BOSTON

THE REFLECTOR

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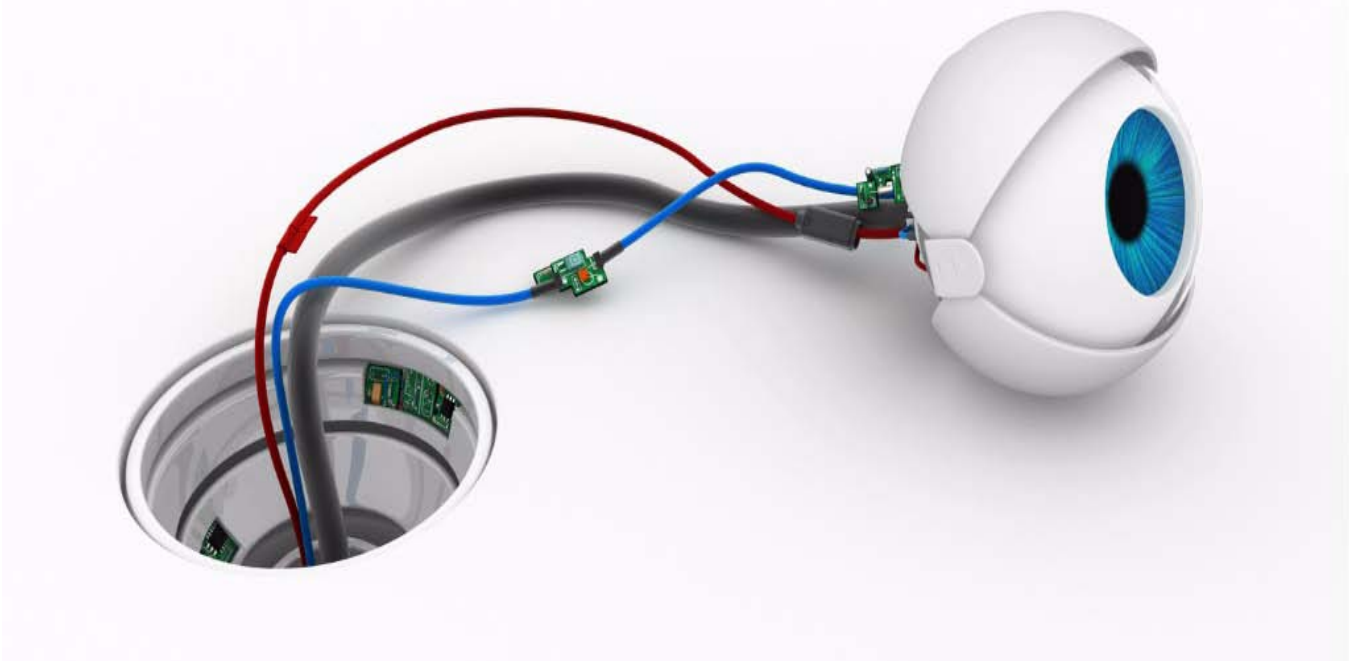

2018 Outstanding Section Membership Recruitment and Retention Performance

Boston Section

IEEE
Advancing Technology for Humanity

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To Recent Graduates

Marjorie Pickard, Member At-Large, Boston Section Excom

June ushers in warmer temperatures, sunshine, and legions of recent graduates frantically sending out job applications from their parents' houses. A lucky few had offers before graduation but many are now hoping to land a job before their first student loan payment is due. I was in exactly the same position a year ago after I graduated from the University of Rhode Island so I understand the excitement and stress of the interview process.

One of the most surprising aspects of the job search was seeing the wide range of possible careers for electrical engineers. College courses are understandably theory heavy which can give the impression that all engineering jobs are like that. After graduation, though, I discovered there were many other avenues available. Did I want to be a project manager or an applications engineer or a test engineer? Would I rather work in pharmaceuticals or power plants? The choices seemed endless!

As a kid when I imagined being an electrical engineer I thought that I would be working in a Google-like office building with catered lunches and nap pods. In my head I saw myself soldering circuit boards or designing the next Mars rover. I was going to do something revolutionary, change the world for the better, and love every minute of it. As I started job hunting, that revolutionary job seemed to get farther and farther out of my reach. None of the entry level jobs on Indeed, LinkedIn, or other job sites were interesting to me. Most seemed … boring. Since Tesla CTO was not an entry level position, I had to scale back my expectations.

The job search also did a number on my ego. While my classmates were accepting offers I was still sending out application after application. It felt like everyone else had found their dream job and I couldn't even get a call back. I am sure many people were in the same situation, but still, job hunting can be a very isolating experience. Getting rejection letters is disheartening, but there are many reasons a person might not get a job so it's important not to take it personally and to keep your spirits high.

Of course, I eventually did get interviews and job offers, but the job I eventually accepted was not in the field in which I expected to work. Coming out of school it is next to impossible to know for sure which industry you are best suited for. While most members of the IEEE have an electrical engineering degree or background, their fields of expertise can be incredibly diverse. All you have to do is glance at the list of IEEE Societies to see that there is a staggering array of engineering specialties that fall under the IEEE umbrella.

So, in an effort help recent graduates I created a list of tips and advice from someone who recently went through it.

1. Don't Panic! Stress will only hurt you. It's better to go into an interview calm and clear headed. If you have a bad interview (it happens to everyone), try to learn from it so you can do better in the next interview. Unfortunately interviewing is an acquired skill, so it may take a while before you feel comfortable.

2. You don't have to take the first job that is offered to you. If at any point in the process you realize you do not want the job, it's ok to back out. When sending

out applications, people tend to focus on matching their qualifications to the job and don't question whether or not they would actually enjoy the work it involves.

3. Explore your options. You may have loved electronics class, but don't just search for 'electronics engineering' jobs. There are so many different opportunities out there and you shouldn't box yourself in too soon. I recommend applying to jobs you aren't sure you want or don't think you are qualified for. At worst, you get extra interview practice, and at best you could find the dream job you didn't know you were looking for.

The IEEE can be very helpful in completing tip number three. I wish I was a member of the IEEE while I was job searching because it would have been helpful to be exposed to the breadth of possible careers. There is a publication about every topic in electrical and computer engineering imaginable and the affinity groups are full of engineers willing to share their experiences and offer advice.

I wish the class of 2019 the best of luck starting the next phase of their lives!

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

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www.array2019.org

Conference Registration Opens May 1, 2019

See www.array2019.org for details

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
- Dual-Polarization Weather Radar Arrays
- Wideband Array Apertures
- Reflecting on the technical contributions of Hans Steyskal

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v.2.2

IEEE Boston Section Online Courses:

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

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

System Verilog 101: Design Constructs
Full course description and registration at ,
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High Performance Project Management
Full course description and registration at ,
http://ieeeboston.org/high-performance-project-management-online-course/

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

Embedded Linux Optimization - Tools and Techniques
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http://ieeeboston.org/design-thinking-technical-work-line-course/

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

June Chapter Meeting Summary

Geoscience and Remote Sensing Society (GRSS) and Aerospace and Electronic Systems Society (AESS) 6:00PM, Tuesday, 4 June

Miniaturized microwave radiometers deployed on nanosatellites in Low Earth Orbit

Dr. Angela Crews. Miniaturized microwave radiometers deployed on nanosatellites in Low Earth Orbit (LEO) are now demonstrating the ability to provide science-quality weather measurements. For instance, the Micro-sized Microwave Atmospheric Satellite-2A (MicroMAS-2A) is a 3U CubeSat launched in January 2018 that provided the first CubeSat microwave atmospheric sounder data from orbit. The goal of having cost-effective miniature instruments distributed in LEO is to field constellations and improve temporal and geospatial coverage. Meeting Location: MIT Lincoln Laboratory, 3 Forbes Rd, Lexington, MA 02421. **See Page 9.**

Entrepreneur's Network – 6:30PM, Tuesday, 4 June

M&A and Exit Strategies

What is your exit plan? Do you know how to prepare for a merger or acquisition? If these questions raised curiosity, this panel discussion is for you. The panel is comprised of experts with legal, business valuation, corporate financing, deal execution, and business operations experience. The panel discussion includes topics on; creating an exit strategy, preparing finances for proper valuation, determining the correct tax strategy, how to complete an exit deal while keeping your sanity, and preparing for life after the deal is done. Meeting: Location Constant Contact, Inc., Reservoir Place, 3rd Floor Great Room, 1601 Trapelo Rd., Waltham, MA. **See Page 10.**

Robotics and Automation Society – 6:30PM, Wednesday, 12 June

Using Automation to Optimize Small-Craft Energy Consumption - Dr. Kenn Sebesta

Join us to elect a new leadership for the Boston Chapter of the IEEE Robotics and Automation Society, and for a talk by Dr. Kenn Sebesta on the use of automation to optimize small-craft energy consumption. Dr. Sebesta is an accomplished roboticist and autonomy engineer. Large ocean-going craft are already well optimized. Further optimizations mostly happen on the logistics and path planning front, or even earlier at the design stage. Small-craft have been largely left out of the optimization discussion as they are owned and operated by individuals instead of teams. Small-craft also pose challenges because they are not maintained with as much rigor, and their operating schedule and environment is less regimented. Lastly, there is little funding or opportunity available to replace a boat for a more efficient hull design, or replace the engine for a more efficient powerplant. Meeting Location: Community Room,150 Staniford St, Boston, MA 02114. **See Page 12.**

Reliability Society – 5:30PM, Wednesday, 12 June

Reliability of a High-Power Electron-Beam Accelerator: A Federal Case

Daniel J. Weidman Ph.D. – MIT Lincoln Labs

High-power electron-beam (e-beam) accelerator facilities process many types of products for many applications, such as sterilizing medical supplies, changing the color of semi-precious gemstones, and recycling Teflon insulation from wires. Maintenance of an e-beam accelerator requires a full-time effort. First I will provide a basic introduction to e-beam accelerator physics, engineering, and applications. Then I will describe my experience as an expert witness in a case in which the reliability and maintenance of an e-beam accelerator was the subject of a lawsuit in Federal court. Meeting Location: MIT Lincoln Laboratory, 3 Forbes Rd Lexington, MA 02421.

See Page 13.

Computer Society and GBC/ACM – 7:00PM, Thursday, 20 June

Weakly Supervised Machine Learning at Industrial Scale - Stephen Bach, Brown

Labeling training data is one of the most costly bottlenecks in developing machine learning-based applications. Weak supervision, using less expensive but noisier sources of supervision than hand-labeled data, has the potential to relax this bottleneck but introduces new challenges around managing these sources. In this talk, I'll describe a new system, Snorkel DryBell, in production at Google for weakly supervised machine learning at industrial scale. Meeting Location: MIT Room 32-G449 (Kiva), Cambridge, MA. **See Page 14.**

Call for Course Speakers/Organizers

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

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

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

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

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

Geoscience and Remote Sensing Society (GRSS) and co-sponsoring Aerospace and Electronic Systems Society (AESS) - 6:00PM, Tuesday, 4 June

Miniaturized Microwave Radiometers Deployed on Nanosatellites in Low Earth Orbit

Speaker: Dr. Angela Crews

MIT Lincoln Laboratory, 3 Forbes Rd, Lexington, MA 02421, USA

Miniaturized microwave radiometers deployed on nanosatellites in Low Earth Orbit (LEO) are now demonstrating the ability to provide science-quality weather measurements. For instance, the Micro-sized Microwave Atmospheric Satellite-2A (MicroMAS-2A) is a 3U CubeSat launched in January 2018 that provided the first CubeSat microwave atmospheric sounder data from orbit. The goal of having cost-effective miniature instruments distributed in LEO is to field constellations and improve temporal and geospatial coverage. The Time-Resolved Observations of Precipitations structure and storm Intensity with a Constellation of Smallsats (TROPICS) is a constellation of six 3U CubeSats, based on MicroMAS-2A, scheduled to no earlier than 2020. Each CubeSat hosts a scanning 12-channel passive microwave radiometer in W-band, F-band, and G-banda. TROPICS will provide a temporal resolution of less than 60 minutes and will provide high value investigations of inner-core conditions for tropical cyclones. Calibration for CubeSats presents new challenges as standard blackbody targets are difficult to effectively shroud on a CubeSat platform. Instead, internal noise diodes are used for calibration on CubeSats. In order to provide state of the art calibration for CubeSats, methods must be developed to track and correct noise diode drift. We quantitatively determine the radiometric accuracy of MicroMAS-2A and compare it to state of the art instruments to provide an assessment of CubeSat performance.

Dr. Angela Crews received a B.S. in aerospace engineering from the United States Naval Academy, Annapolis, MD in 2004. She received dual M.S. degrees in aeronautical engineering and astronautical engineering from the Air Force Institute of Technology, Dayton, OH in 2012. From 2004 to 2015, she served in the United States Marine Corps (USMC) as an EA-6B Electronic Countermeasures Officer (ECMO) and as a Space Operations Officer. Crews began her Ph.D. at MIT in 2015 as a member of the STAR Lab in the AeroAstro Department, and she will be graduating this June. At MIT, Crews has participated in STAR Lab laser communication CubeSat projects KitCube, FLARE, and CLICK. Her research is focused on calibration and validation for the CubeSat microwave radiometer missions MicroMAS-2 and TROPICS.

Meeting Location: MIT Lincoln Laboratory, 3 Forbes Rd, Lexington, MA 02421, USA

Entrepreneur's Network – 6:30PM, Tuesday, 4 June

M&A and Exit Strategies

Meeting: 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

What is your exit plan? Do you know how to prepare for a merger or acquisition? If these questions raised curiosity, this panel discussion is for you. The panel is comprised of experts with legal, business valuation, corporate financing, deal execution, and business operations experience. The panel discussion includes topics on; creating an exit strategy, preparing finances for proper valuation, determining the correct tax strategy, how to complete an exit deal while keeping your sanity, and preparing for life after the deal is done.

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:

Attorney Tal Unrad – Partner at Burns Levison
Attorney Tal Unrad joined Burns & Levinson's Corporate Group in 2008. His practice focuses on corporate transactions, including mergers and acquisitions, start-up structuring and financing, e-commerce, and distressed transactions. Attorney Unrad is also active in the firm's Restructuring Practice and has represented numerous clients in Chapter 11 bankruptcy proceedings.

Attorney Unrad represents both domestic and foreign buyers and sellers in mid-market asset and stock purchase transactions across various industries ranging in value from $1 million to $100 million. He works regularly with venture capital and private equity firms in their capacity as acquirers and sellers of businesses. Attorney Unrad is also active in the Boston start-up scene and has helped a number of companies launch their visions into successful companies. He frequently works with entrepreneurs and emerging companies to establish their initial business presence and to help obtain early-round and subsequent financing.

Brendan Kiernan – Partner at Mirus Capital Partners
Brendan Kiernan has been a Partner with Mirus Capital Advisors since 2004. He is experienced in business valuation, corporate finance advising and deal execution, Mr. Kiernan leads Mirus' Valuation practice, as well as co-leading sell-side and buy-side M&A mandates.

He has made significant contributions to several dozen client transactions and engagements during his tenure with the firm. His work has focused primarily on clients in the technology, business services, and industrial and distribution sectors.

Seth Webber – Principal at BerryDunn
Seth Webber has worked at BerryDunn since 2007. He brings a unique combination of valuation, consulting, and operations skills to bear for his clients, helping them navigate challenging issues related to business valuation. As head of the Valuation Group at BerryDunn, Mr. Webber leads a diverse team of valuation experts that draw on the deep resources of the company to help clients address their needs.

Mr. Webber is heavily involved in working with clients

to define and execute transition plans, including valuations relating to ESOPs, management buyouts, sales, and gifting. He also provides expert witness services to clients and attorneys on business valuation, economic damages, and lost profits.

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.

Co-Meeting Organizer:
William Mansfield, Secretary Of Boston ENET

Attorney Mansfield is a patent attorney and is a lawyer in MA & NY; high bar exam scores allowed him to waive into 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.

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://boston-enet.org/event-3097511/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

Robotics and Automation Society – 6:30PM, Wednesday, 12 June

Using Automation to Optimize Small-Craft Energy Consumption

Speaker: Dr. Kenn Sebesta

PLEASE NOTE: Boston RAS Chapter Elections will be held at this meeting. please join us to vote in this election.

Join us to elect a new leadership for the Boston Chapter of the IEEE Robotics and Automation Society, and for a talk by Dr. Kenn Sebesta on the use of automation to optimize small-craft energy consumption. Dr. Sebesta is an accomplished roboticist and autonomy engineer, you can see some of his previous talks here: https://tedxbeaconstreet.com/speakers/kenneth-sebesta/.

Large ocean-going craft are already well optimized. Further optimizations mostly happen on the logistics and path planning front, or even earlier at the design stage. Small-craft have been largely left out of the optimization discussion as they are owned and operated by individuals instead of teams. Small-craft also pose challenges because they are not maintained with as much rigor, and their operating schedule and environment is less regimented. Lastly, there is little funding or opportunity available to replace a boat for a more efficient hull design, or replace the engine for a more efficient powerplant.

Optimization requires knowing what and how: what have we got and how are we going to control it? In the case of a small-craft, identifying the what is challenging. Boat motion and stability through a troubled sea is completely different from a calm sea, currents can sap or double the boat speed, the wind can push the boat around, and a boat full of fish sits much lower in the water than an empty one. We can answer these questions, and more, by the use of Kalman filtering.

Once we have thoroughly characterized a boat, we can turn to optimization algorithms, such as the Pontryagin Maximum Principle. These let us give the captain real-time commands which can reduce fuel consumption or increase speed. The advantage is that the commands are dynamically tailored to the specific boat under the specific conditions. The strategy is generalizable both to motorboats and to sailboats.

Dr. Kenn Sebesta - With a Ph.D. in controls, Kenn Sebesta designs robots and algorithms for scientists and engineers. He is a co-founder of one of the world's largest open-source autopilot initiatives, and has recently shifted into the marine space. Years of experience on the water, skippering everything from racing trimarans to MIT's 116-year-old Mashnee, show convincingly that the same paradigm shift which powered the drones explosion is now possible in the marine environment. Kenn is currently exploring how to develop situationally-explicit optimization algorithms for small craft, and in his spare time muses about the wealth of other exciting opportunities on-- and under-- the water.

Meeting Location: Community Room,150 Staniford St, Boston, MA 02114.

Registration: https://rasboston.app.rsvpify.com/

Reliability Society – 5:30PM, Wednesday, 12 June

Reliability of a High-Power Electron-Beam Accelerator: A Federal Case

Daniel J. Weidman Ph.D. – MIT Lincoln Labs

Meeting Location: MIT Lincoln Laboratory, 3 Forbes Rd Lexington, MA 02421

High-power electron-beam (e-beam) accelerator facilities process many types of products for many applications, such as sterilizing medical supplies, changing the color of semi-precious gemstones, and recycling Teflon insulation from wires. Maintenance of an e-beam accelerator requires a full-time effort. First I will provide a basic introduction to e-beam accelerator physics, engineering, and applications. Then I will describe my experience as an expert witness in a case in which the reliability and maintenance of an e-beam accelerator was the subject of a lawsuit in Federal court.

Daniel J. Weidman, Ph.D. - Dan received his Bachelor's degree in Physics from MIT in 1985, and Ph.D. in Electrical Engineering from the Univ. of Maryland, College Park. He has authored or co-authored more than 20 journal articles and technical reports in publications and more than 60 conference presentations. He started working with electron beams more than 30 years ago, as an undergraduate studying free-electron lasers and, as a grad student, e-beam propagation through air.

Experience in e-beams:

- Food preservation, water remediation, and platelet shelf-life extension at Science Research Laboratory as a Senior Research Scientist
- Building and testing composite-curing e-beam systems at Electron Solutions, Inc. and then installing them at NASA MSFC and Boeing Radiation Effects Laboratory
- Scanning electron microscopes at KLA-Tencor, as a Systems Design Engineer
- Metallization of semiconductor wafers by physical vapor deposition at NEXX Systems, Reliability Engineer
- e-beam emitter design and manufacturing at Advanced Electron Beams, as the Principal Process Engineer

Dr. Weidman has since been working at MIT Lincoln Laboratory as a member of the Technical Staff.
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".

Computer Society and GBC/ACM – 7:00PM, Thursday, 20 June

Weakly Supervised Machine Learning at Industrial Scale

Stephen Bach, Brown

This talk will be webcast on the MIT CSAIL Youtube channel http://www.youtube.com/channel/UCYs2iUgksAhgoidZwEAimmg/live beginning at 7pm.

Labeling training data is one of the most costly bottlenecks in developing machine learning-based applications. Weak supervision, using less expensive but noisier sources of supervision than hand-labeled data, has the potential to relax this bottleneck but introduces new challenges around managing these sources. In this talk, I'll describe a new system, Snorkel DryBell, in production at Google for weakly supervised machine learning at industrial scale. Snorkel DryBell builds on the Snorkel framework (snorkel.stanford.edu), extending it in three critical aspects: flexible, template-based ingestion of diverse organizational knowledge, cross-feature production serving, and scalable, sampling-free execution. On three classification tasks at Google, we find that Snorkel DryBell creates classifiers of comparable quality to ones trained with tens of thousands of hand-labeled examples, converts non-servable organizational resources to servable models for an average 52% performance improvement, and scales to millions of training examples.

Stephen Bach is an assistant professor in the computer science department at Brown University. Previously, he was a visiting scholar at Google, and a postdoctoral scholar in the computer science department at Stanford University advised by Christopher Re. He received his Ph.D. in computer science from the University of Maryland, where he was advised by Lise Getoor. His research focuses on statistical machine learning methods that exploit high-level knowledge like rules and programs. Stephen's thesis on probabilistic soft logic was recognized with the University of Maryland's Larry S. Davis Doctoral Dissertation Award. His work on the Snorkel project for weakly supervised machine learning was recognized with a Best of VLDB 2018 selection.

This joint meeting of the Boston Chapter of the IEEE Computer Society and GBC/ACM will be held in MIT Room 32-G449 (the Kiva conference room on the 4th floor of the Stata Center, building 32 on MIT maps) . You can see it on this map of the MIT campus.

Up-to-date information about this and other talks is available online at http://ewh.ieee.org/r1/boston/computer/. You can sign up to receive updated status information about this talk and informational emails about future talks at http://mailman.mit.edu/mailman/listinfo/ieee-cs, our self-administered mailing list.

IEEE Boston Section Social Media Links:

Twitter: https://twitter.com/ieeeboston

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2019 MIT IEEE Undergraduate Research Technology Conference

Call for Submissions

Conference: Oct 11-13, 2019
Massachusetts Institute of Technology, Cambridge MA, USA
Early paper submission deadline/notification of acceptance: July 7, 2019/August 4, 2019
Paper submission deadline/notification of acceptance: August 4, 2019 at 11:59 PM EDT/September 8, 2019
Poster and lightning talk submission deadline/notification of acceptance: September 8, 2019 at 11:59 PM EDT/September 15, 2019
Submit to: https://ieee-r1-studentconference.myreviewroom.com

The conference theme is “Meet Innovative Technology,” and the eight technical tracks include:

1. Machine Learning and Artificial Intelligence
2. Security and Communications
3. Human-Computer Interaction and Graphics
4. Robotics and Controls
5. BioEECS and Applied Physics
6. Computer Systems
7. Circuits, Materials, and Nanotechnologies
8. Theoretical Computer Science and Mathematics

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 be no longer than 4 pages, single-spaced, with a minimum of 10 point font, and submissions may include figures, illustrations, and graphs. Abstract submissions for the poster and lightning talks are limited to 500 words.
All submissions will be peer-reviewed by faculty, graduate students, and industry professionals. Submissions are online, with a deadline of August 4, 2019. Notification of acceptance will be sent via email by September 8, 2019.
Please join the mailing list (MIT-Conference@ieee.org) for more information and updates on submission, the technical program, registration, and accommodation.
A conference proceeding of all the accepted papers that have been presented at the conference may be published and included in the IEEE Xplore journal. Electronic and online media containing all accepted submissions will be distributed to all registered attendees.

MEET INNOVATIVE TECHNOLOGY

Sponsored by the MIT IEEE Student Branch and IEEE Boston Section
http://ieee.scripts.mit.edu/conference

Envisioning a technical conference targeted towards undergraduate students all over the globe, the MIT IEEE Student Branch in 2015 inaugurated the IEEE MIT Undergraduate Research Technology Conference. This year we are organizing it again with the goal to make the conference a venue where undergraduate students can meet to present, discuss, and develop solutions advancing technology. Participants can attend a rich program with renowned speakers, technical sessions, a student design competition, exhibits, networking, and social activities, as well as a great opportunity for students to interact with leading industry experts. Our 2017 conference had 267 attendees, including several internationals and students from across the US, with a technical paper acceptance rate of 38%.

3 Days of
Keynotes, Technical Sessions & Workshops/ Product Demos

SPEAKERS


Mike Violette


Anil Pandy


Caroline Chan


Eli Bookner


Eric Bogatin


James Drewniak


Joseph Guerci


Scott McMorrow


Ken Wyatt


Robert Smith


Scott Best


Steve Sandler

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EDI CON ONLINE

www.edicononline.com
September 10-12, 2019

Submission Deadline Extended until June, 2019!!

Call for Papers and Posters

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:	**EXTENDED TO JUNE 10, 2019**
Paper and Poster Acceptance Notification:	July 1, 2019
Final Paper Submission Deadline:	September 16, 2019

Organizing Committee

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Cyber Security	Hong Liu, UMass Dartmouth
	Firas Glaiel, Raytheon
	Thomas Edgar, Pacific Northwest National Laboratory

The IEEE High Performance Extreme Computing Conference (HPEC '19) will be held in the Greater Boston Area, Massachusetts, USA on 24 – 26 September 2019

Presentations that describe advances in high performance extreme computing technologies will be presented at this conference which is to be the premier conference in the world on the confluence of HPC and Embedded Computing.

Confirmed Distinguished Speakers:

Marc Hamilton (Nvidia VP of Solutions Architecture and Engineering) - GPU Accelerated Machine Learning

Honorable Zachary J. Lemnios (IBM VP Physical Sciences and Government Programs) - HPC systems for Machine Learning, Natural Language Processing and Graph Analytics

Stan Reiss (Matrix Partners) - Brilliant Technologists Building Cool Stuff

Prof. Julian Shun (MIT CSAIL) - Large-Scale Graph Processing

Mark Hamilton (Microsoft) - Microsoft MLSpark: Unifying Machine Learning Ecosystems at Massive Scales

Jaya Shankar (Mathworks) - Deploying High-Performance Deep Learning Applications

GraphChallenge submission deadline is July 1, 2019 – SUBMIT NOW!

Challenges such as YOHO, MNIST, HPC Challenge, ImageNet, and VAST have played important roles in driving progress in fields as diverse as machine learning, high performance computing, and visual analytics.

GraphChallenge encourages community approaches to developing new solutions for analyzing graphs and sparse data derived from social media, sensor feeds, and scientific data to enable relationships between events to be discovered as they unfold in the field.

IEEE-HPEC.ORG