June 1, 2016

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The Digital Reflector

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IEEE Boston Spring Social and Awards Reception

Sunday, June 12, 2016, 1 - 4PM

The 2016 IEEE Boston Section Spring Social and Awards Reception will be held on **Sunday, June 12, 2016 from 1 - 4PM at the Crowne Plaza Hotel, 15 Middlesex Canal Park Road, Woburn, MA.**

At this reception, we will recognize and/or present awards of all IEEE levels from
Fellows to section awards to all Boston Section recipients. Members of the section and their families and friends are invited to attend.

Pre-registration is strongly encouraged to help us plan the spring social. You have three options to register.

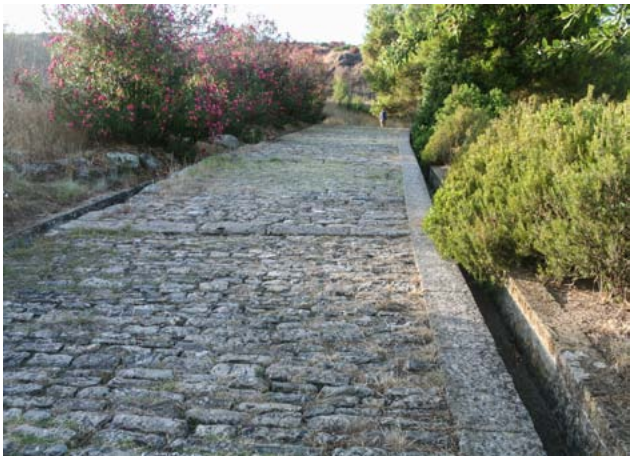
Call the office at 781 245 5405.
Email, ieeebostonsection@gmail.com
Online: http://www.ieeeboston.org/Register/ and select "spring social 2016"

Guest Speaker: John Horrigan

Early American Roads

By the time journalist John L. O'Sullivan, wrote an article in 1845 declaring to the citizens of the United States that it was "our manifest destiny to overspread the continent allotted by Providence for the free development of our yearly multiplying millions", construction of the first macadamized road in the United States had already begun. The migration westward was dramatically increasing as settlers headed into uncharted territories throughout the wild west, in search of fertile land and a better way of life. They followed ancient Native American game trails and cattle paths that were unsuitable for wagons, given their mud-filled gullies and rock-bound surfaces. Smooth, continuous and more direct routes were needed to accommodate more wagon trains, substantially reduce travel times and allow for rapid expansion of our nation. Eventually, the proliferation of automobiles made it necessary to develop a comprehensive system of asphalt thoroughfares and avenues.

Join five-time Boston/New England Emmy Award-winning folklorist John Horrigan as he presents a chronological survey of America's early roads, canals and thoroughfares, including the Natchez Trace, the Mohawk Trail, Boston Post Road, the Old Connecticut Path, the Wilderness Road, the National Road, the Erie Canal, Route 66 and modern-day I-90.



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IEEE Boston Section Online Courses:

Verilog101:Verilog Foundations CLASS DESCRIPTION: Verilog is IEEE standard 1364. It is a Hardware Description Language that is the corner stone of much of the simulation world. Verilog Foundations is a comprehensive introduction to the IEEE 1364 (Verilog). The Verilog Foundations class has a slightly different approach to learning Verilog than other methods. There is a lecture section for each main topic. This presents a basic foundation for the language. What makes Verilog Foundations exciting is the emphasis on labs/examples. There are nearly 100 labs/examples giving comprehensive "how to" examples of most Verilog language constructs. There are working solutions for each lab and the students can use the lab database for developing their own models later. The class is also self paced. All the work can be done independently by the engineers, at their own computer, and at their own pace.
(Register at http://www.ieeeboston.org) and click on course title

System Verilog 101: Design Constructs CLASS DESCRIPTION: SytemVerilog is an extensive set of language constructs to the IEEE 1364-2001 standard. It's meant to aid in the creation and verification of models. There are two parts to the language extension. The first part covered by this class, is new design constructs. The second part of SystemVerilog is verification constructs, covered by SystemVerilog102. There are over 100 labs/examples giving comprehensive "how to" examples of most SystemVerilog language constructs. There are working solutions for each lab and the students can use the lab database for developing their own models later. The class is also self paced. All the work can be done independently by the engineers, at their own computer, and at their own pace. There are self-grading quizzes for each chapter that allow the student to see if he/she is learning the material. The goals of this course are to make you familiar with the new part of the language. Students taking SystremVerilog101 will have a 90-day access to it. The lab database you will be able to download and is yours to keep. **(Register at http://www.ieeeboston.org) and click on course title**

System Verilog 102: Verification Constructs CLASS DESCRIPTION:SytemVerilog is an extensive set of language constructs to the IEEE 1364-2001 standard. It's meant to aid in the creation and verification of models. There are two parts to the language extension. The first part covered by SV101, is new design constructs. SV102, this class, covers verification constructs. SystemVerilog102, like all CBE classes, is lab based. There are over 30 verification labs/examples giving comprehensive "how to" examples of most SystemVerilog verification language constructs. There are working solutions for each lab and the students can use the lab database for developing their own assertions later. The class is also self paced. All the work can be done independently by the engineers, at their own computer, and at their own pace. **(Register at http://www.ieeeboston.org) and click on course title**

Introduction to Embedded Linux Part I CLASS DESCRIPTION: This first of a 2-part series introduces the Linux Operating System and the use of Embedded Linux Distributions. The course focuses on the development and creation of applications in an Embedded Linux context using the Eclipse IDE. The first part of the course focuses on acquiring an understanding of the basic Linux Operating System, highlighting areas of concern for Embedded Linux applications development using Eclipse. The latter part covers the methods for booting Embedded Linux distributions including embedded cross-development and target board considerations.

High Performance Project Managment CLASS DESCRIPTION: This12 hour course(broken into short 10 to 20 minute independent modules) provides the project methodology, concepts, and techniques that ensure successful completion (on time, on budget, with the quality required) of projects, large and small. Participants learn the steps to take before, during, and at the end of a project to hone planning and execution to a strategically built process that delivers project success when used. Additionally, the course provides the interpersonal and leadership techniques to ensure everyone involved with the project whether a team member, organization member, or outside of the organization commits to the success of the project—voluntarily—and provides the support and assistance to ensure its success. In addition to learning how to master the technical skills that have evolved over thousands of years of project implementation and practice, the course provides the advanced team building, leadership, and interpersonal skills that ensure the technical skills can be used, they way they are designed to be used, resulting in a process that delivers the on time, on or under budget, with the quality required completed project consistently.

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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.

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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 Marijuana 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!

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Entrepreneurs' Network and Young Professionals – 6:30PM, Tuesday, 7 June

The Key to a Successful Start-up - Winning Investors with Your Pitch Deck and Presentation

Meeting Location – Constant Contact, Reservoir Place, Main Building, InnoLoft Great Room, 1st Floor, 1601 Trapelo Road, Waltham, MA. PRE-MEETING DINNER at 5:15 PM (sharp) at Bertucci's, Waltham.

One of the most obvious and challenging key requirements for the success of an early stage entrepreneurial company is securing funding. Our Boston ENET June 7th meeting is focused on learning how to win potential investors with the right pitch deck and presentation. It will also focus on how companies can build a value proposition which will enable an entrepreneur to raise value, a critical step prior to raising money.

The Panel is composed of several venture capitalists, some who have been in successful startups prior to their investment careers and a CEO who has led several successful start-ups, is an author, currently works with early stage companies as an advisor and who has developed webinars and a work shop to guide early stage company executives to success.

Join us for an exciting and informative evening of informative presentations and networking. For updates please see: http://www.boston-enet.org

Moderator: Brigid Oliveri Siegel, Partner & Founder, Brigid Siegel Associates

Brigid is a Managing Partner and Founder of Brigid Siegel Associates, a retained executive search firm focused on high technology, biotechnology, clean tech, technology roles at universities, venture capital and private equity clients. Brigid's responsibilities encompass the execution and direction of a comprehensive search process from research strategy, candidate development, position and person specification through final candidate selection and offer.

Brigid began her career in the high technology industry over 30 years ago and in executive search, 20 years ago. Prior to Brigid Siegel Associates Brigid was a Partner at Polachi, a Managing Director with The Onstott Group, a Senior Partner at Heidrick & Struggles and a Vice President with Fenwick Partners. She also founded and managed Brigid Siegel Associates LLC, a boutique retained executive search firm specializing in the high technology practice area. In addition to executive recruiting, her professional experience spans multiple positions in technology firms, including management, marketing, national account sales, software development and field engineering. Throughout her retained executive search career Brigid has successfully completed numerous information technology senior executive search assignments for clients ranging from emerging growth companies to multi-billion dollar corporations.

Brigid studied at Polytechnic Institute of Brooklyn and holds a Bachelor of Science degree in Electrical Engineering from Lowell Technological Institute. Her executive search industry expertise has been cited in the Boston Business Journal, the New York Post, as well as Hunt Scanlon's Executive Recruiting Industry Newswire. She was also a member of the Executive Board of the WPI (Worcester Polytechnic Institute) Venture Forum for seven years.

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Pre-meeting Dinner at 5:15 PM (sharp) at Bertucci's, Waltham, (Exit 27B, Route 128).

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.

Check for Updates at: Boston Entrepreneurs' Network Website at http://www.boston-enet.org

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

See: http://www.constantcontact.com/about-constant-contact/office-location-waltham.jsp

Reservations: ENET Constant Contact meetings are free to ENET members,$20 for non-members and $10 for students with a valid ID. No reservations are needed for the premeeting dinner. 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.

As always, the views expressed in our editorials are those of the author and not necessarily those of the IEEE Boston

Letters to the editor can be sent to, "sec.boston@ieee.org"

IEEE prohibits discrimination, harassment and bullying.
For more information visit http://www.ieee.org/web/aboutus/whatis/policies/p9-26.html

Locally held IEEE Conferences

2016 IEEE High Performance Extreme Computing Conference
September 13 - 15 2016
www.ieee-hpec.org
(Abstract submission deadline is May 16, 2016)

2016 IEEE International Symposium on Phased Array Systems & Technology
October, 18 - 21 2016
www.array2016.org

2017 IEEE Symposium on Technologies for Homeland Security Call for Papers!
April 25 - 27, 2017
www.ieee-hst.org
(Abstract submission deadline is October 17, 2017)

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2016 IEEE International Symposium on Phased Array Systems and Technology

Revolutionary Developments in Phased Arrays

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Our Blog

18–21 October 2016

Westin Waltham Hotel, Greater Boston, Massachusetts, USA

www.array2016.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.

Plenary Session Speakers

- **William Delaney** – MIT Lincoln Laboratory
- **Troy Olsson** – DARPA
- **Israel Lupa** – IAI ELTA, Israel
- **Gordon Frazer** – DSTO Australia
- **Joseph Haimerl** – Lockheed Martin
- **Tony Fischetti** – Northrop Grumman Corp.

SESSIONS

Plenary
European Phased Array Systems and Technology*
Array Design I, II, III
T/R Modules
Radar I, II
Beamforming and Calibration I, II, III
Emerging Technologies for Wideband Arrays*
Communications Arrays
Array Measurements
Signal Processing and Architectures
Dual Polarization Weather Radar Arrays
Multifunction Arrays
Millimeter Wave and Terahertz Arrays*
Metamaterial Phased Arrays*
MIMO Arrays
Conformal Arrays
Poster Sessions I & II

*Special Session

Tutorials

- Phased Arrays for MIMO Radar
  Dr. Vito Mecca, MIT Lincoln Laboratory
- Smart Antennas
  Dr. Frank Gross, Boeing Technical Fellow, Georgia Southern University
- T/R Modules for Phased Arrays
  Dr. William H. Weedon, Applied Radar
- Phased Array Antenna Measurements
  Dr. Alan J. Fenn, MIT LL
- Advances in SiGe BiCMOS Technology with Chip Scale Phased Array Applications
  – Dr. Gabriel Rebeiz, UCSD
- Phased Arrays for Imaging Applications
  Dr. Carey Rappaport, Northeastern University
- Microwave Array Beamforming: Analog, Digital, and Photonic
  Dr. Jeffrey Herd, MIT Lincoln Laboratory
- Phased Arrays: Basics, Breakthroughs & Future Trends
  Dr. Eli Brookner, Raytheon (Retired)

Conference Committee

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Attention: RF, Microwave, & High-Speed Digital Designers

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2016

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IEEE MIT Call for Submissions

Submission Deadline: September 3rd, 2016

Meet Innovation Technology

Sponsored by MIT IEEE Student Branch and IEEE Boston Section

MIT IEEE Student Branch believes a technical conference is needed for all the undergraduate students globally. They inaugurated the IEEE MIT Undergraduate Research Technology Conference last year, and will organize it again for this year. MIT will be the venue where the undergraduate students can meet to present, discuss, and develop solutions to advance technology for humanity. Participants can attend a rich program with renowned speakers, technical sessions, student design competition, exhibits, networking and social activities. It is a great opportunity for students to interact with the industry experts.

The conference theme is "Meet Innovation Technology (MIT)", and the four focus technical tracks are:

1. Big Data, Cloud Computing, Cybersecurity
2. Life Sciences, Biomedical Engineering and Technology
3. Robotics and Automation Technology
4. Communications for All Things
5. Wearable Technology
6. Innovative Technologies X-Track

Authors may submit content in the form of a technical paper, poster, or lightning talk.

All submissions must be written in English. Paper submissions must not be longer than 4 pages. Minimum font is 10 point, single-spaced, and submissions may include figures, illustrations, and graphs. Abstract submission for poster and lightning talk will be limited to 500 words.

All submissions will be peers reviewed. Notification of acceptance or rejection will be sent via email.

Submission will be online, and deadline is September 3rd, 2016. Notification of acceptance by September 24, 2016.

Please join the mailing list (MIT-Conference@ieee.org) for more information on the submission, technical program, registration, and accommodation.

Conference Proceeding of all the accepted papers that have been presented at the conference may be published, and included in the IEEE Xplore. Electronic media and online containing all accepted submissions will be distributed to the registered attendees.

For any inquiries, please email either the conference co-chair: - Alice Zhan (tzhan@mit.edu) or Helen Zhou (hlzhou@mit.edu).

http://ieee.scripts.mit.edu/conference

Massachusetts Institute of Technology

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

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 sec.boston@ieee.org 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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2017 IEEE Boston Section Executive Committee Nominations

Chair: Lennart Long

Lennart E. Long is a Transportation Electromagnetic Compatibility (EMC) Engineer with over 30 years of experience with railroad, subway, trolley and bus EMC studies. He has a Bachelor's and Masters Degree in Electrical Engineering from Northeastern University and graduate studies at the University of New Hampshire and Johns Hopkins University. He has taught security technology at UMASS Lowell (teaching security risk management, overview of homeland security, and cyber security), Boston University, Suffolk University, the University of New Hampshire, Northeastern University, the Federal Law Enforcement and Training Center in Georgia, John Jay College in New York City and for the City of New York.

He has lectured on and participated in security projects for the Internal Revenue Service, Houses of Worship, and Gdansk University of Technology in Poland. He and his consulting team has worked successfully for the British Home Office, Federal Protective Services, Social Security Administration, Instrumentation Society of America, President Clinton's Security Policy Board evaluating risk assessment methodologies, Inter-agency Committee for Security Equipment, the U.S. Senate staff, White House Communications Agency, the Secretary of State's security detail, the President's situation room, the Bureau of Engraving and Printing, Department of the Treasury, White House, State Department (in Brussels, Helsinki, Paris, Frankfurt, and other posts and embassies around the world), Army Intelligence, Federal Aviation Administration, US Coast Guard, Central Intelligence Agency, National Security Agency, Federal Railroad Administration, St. Lawrence Seaway Administration, Pipeline Administration, Marine Administration, Office of Intelligence and Security, Federal Transit Administration, Federal Bureau of Investigation, U. S. Marshals Service, Customs Service, Federal Transportation Administration (security risk management and security policy), and the Research and Special Programs Administration.

His recent clients include the Niagara Frontier Transportation Agency, Buffalo Transit Agency, PATH, SEPTA, MBTA, Port Of New York and New Jersey, NYCTA, LIRR, MNR, NYCTA Hybrid Bus - (Oerlicon), DesignLine Bus of North Carolina, Baltimore MTA, Boston MBTA, BART, Houston, Portland, ALSTOM, BREDA, Siemens, Kawasaki, Mitsubishi, Westinghouse, Helsinki, Toronto, MARTA, Brown Boveri, Seattle Light Rail, LACMTA Heavy/Light Rail, New Jersey Transit, Dallas, WMATA, Kinki Sharyo, UTS, General Electric, Earth-Tech, Parsons, STV, Booz-Allen, SYSTRA, Turner Consulting, LTK, PATCO, SEPTA, U. S. Army, U.S. Navy, Hanscom Air Force Base, Cambridge Research Labs, ROME Air Force Base, General Service Administration, Social Security Administration, Internal Revenue Service, Federal Law Enforcement Training Center, Morgantown Personal Transit System, National Transportation Safety Board, Washington Metropolitan Area Transit Administration, Metropolitan Atlanta Regional Transportation Administration, Bay Area Transportation Administration, the Security Technology Division of the NDIA, and the Institute for Electrical and Electronics Engineers.

He is the recipient of the, Research and Special Programs Bronze Medal and well as a U. S. Department of Transportation Bronze Medal as well as a special citation from the British Home Office and an award from the Secretary of State. On May 17, 2014 he will be presented with the Robert S. Walleigh Distinguished Contributions to Engineering Professionalism Award, the highest and most prestigious award issued by IEEE-USA. He has several patents and publications. He has given a keynote address at a NATO sponsored Conference at Gdansk University

of Technology and has worked with The National CyberSecurity Coordinator and Advisor to the President, Howard Schmidt. He serves on the Boston Section Executive Committee as Treasurer and on the Outreach, Planning and Action Plan Committee and chairs the Professional Development and Education Committee and is designing and developing a system for hosting and presenting online courses for the Boston Section.

Vice Chair: Greg Walson

Mr. Walson is a Senior Member of the IEEE. He has previously held several positions on the Boston Section Executive Committee and currently serves as Secretary and PACE Chair.

He recently joined the MIT Department of Facilities as a Senior Electrical Engineer, working for the Utilities Group. Prior to this he worked for eight years as an Electrical Engineer specializing in power utility substation design and engineering for Vanderweil Engineers. He has also worked as an electrical designer and lighting manufacturer's representative. He has lectured at MIT on lighting control systems.

He holds a BSEE from Northeastern University, and a BA in Theater from Goshen College. He is also a licensed Professional Engineer in Massachusetts and New Hampshire.

Secretary: Gilmore Cooke

Gil Cooke received the Bachelor of Engineering degree in electrical engineering from McGill University Montreal in 1962. He has spent most of his engineering career working on large engineering and construction projects while residing in California, the mid- west and Massachusetts. He is a Registered Professional Engineer in Massachusetts and California.

He served as chairman of the Detroit Chapter in 1977-78; director-at-large in 1977, and has been active with the Boston chapter's technical programs during the 80's. He's been appointed to the following: Boston Section Chair History & Milestones Committee; Boston Section Director at Large, 2004-2006; Boston Section Treasurer, 2015- 2016.

Treasurer: Ramon de la Cruz

Ramon started volunteering with the IEEE during college at Iowa State University. He joined as the Student Chapter Publicity Chair, where he was editor of the IEEE monthly newsletter. The following year, he was elected IEEE Student Chapter Chair for two consecutive terms. With record number of activities and student participation, the student chapter co-sponsored joint technical and professional meetings with the IEEE Central Iowa Professional Chapter and the University of Northern Iowa IEEE Student Chapter.

Ramon joined Teradyne, Inc. Integra Test Division in 1999 at the start of the product introduction and ramp of the J750 Automatic Test Equipment (ATE). During his earlier years with Teradyne, Ramon co-developed test processes that enabled high volume manufacturing to support the unprecedented ramp of the J750 ATE Test Platform. The J750 market acceptance for testing the next generations of highly integrated, low cost microcontrollers expanded with the introduction of several new products like the Converter Test Option, Mixed Signal Option, RFID Test Option and Analog Parametric Measurement Unit Option.

In 2003, Ramon moved to the Teradyne New Product Introduction Group of the Semiconductor Test Division during the development and introduction of the UltraFlex Automatic Test Equipment (ATE) Platform. In this role, he has overseen the test process transfer from the pilot line to high volume manufacturing of the 1 GHz digital option and various new analog and digital ATE instrument products. Currently at Teradyne NPI Group, he participates in operations strategy workgroups to define processes and methods sup-

porting next generation system and instrumentation development for current and future ATE Platforms.

Ramon joined the Boston Reliability Chapter in 2007 as a member-at-large and has served as the Joint Section Reliability Chapter Chair (2009-11) and Vice-Chair (2008, 2012-14). He's a member of the Board of Directors of the Northeast Chapter of the Electrostatic Discharge Association (NE-ESDA, 2009-2014). At the ESDA, he serves on the ESDA Regional Tutorial Program Committee and has been hosting the annual NE-ESDA Regional Tutorial since 2010.

Other volunteer opportunities include serving as an industry advisor for the University of Massachusetts Lowell Assistive Technology Development Fair and participating in local high school job fairs.

He holds a B.S. in Electrical Engineering from Iowa State University. His background includes Design for Testability, Process FMEA, Systems and Circuit Analysis, Risk Assessment, and Highly Accelerated Stress Testing.

Ramon enjoys evaluating consumer electronics and designing, modifying and improving state-of-the-art audio equipment. Other interests include digital photography and staying current on the latest science and technology trends.

At Large: Two year term (2017 -2018)

Paul Zorfass

Paul is currently on the IEEE Boston Section Executive Committee. He is chapter chair coordinator. He has previously initiated the first section Job Forum and been active on program committees to recruit speakers for section conferences and other events. Prior to this he had been Chapter Chair for the Communications Society, Boston and CNET chapters, for six years; and also the Region 1 representative to the North American Board for the Communications Society.

He also volunteers in several other Greater Boston activities. This includes as a member of the Board of Assessors in his local town that values real estate; and member of the Cable Advisory Committee. He is also Treasurer of the board for his own homeowners' community.

His professional interests and background include software and hardware technology development and market evaluation, especially as it adds value to final product performance. His work activities have included consulting with multinationals such as IBM, Intel, Philips and Microsoft as well as numerous start-ups. This has evolved from engineering and software development for real time and embedded systems for both DoD and wide-ranging industry and commercial use. He has also been an active participant in start-up company founder teams.

With non-industrial clients Paul has focused on technology planning and market assessments for large US agencies such as DARPA, NSA, and World Bank; and non-U.S. governmental agencies from: UK, The Netherlands, European Commission, and South Korea. Client agendas were usually focused on country economic issues. It was always important to encourage and sustain economic development in regard to each country's specific metrics and requirements for advanced electronics technologies.

Marie C. Tupaj

Marie C. Tupaj holds a bachelor's degree in electrical engineering and a doctorate in biomedical engineering from Tufts University. Following her undergraduate degree, she worked at Sun Microsystems on the design and verification of host-bridge application specific integrated circuits for mid-range server products. As a doctoral student, Marie worked on a project supported by the Armed Forces Institute of Regenerative Medicine that identified and integrated biochemical, biophysical, and bioelectrical strategies into nerve guides for peripheral nerve repair and limb and digit salvage. As

a postdoctoral fellow, Marie worked on a number of biomedical projects ranging from chemical modification of surfaces to building miniaturized biosensors. Marie's research interests include neuroprosthetic device design and examining electric field effects on cells.

Marie has been an active member of the IEEE Boston section since 2011. Within the Boston section, she has worked on the steering committee of the Women in Engineering (WIE) affinity group. On this committee, Marie has held roles as treasurer and chair. Specifically, she has organized and led steering committee meetings, planned monthly technical and professional development meetings, and wrote proposals for group funding and award money. She has represented WIE Boston at local and regional conferences including the Region 1 WIE Conference, the Region 1 IEEE student conference, and at a MA regional science fairs as science fair judge. She is also a member of the IEEE Engineering Medicine & Biology Society.

Geoscience and Remote Sensing – 6:30PM, Wednesday, 15 June

Update on Research and Development Activities at Atmospheric & Environmental Research

Dr. Robert A. Morris, Vice President, R&D Division, and Chief Science Officer, Atmospheric & Environmental Research

Postponed until September

Since its formation in 1977, Atmospheric & Environmental Research (AER) has conducted cutting-edge basic and applied research in the geosciences and environmental risk. While initially focused on atmospheric photochemistry, AER has expanded its footprint into a broad set of capabilities in remote sensing, physical oceanography, meteorology, data assimilation, climate science, atmospheric composition and air quality, and space weather. In supporting its government customers, AER also provides on-site research and engineering staff at several US government research laboratories. We also transition environmental research results into commercial products. Recent and current R&D activities at AER will be presented, and the outlook for the future will be discussed.

Dr. Robert Morris leads AER's Research & Development Division, which performs basic and applied research and technology development in the areas of atmospheric science, satellite data assimilation, physical oceanography, air quality, climate analysis, space environment, and space weather for government and commercial customers. Dr. Morris has over 24 years of government laboratory experience in space environment and remote sensing, including leading the Battlespace Environment Division of the Air Force Research Laboratory prior to its relocation to New Mexico in July 2011. He has published over 100 research articles in peer-reviewed scientific journals and over 100 conference papers; much of his research focused on the kinetics and dynamics of ion-molecule reactions. Dr. Morris is a Fellow of the American Physical Society and an AFRL Fellow. He earned his B.S. in chemistry at Bates College, his Ph.D. in physical chemistry at Boston College, and then served as a Geophysics Scholar postdoctoral fellow at the Air Force Geophysics Laboratory.

Meeting Location: AER - Atmospheric and Environmental Research (AER) Inc., 131 Hartwell Avenue, Lexington, MA 02421. To assist us in planning this meeting, please pre-register at http://www.ieeeboston.org/Register/.

Please take this short survey, https://www.surveymonkey.com/r/B8R2DYL

Call for Papers, Posters, and Tutorials

Call for Papers, Posters & Tutorials

The 16th annual IEEE Symposium on Technologies for Homeland Security (HST '17), will be held 25-27 April 2017, in the Greater Boston, Massachusetts area. This symposium brings together innovators from leading academic, industry, business, Homeland Security Centers of Excellence, and government programs to provide a forum to discuss ideas, concepts, and experimental results.

Produced by IEEE with technical support from DHS S&T, IEEE, IEEE Boston Section, and IEEE-USA and organizational support from MIT Lincoln Laboratory, Raytheon, Battelle, and MITRE, this year's event will once again showcase selected technical paper and posters highlighting emerging technologies in the areas of:

Cyber Security

Biometrics & Forensics

Land and Maritime Border Security

Disaster and Attack Preparedness, Mitigation, Recovery, and Response

We are currently seeking technical paper, poster and tutorial session submissions in each of the areas noted above. Papers examining the feasibility of transition to practice will also be considered. Submissions should focus on technologies with applications available for implementation within about five years. All areas will cover the following common topics:

- Strategy and threat characterization, CONOPs, 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, Posters & Tutorials, 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/HST2017/

Important Dates

Paper Abstract Deadline:	October 17, 2016
Paper, Poster and Tutorial Acceptance Notification	December 1, 2016
Final Paper Submission Deadline:	March 1, 2017

All deadlines are by midnight Eastern Time.

Organizing Committee

General Chair:	James Flavin, MIT Lincoln Laboratory
Deputy Chair:	Fausto Molinet, Matrix Internationale
Technical Chair:	Gerald Larocque MIT Lincoln Laboratory
Tutorials Chair:	Anthony Serino, Raytheon
Business Program Chair:	Andrea Marsh, Battelle
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Land and Maritime Border Security Karen Panetta, Tufts University Rich Moro, Raytheon John Aldridge, MIT Lincoln Laboratory

Cyber Security
Claire Applegarth, Mark Peters, MITRE

Please take this short survey, https://www.surveymonkey.com/r/B8R2DYL

Photonics Society – 6:30PM, Thursday, 16 June

Leveraging Advances in CAomputational Electrodynamics to Enable New Kinds of Nanophotonic Devices

Ardavan Oskooi, Simpetus, San Francisco, CA

Advances in computational electrodynamics have the potential to enable fundamentally new kinds of nanophotonic devices which are based principally on complex, non-analytical wave-interference effects.

Powerful, flexible, open-source software tools have now been made available for use in large-scale, parallel computations to model the interaction of light with practically any kind of material in any arbitrary geometry. These recent developments in computational capability make possible the investigation of various emergent structures, materials, and physical phenomena that were previously beyond the reach of pencil and paper analytical methods as well as less versatile and even less accessible commercial software tools.

I will demonstrate how such advances in finite-difference time-domain (FDTD) methods for computational electromagnetism via an open-source software package known as MEEP can lead to entirely new designs for light trapping in nanostructured thin-film silicon solar cells as well as light extraction from nanostructured organic light-emitting diodes (OLEDs).

I will then describe efforts by our startup to leverage scalable, high-performance computing (HPC) in the public cloud for large-scale device design.
Ardavan Oskooi (http://ab-initio.mit.edu/~oskooi) is the Founder and CEO of Simpetus (www.simpetuscloud.com), a San Francisco-based startup with a mission to propel computational simulations to the forefront of photonics research and development. Ardavan received his Sc.D. from MIT where he worked with Professors Steven G. Johnson and John D. Joannopoulos (thesis: Computation & Design for Nanophotonics) to develop MEEP (ab-initio.mit.edu/meep). Ardavan has published 13 first-author articles in peer-reviewed journals and a book “Advances in FDTD Computational Electrodynamics: Photonics and Nanotechnology’” with Professors Allen Taflove of Northwestern University and Steven G. Johnson. He has a masters in Computation for Design and Optimization from MIT and completed his undergraduate studies, with honors, in Engineering Science at the University of Toronto. Prior to launching Simpetus, Ardavan worked with Professors Susumu Noda at Kyoto University and Stephen R. Forrest at the University of Michigan on leveraging MEEP to advance the frontier of optoelectronic device design.

Meeting Location: MIT Lincoln Laboratory, 3 Forbes Road, Lexington, MA

Directions to Forbes Rd Lincoln Laboratory: (from interstate I-95/Route 128)
• Take Exit 30B onto Marrett Rd in Lexington – Merge into left lane
• Make the first Left onto Forbes Rd.
• Proceed straight through the small rotary and enter the parking lot.
• The entrance is on your right.

To assist us in planning this meeting, please pre-register at http://www.ieeeboston.org/Register/.

Please take this short survey, https://www.surveymonkey.com/r/B8R2DYL

Entrepreneurs' Network, Cambridge Meeting - 6:00PM, Tuesday, 21 June

Open Mic Night - Entrepreneurs Share Startup Stories

Back by popular demand is the annual Open Mic Night, where entrepreneurs share startup stories to help fellow entrepreneurs! Share your startup success story or your invaluable lessons learned from a setback or failure, all in a good faith effort to pay it forward to other founders, startup team members, and entrepreneurs.

Open Mic Night gives you up to three minutes to present your story in front of a panel of expert judges and an engaged audience. Entrepreneurs get an opportunity to practice their presentation skills in front of an unknown audience, get feedback from the panel of experts, and network with attendees. There is ample time to network over pizza and beverages before and after the event. You just never know who you will meet ... really! The event will be held right in the heart Cambridge's innovation hub, Kendall Square, at Microsoft Technology Center.

To celebrate Boston ENET's 25th year of educating and empowering entrepreneurs, a silver desktop organizer will be awarded to winners in the following categories: 1) Audience Favorite, by vote of the audience, 2) Titanic, a startup that was doomed from start, but gives life saving lessons, 3) Unicorn, a magical surprise, and 4) Rising Phoenix, despite all odds, the startup or team that rose out of the ashes to become a success.

Sign up now to share your startup story at the annual Boston ENET's Open Mic Night! To pitch at Open Mic Night, please email maureenmansfield@post.harvard.edu or call/text 781-369-2020 or 857-333-1876.

Panelists: Our panel of experts will be announced before Open Mic Night. These panelists are drawn from our community of pitch coaches, angel investors, VC investors, entrepreneurs whose startups have scaled, and service providers and business consultants who work in the entrepreneurial space.

Check for Updates: Boston Entrepreneurs' Network Website at (http://www.boston-enet.org)

Meeting Co-Organizer: Maureen Mansfield, ALM, Chief Contract Officer, MANSFIELD LAW, MANSFIELD LAW, Twitter: @MaureenManALM.

Maureen Mansfield, ALM, is a business development, corporate development, and strategy professional for companies in the the private and public sectors. Currently, Maureen is at Mansfield Law where she works with entrepreneurs, inventors, artists, startups, and emerging growth companies. Previously, she cofounded a boot strapped startup that has progressed to a $10 million term sheet agreement. She currently serves as an advisor and mentor for several startups and related entrepreneurial ventures. She is a member of the Executive Board of The Boston Entrepreneurs' Network (Boston ENET), where she leads Alliance Partnerships.

Prior to joining Mansfield Law in 2009, Maureen was a New England Director of Business Development for the award-winning firm Syska & Hennessy, Inc., With S&H, she focused on business development and corporate management strategy for major accounts locally, nationally, and internationally. After helping to bring in its most successful year, Maureen was awarded a seat on the board of directors. Previously, Maureen was a Senior National Accounts Manager at Abbott Laboratories where she focused on contract compliance, increasing revenues, and sales. She initiated and innovated contract management and auditing procedures that resulted in a new

nationwide cost center the produced annual savings of over $1 million. She also helped cofound two holiday charities that continue today.

Maureen received two BAs from the University of Iowa., one in Journalism and one in Communication. Maureen also received a Master of Liberal Arts (ALM) in Management with a Concentration in Finance & Control from Harvard University.

Meeting Co-Organizer: Dr. Nathalie Goletiani, MD, Founder and CEO, POWERFEM Therapeutics http://www.powerfemtherapeutics.com

Dr. Goletiani is the Founder and Chief Executive Officer of POWERFEM Therapeutics, a company devoted to novel, networked treatment methods for the care of those suffering from substance abuse and mental illness. Her extensive clinical research into the hormonal effects of nicotine, opioid and cocaine use lead her to new concepts and mechanisms in understanding and treating psychiatric disorders, in particular, disorders experienced by underserved female populations. At Harvard's McLean Hospital, she was charged with rebuilding and responsible for all the operations of Clinical Research Program, including simultaneously running multiple clinical trials. Based on her patented work, she founded POWERFEM Therapeutics, an independent company devoted to creating new treatments and healthcare solutions. POWERFEM incorporates novel disease concepts and treatments to design cost-effective, integrated mental and substance abuse care solutions across multiple provider networks.

Dr. Goletiani has received numerous national and international awards including most recently the Harvard Livingston Award for the investigation of complex underlying mechanisms in the neurobiology of women. She also received a Harvard University Zinberg Fellowship specifically to support her research on alcohol and drug use disorders. Her research provides a valuable basis for psychotherapeutic public policy decision making on issues of substance abuse and the integrated treatment of mental illness. She has extensively published the results of her research in peer reviewed journals.

Nathalie completed basic and clinic felowships at the Harvard School of Public Health and at Harvard Medical School. In addition, she has been trained at and conducted medical research at Tbilisi State Medical University, University of Amsterdam and King's College in London.

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.

Where: Microsoft Technology Center, 255 Main Street /One Cambridge Center, Cambridge, MA. 02142 Phone: (781) 487-6400 The One Cambridge Center GENERAL ENTRANCE is on 255 Main Street, Cambridge, across from the Kendall Square Post Office. Exit Kendall Square T Station to Main Street. Once you exit the station, head down the Marriott side of Main Street going in the direction of Boston/the Longfellow Bridge. The One Cambridge Center entrance is located next to the Boston Properties entrance. Enter through the glass revolving door and proceed to the Microsoft facilities on the second floor. Note: There is also a direct Microsoft entrance across from the rotary at the confluence of Main Street and Broadway. See also: http://www.microsoft.com/en-us/mtc/locations/boston_directions.aspx

PUBLIC TRANSPORTATION: Travel Mass RT 2 East from RT 128 Exit 29A directly to the Alewife MBTA garage. Park at the Alewife Garage ($7.00) on the MBTA subway Red Line. Take the inbound train (the only one available there) for 15 minutes to Kendall / MIT. The entrance to the Microsoft Technology Center is directly across the street from the station.

Admission: General admission is $10. Free to ENET members. Free pizza and soft drinks will be served. Advanced registration is requested but not required.

Please take this short survey, https://www.surveymonkey.com/r/B8R2DYL