 14 May

How / When to Scale your Business

Location: Draper, Hill Building, One Hampshire Street, Cambridge, MA

You have a successful startup; business is booming. How do I scale the company for the next growth wave? This panel discussion will provide a path forward. The business scaling plan will include conversations on; ensuring you have the proper finances in place, how to include partners, how to staff the growth, how do build high performing teams, and how to include diversity in your growth plan.

These discussions will focus on real-world examples from CFOs, Staffing, Operations, Team Building, and Diversity and Inclusion experts. We will end with a discussion on how to measure business scaling success.

Agenda:

6:00-7:00 PM - Registration & networking

7:00-7:10 PM - ENET Chairman's announcements

7:10-7:25 PM - eMinute - Up to 3 Startup companies' presentations

7:25-8:15 PM - Two expert speakers on the night's topic

8:15- 8:30 PM - Audience / Speakers Q & A

8:30 - 9:00 PM - Final networking includes meeting presenting speakers

A question and answer session follows the presentation, and panelists will be available afterward for responses to individual questions. As with every ENET meeting, you will also get the chance to network with the panelists and other meeting attendees, both before the start of the meeting and afterward.

Panel

Richard (Rick) Clemon, CGMA, CPA Tech-CXO

As an interim, fractional or consultative CFO, I use my comprehensive background leading the accounting, finance, tax, SEC reporting, HR, tech and facilities functions at fast-growing companies, particularly in

life sciences, software, and technology.

I combine a depth of knowledge and 25 years of experience

in accounting, finance, budgeting, audit, tax, and securities (E&Y, Arthur Andersen, CFGI) with the ability to lead cross-functional management teams to guide companies through complex business decisions. This foundation allows me to effectively identify and track KPIs, implement corporate initiatives, develop meaningful financial reporting and grow accounting functions.



Melissa Field Jurkoic, Co-Founder Diversify Thinking

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.



John Bogosian, Principal and Advisor of King & Bishop Companies

John brings over 30 years of well rounded entrepreneurial experience in Management Consulting, Coaching, Executive Search, Temporary Staffing, Human Resource Consulting, and Business Development. With John's innovative approach, vision for the future and leadership and guidance, King & Bishop is growing nationally and internationally offering a portfolio of services designed to meet clients' needs.

Before John joined King & Bishop in 2004, he was a national recruiter and gained increasing responsibility in managing the New England Region for B&M Associates, a national temporary technical staffing firm. From there, he went on to start up a local temporary staffing firm. He was recruited to take his experience in staffing and business development to one of the larger international career and executive coaching companies.

During his tenure, John was vice president and respon-

sible for career coaching, facilitation, and new business development. He developed an appreciation and passion for assisting organizations and individuals at all levels through the coaching process. He later serviced as the head of staffing for a publicly traded Medical Device Company.

John employs a strong partnering and collaborative style. Given his creative and resourceful style, he is often able to succeed where previous resources have proven limiting. He is a frequent speaker at area human resource functions, business associations, and higher education events. John earned his Bachelors of Science degree in Business Administration from Boston University, and he completed the MIT Sloan School's program, "Reinventing Your Business Strategy."



Enrique Levin Entrepreneur, Mentor, Professor and Investor, Founder ELEVIN SOLUTIONS

Enrique is an entrepreneur with 15+ years of experience in turning ideas into reality and a great track record for building sustainable businesses that provide value adding products and services to accurately targeted markets internationally.

His multidisciplinary hands-on background and unique perception of the world give him an enhanced understanding of complex dynamic systems and social behavior, allowing him to add value to most business disciplines. His exceptional management skills maximize the potential of any high-performance team.

Enrique has successfully built and helped execute 30+ business models in the B2B and B2C realms in extremely diverse industries, always with a frugal mindset, continually optimizing business models and operations for the right KPIs, while keeping a work culture of quality, discipline and trust.

He is the Founder of ELEVIN SOLUTIONS, a firm that empowers entrepreneurs to cross the chasm between idea and realization. He is also part of the Board of Directors at Zintro and the Asperger/Autism Network, an advisor for several technology startups, an Adjunct Professor of Experiential Entrepreneurship at the Brandeis International Business School and at the Tecnológico de Monterrey, as well as a Mentor and Judge for mul-

multiple startup competitions and accelerators worldwide.

He holds an MBA from Brandeis University's International Business School, known for its social justice approach to education, as well as a BS in Industrial & Systems Engineering from ITESM, the top engineering and entrepreneurship university in Mexico. He speaks Spanish, Portuguese and English with high proficiency and has a lot of experience in multicultural local and remote settings.

When not working (which is rare), Enrique is a music producer, performance driver, car tuner, explorer, photographer and designer.



**Co-Meeting Organizer
William Mansfield**

Attorney Mansfield is a patent attorney and is a lawyer in MA & NY; high bar exam scores allowed him to waive into D.C. Circuit U.S. Court of Appeals. 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 IP law using trademarks, trade dress, copyrights, licensing, patents, 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.



**Moderator and Co-Meeting Organizer
Dan Skiba, President & CEO GOT Interface,
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 engineering disciplines, I've designed 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.

eMinute Presentations will be given at the start of the meeting. These very short presentations enable young startup entrepreneurs to gain experience in presenting their summary business plans to expert panels and audiences.

Registration:
ENET Member - Free
Non-ENET Member – \$10.00

Registration:
<https://www.boston-enet.org/event-3097509/Registration>

COST AND RESERVATIONS: ENET meetings are free

to ENET members and \$10 for non-members. To expedite sign-in for the meeting, we ask that everyone -- members as well as non-members -- pre-register for the meeting online. Pre-registration is available until midnight the day before the meeting. If you cannot pre-register, you are welcome to register at the door.

REFRESHMENTS: Pizza, salad and soft drinks will be served at this meeting.

LOCATION: Draper, Hill Building, One Hampshire St. Cambridge, MA 02139 (directions). The address is One Hampshire St but the entrance is actually on Broadway. Attendees must arrive at Draper before 7pm. Entrance will be locked after 7pm.

PUBLIC TRANSPORTATION: Kendall Square stop on the Red Line.

PARKING: Parking Near Draper - Kendall Center Blue, Yellow, and Green Parking Garages. Metered parking is often available after 6pm.

Power & Energy Society – 6:00PM, Tuesday, 21 May

2019 ANNUAL BANQUET

Come and join us for an evening of fun and networking!!!

Grid Modernization to Enable A Clean Energy Future

Featuring: Buffet style dinner, cash bar and live music by "Jazz in the Air"

Speaker: Aftab Khan, Senior Vice President Engineering, Eversource Energy

Pre-dinner drinks at 6:00 pm; program commences at 6.30 pm

Meeting Location: The Inn at Brookline 1200 Beacon Street Brookline, MA 02446

Registration Details: Price: \$35 per person or \$270 per table of eight. \$10 per student

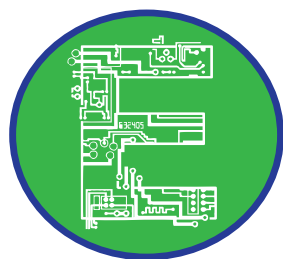
On line Registration:

<https://ieee-pes-boston-annual-dinner-2019.eventbrite.com> *A small convenience fee will apply to online ticket transactions.

Checks are also acceptable. Please make the check payable to IEEE PES Boston Chapter and mail it to: Jack Martin, IEEE PES Boston Treasurer 50 Church Street, Westwood, MA 02090

Registration Closing Date and Time: 3PM on Friday May 17, 2019

Visit IEEE PES Boston Chapter's website for details!
<http://www.ieeepestboston.org/>



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Register to attend at mwjournal.com/webinars

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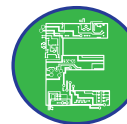


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Submission Deadline Extended until May 20, 2019!!

Call for Papers and Posters



Co-Sponsor:
IEEE★USA

2019 IEEE International Symposium on Technologies for Homeland Security

November 5–6, 2019 • Crown Plaza, Woburn MA • information@ieee-hst.org

Call for Papers & Posters

The 19th annual IEEE Symposium on Technologies for Homeland Security (HST '19), will be held November 5–6, 2019 in the greater Boston, MA area. This symposium brings together innovators from leading academic, industry, businesses, Homeland Security Centers of Excellence, and government agencies to provide a forum to discuss ideas, concepts, and experimental results.

Produced by IEEE with technical support from IEEE, IEEE Boston Section, and IEEE-USA and organizational support from MIT Lincoln Laboratory, and Raytheon, this year's event will once again showcase selected technical papers and posters highlighting emerging technologies in:

Humanitarian Assistance
& Disaster Relief

Land/Maritime Borders & Critical
Infrastructure Protection

Biometrics &
Forensics

Cyber Security

Frontier and
Emerging Technologies

We are currently seeking technical paper and poster session submissions in the above areas. This year, we are opening submissions for new Emerging Technologies with promise to affect Homeland Security. Papers examining the feasibility of transition to practice will also be considered. All areas cover the following common topics:

- Strategy, threat characterization, operational concepts and risk analysis;
- Modeling, simulation, experimentation, and exercises & training; and
- Testbeds, standards, performance and evaluations.

Contact Information

For more detailed information on the Call for Papers and Posters, as well as Sponsorship and Exhibit Opportunities, visit the website <http://ieee-hst.org/> or email: information@ieee-hst.org. Submissions should be made at the following website: <https://cmt3.research.microsoft.com/HST2019/>

Important Dates (All deadlines are by midnight Eastern Time)

Paper Extended Abstract Deadline:	May 20, 2019
Paper and Poster Acceptance Notification:	July 1, 2019
Final Paper Submission Deadline:	September 16, 2019

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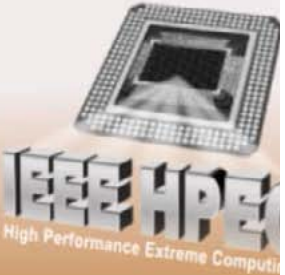
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CALL FOR PAPERS




**2019 IEEE High Performance
Extreme Computing Conference
(HPEC '19)**
 Twenty-third Annual HPEC Conference
 24 - 26 September 2019
 Westin Hotel, Waltham, MA USA



www.ieee-hpec.org

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The IEEE High Performance Extreme Computing Conference (HPEC '19) will be held in the Greater Boston Area, Massachusetts, USA on 24 – 26 September 2019. The HPEC charter is to be the premier conference in the world on the confluence of HPC and Embedded Computing.

The technical committee seeks new presentations that clearly describe advances in high performance extreme computing technologies, emphasizing one or more of the following topics:

- Machine Learning
- Graph Analytics and Network Science
- Advanced Multicore Software Technologies
- Advanced Processor Architectures
- Automated Design Tools
- Big Data and Distributed Computing
- Case Studies and Benchmarking of Applications
- Advanced Cloud Computing
- Computing Technologies for Challenging Form Factors
- ASIC and FPGA Advances
- Data Intensive Computing
- Digital Front Ends
- Fault-Tolerant Computing
- General Purpose GPU Computing
- High Performance Data Analysis
- Interactive and Real-Time Supercomputing
- Mapping and Scheduling of Parallel and Real-Time Applications
- New Application Frontiers
- Open System Architectures
- Secure Computing & Anti-Tamper Technologies
- Quantum/Hybrid Computing
- AI Computing

HPEC accepts two types of submissions:

1. Full papers (up to 6 pages, references not included), and
2. Extended abstracts (up to 2 pages, references included).

IMPORTANT DATES:

Submission Deadline: **May 17, 2019**
 Notification of Acceptance: **July 1, 2019**
 Camera Ready Deadline: **August 31, 2019**

Preference will be given to papers with strong, quantitative results, demonstrating novel approaches or describing high quality prototypes. Authors of full papers can mark their preference for a poster display or an oral presentation. Presenters who wish to have hardware demonstrations are encouraged to mark their preference for a poster display. Accepted extended abstracts will be displayed as posters. Papers can be declared "student paper" if the first author was a student when doing the presented work, and will be eligible for the "IEEE HPEC Best Student Paper Award." Papers should not be anonymized. All paper and extended abstract submissions need to use the approved IEEE templates. Full paper submissions with the highest peer review ratings will be published by IEEE in the official HPEC proceedings available on IEEE eXplore. All other accepted submissions and extended abstracts are published on ieee-hpec.org.

Vendors are encouraged to sign up for vendor booths. This will allow vendors to present their HPEC technologies in an interactive atmosphere suitable for product demonstration and promotion. We welcome input (hpec@ieee-hpec.org) on tutorials, invited talks, special sessions, peer reviewed presentations, and vendor demos. Instructions for submitting will be posted on the conference web site shortly.

2018 Sponsors

Last Notice before Course Begins, Please Register Now!!!

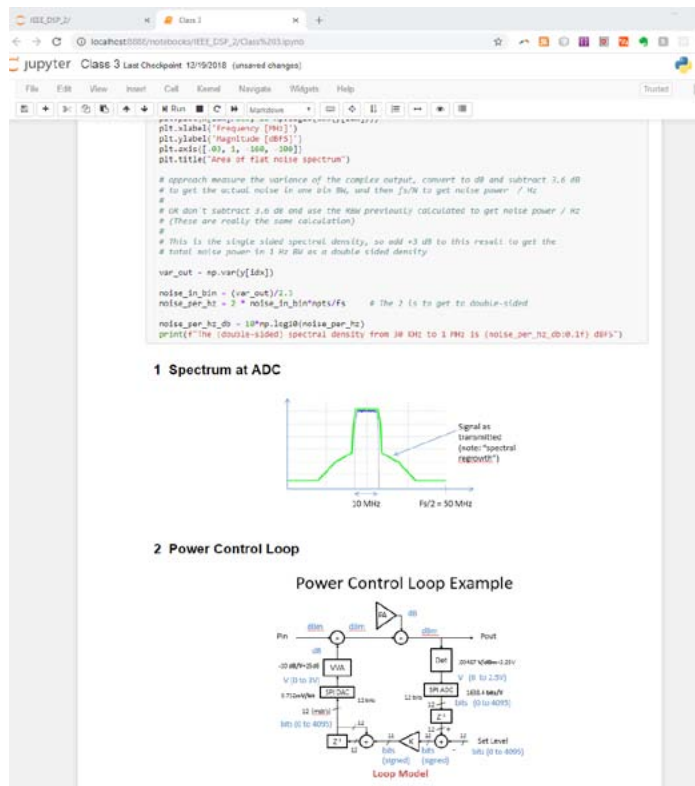
DSP for Software Radio

(13 hours of instruction!)

Time & Date: 6:00 - 9:00PM, Wednesdays, May 15, 22, 29, June 5, 12
Location: Crowne Plaza Hotel, 15 Middlesex Canal Park Road, Woburn, MA
Speaker: Dan Boschen

Course Summary

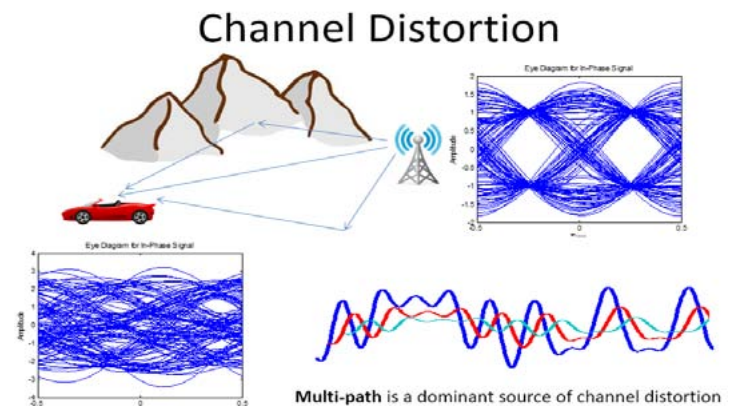
This course builds on the IEEE course “DSP for Wireless Communications” also taught by Dan Boschen, further detailing digital signal processing most applicable to practical real-world problems and applications in radio communication systems. Students need not have taken the prior course if they are familiar with fundamental DSP concepts such as the Laplace and Z transform



and basic digital filter design principles. The course title has been changed with some minor additions but this is the same course that was previously taught titled “More DSP for Wireless Communications”, with the addition of Python demonstrations using Jupyter Notebooks.

This course brings together core DSP concepts to address signal processing challenges encountered in

radios and modems for modern wireless communications. Specific areas covered include carrier and timing recovery, equalization, automatic gain control, and



considerations to mitigate the effects of RF and channel distortions such as multipath, phase noise and amplitude/phase offsets.

Dan builds an intuitive understanding of the underlying mathematics through the use of graphics, visual demonstrations, and real-world applications for mixed signal (analog/digital) modern transceivers. This course is applicable to DSP algorithm development with a focus on meeting practical hardware development challenges, rather than a tutorial on implementations with DSP processors.

Now with Jupyter Notebooks!

This long-running IEEE Course has been updated to include Jupyter Notebooks which incorporates graphics together with Python simulation code to provide a “take-it-with-you” interactive user experience. No knowledge of Python is required but the notebooks will provide a basic framework for proceeding with further signal processing development using that tools for those that have interest in doing so.

This course will not be teaching Python, but using it for demonstration. A more detailed course on Python itself

Benefits of Attending/ Goals of Course:

Attendees will gain a strong intuitive understanding of the practical and common signal processing implementations found in modern radio and modem architectures and be able to apply these concepts directly to communications system design.

Topics / Schedule:

Class 1: DSP Review, Radio Architectures, Digital Mapping, Pulse Shaping, Eye Diagrams

Class 2: ADC Receiver, CORDIC Rotator, Digital Down Converters, Numerically Controlled Oscillators

Class 3: Digital Control Loops; Output Power Control, Automatic Gain Control

Class 4: Digital Control Loops; Carrier and Timing Recovery, Sigma Delta Converters

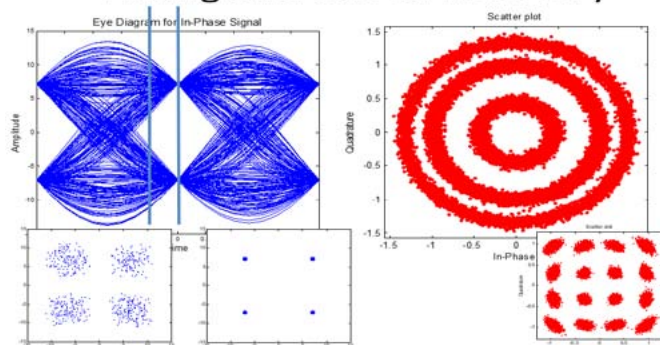
Class 5: RF Signal Impairments, Equalization and Compensation, Linear Feedback Shift Registers

Speaker's Bio:

Dan Boschen has a MS in Communications and Signal Processing from Northeastern University, with over 25 years of experience in system and hardware design for radio transceivers and modems. He has held various positions at Signal Technologies, MITRE, Airvana and Hittite Microwave designing and developing transceiver hardware from baseband to antenna for wireless communications systems. Dan is currently at Microchip (formerly Microsemi and Symmetricom) leading design efforts for advanced frequency and time solutions.

For more background information, please view Dan's Linked-In page at: <http://www.linkedin.com/in/dan-boschen>

Timing and Carrier Recovery



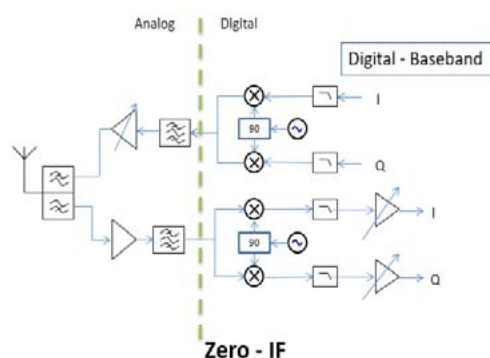
is covered in a separate IEEE Course "Python Applications for Digital Design and Signal Processing".

Students will be encouraged but not required to bring a laptop to class, and all set-up information for installation will be provided prior to the start of class.

Target Audience:

All engineers involved in or interested in signal processing for wireless communications. Students should have either taken the earlier course "DSP for Wireless Communications" or have been sufficiently exposed to basic signal processing concepts such as Fourier, Laplace,

Radio Architectures



and Z-transforms, Digital filter (FIR/IIR) structures, and representation of complex digital and analog signals in the time and frequency domains. Please contact Dan at boschen@loglin.com if you are uncertain about your background or if you would like more information on the course.

Decision (Run/Cancel) Date for this Courses is Wednesday, May 8

Payment received by May 1

IEEE Members	\$340
Non-members	\$375

Payment received after May 1

IEEE Members	\$375
Non-members	\$440