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TABLE OF CONTENTS

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.

What can the Boston Section do for you?

Len Long, Chair, IEEE Boston Section

Back when I was serving as chapter chair of the local chapter of the EMC Society I was asked what the Boston Office of the Section did for the Chapter. My answer then is the same now as it was then. Here is a list:

- Organize professional development and education courses

  A rich selection of more than 45 face-to-face courses which are designed to help in career development of local engineers

  A new series of online course which are designed to help in career development of engineers world-wide

- Provide day-to-day support of 29 Chapters and Affinity Groups supporting IEEE Societies

- Provide a central point of contact for over 8,000 engineers in the Boston Section with over 150 volunteers.

- Solicits and engages volunteers where needed

  Solicits articles of timely interest to engineers and publishes them in this digital magazine. The Office also provides meeting notices and summaries

  Solicits conference needs for over 7 local conferences per year and helps volunteers design and implement them

- Arranges hotel and other conference venues
  - Food & Beverage
  - Rooms
  - Parking
  - Poster Sessions
  - Lecture halls

- Organizes social activities such as the Annual Meeting and Milestone events
  - Coordinates and guides the conference program committee
  - Advises committee on existence of potential sponsors
  - Hosts entrepreneurial events
  - Assists engineers in researching what is needed in IEEE Headquarters
  - Balances the Section books
  - Organizes Executive Committee and other timely meetings
  - Hosts in-company training courses
  - Recommends highly qualified speakers for training and social events

I was asked what kind of large organization was necessary to support such an in-depth and broad effort. When I told them that Bob Alongi and Karen Safina(sp?) worked in a little office in Wakefield to accomplish all of that, there was disbelief. Yes, Bob is known for his ability to juggle many balls in the air and is very efficient in his efforts because he is well known to all the chapter chairs, most hotel chains, and is an expert in finding technical and administrative resources.

We are indeed very fortunate to be able to enjoy one of the few staffed offices in the IEEE which contributes to the Boston Sections highly regarded reputation. When I assume the Chair of the Boston Section in January it is assuring to know that I have such a valuable resource to continue the valuable work of the Section.

Letters to the editor can be sent to, ieeebostonsection@gmail.com

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

IEEE Boston Section Social Media Links:

Twitter: https://twitter.com/ieeeboston

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

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

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

Entrepreneurs' and Consultants' Networks – 6:30PM, Tuesday, 3 January

Product Development in Life Science and High Tech Startups

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

When any intrepid, smart, maybe even somewhat geeky entrepreneur gets a great idea for a new technology-based product, there are a few steps to take before achieving sustainable profitability; steps that may include applied research, product development research and production. Assuming the envisioned product is something that the world wants or needs, whether in the life sciences or the high tech sector – or perhaps a little of both, lots of questions need be considered in defining the path forward. What is the target market? Is it direct to consumer or B to B? What kind of user interface will be best – cloud infrastructure, phone app, specialist service provider (e.g., hospital), or something else? Is there a regulatory approval path to consider? Is there a need for prototyping and manufacturing? Can it be done independently or is a large company partner needed?

Join us in Waltham to gain insights on these topics, and more, with our panel of exceptionally experienced med tech and high tech entrepreneurs who will share their wisdom in what promises to be a lively, enlightening discussion.

Speaker: Steve Owens, founder of Finish Line PDS (www.finishlinepds.com) has over 30 years of successful product development experience in many different industries and is a sought-after adviser and speaker on the subject. Steve has founded four successful start-ups and holds more than twenty-five patents. Steve has worked for companies such as Halliburton and Baker Hughes. He has experience in the Internet of Things, M2M, oil and gas, and industrial controls. Steve's insight into the product development process has generated millions of dollars in revenue for start-ups and small businesses. Finish Line PDS provides product and technology development management, mechanical design, and development of electronics, firmware and sensors, as well as design verification testing and other services. Finish Line PDS is a proud sponsor of the Boston ENET.
https://twitter.com/FinishLine_PDS

Speaker: Paul Hartung is the Founder, President and CEO of Sonivance Inc. Paul is a long time life sciences and technology executive with a proven track record in launching successful startup businesses and leading Fortune 500 organizations. Prior to Sonivance, Paul served as President & CEO of Cognoptix, which developed an innovative eye scan for early detection of Alzheimer's disease. Paul was previously Vice President of Operations at Winphoria Networks, a successful mobile communications startup acquired by Motorola. He serves on the Board of Directors of SemiNex Corporation, a manufacturer of semi-conductor lasers, and Medical Development Group (MDG), a leading medical technology professional organization, and the Business Advisory Board of Metria Innovations and Forsythe Institute, and mentors entrepreneurs at MIT Venture Mentoring Service, Mass BioTech Council's MassCONNECT, Tech Sandbox and The

Capital Network. He has extensive experience in technology and medical device industries, including managing manufacturing for Summit Technology, Inc., a leading developer of the LASIK procedure and other laser eye correction procedures. He has held senior management roles at 3Com, Trumpf, Laser Fare and GE. Paul graduated with honors from MIT with an MS Degree in Mechanical Engineering. He is an active speaker, author and inventor on a number of patents.

Speaker: Martin Sklar, founder and CEO of AblaCor Medical Corporation, is a highly accomplished leader, inventor, consultant and engineer. He has extensive experience in business development, intellectual property development, project management, design engineering, manufacturing engineering, technical analysis, and product introduction in the medical technology industry. Martin's product development activities have contributed to over $1 billion in revenues for clients and employers from start-up through Fortune 100 companies. Martin has 12 issued patents and 8 patents pending. His experience was gained while working in areas of surgical instrumentation, production automation, implants, laboratory automated instrumentation, and drug delivery devices.

Martin has worked with Betagen Corp. (sold to Gene-Trak Systems), Corning Glass Works, Hewlett Packard, Johnson & Johnson, Millipore Corporation, Orion Research, Visualization Technology, Inc. (sold to GE Healthcare), Waters Corporation, among other start-up and early stage companies. In 2001, Martin co-founded, and later became the first President of the not-for-profit Medical Development Group, ("MDG"/"MDG History"), a medical business and technology industry group. He also co-founded AlvaMed, LLC., a for-profit medical device consulting company and Medical Development Partners, LLC. ("MDP"), a medical device consulting company. Martin helped AlvaMed and MDP by developing a significant client base and establish each company as a major resource for development of medical products.

Martin is a member of several professional associations including MDG, Heart Rhythm Society, and the Biomedical Engineering Society. His education includes a Master of Engineering degree from Dartmouth College's Thayer School of Engineering and a Bachelor of Science degree in Mechanical Engineering from Worcester Polytechnic Institute.

Speaker: Rahul Chaturvedi is the Co-Founder and CEO of Clora, a technology platform that matches life science companies with vetted consultants. Clora's goal is to reduce the time and cost of getting a product to market by dramatically increasing access to top-tier talent in a highly fragmented industry.

Rahul has been an executive at several early stage, high-growth startups that have raised >$110MM. Prior to Clora, Rahul spent the last decade as the head of clinical development at various drug, biotech, and medical device companies. He was the VP of clinical development at Kaleido Biosciences (a Flagship VentureLabs company), GI Dynamics, and Avedro. His clinical development work has spanned orphan diseases to global epidemics and has resulted in 6 product approvals to date. He has a penchant for leveraging technology across various facets of development, including drug discovery, clinical operations, patient recruitment, safety, and resource allocation.

Moderator: Dr. Roger Frechette is the Co-Founder and Principal of New England PharmAssociates, a consultancy offering on-demand executive and business advisory services to life sciences enterprises. Dr. Frechette has been a volunteer with Boston ENET since 2014, and supports area start-ups as

a mentor for MassBio's MassCONNECT Program and the MTTC's Platform Program. His consulting work has led to roles as the US East Coast Ambassador for Medicon Valley Alliance, a life sciences cluster organization based in Copenhagen, and as a Co-Founder of Frontiera Therapeutics, a startup developing therapeutics for vascular leaks. New England PharmAssociates was an early sponsor for the North Shore InnoVentures biotech incubator, where Dr Frechette served as a mentor and advisor to the Incubator management team. Previously, Dr. Frechette was

Co-Founder of MaxThera, an antibacterial drug discovery company. MaxThera was sold in 2010 to Biota Holdings Limited, a Melbourne Australia anti-infectives company. Prior to starting MaxThera, Dr. Frechette was a drug discovery and life-sciences consultant following his role as Project Director at Paratek Pharmaceuticals (Boston). At Paratek he led the team that discovered PTK0796 (currently in Phase III clinical trials) with strategic partner Glaxo-Wellcome, and the pre-clinical development program that was carried out with a multinational team of consultants and contractors. Previously, he was Associate Director of Chemistry at RiboGene (Hayward, CA), where he built the chemistry department and managed two drug discovery programs in collaboration with strategic partner Dainippon Pharmaceuticals. He began his career as a medicinal chemist at the R.W. Johnson Pharmaceutical Research Institute (J&J, Raritan, NJ). In his spare time, he serves of steering committees for well-regarded Boston area conferences, including the annual Massachusetts Life Sciences Innovation Day and MassBio's Signature event the Annual CRO/CMO Symposium. Dr. Frechette was a Post-Doctoral Fellow at Yale University, earned his PhD in Organic Chemistry from Wesleyan University and his BA in Chemistry from College of the Holy Cross.

Co-Organizer: Norman K. Ma, NK Ma & Associates, Boston ENET Volunteer works as a system engineer supporting public sector technology acquisition efforts. He is focusing on software due diligence and system modernization to sustain his organization's capabilities. He worked as a computer scientist with software engineering specialization for a non-compete contractor in the public sector. His thirty-year software engineering experience at Lockheed-Martin, Raytheon, Texas Instruments that successfully developed a real-time machine intelligence system for vehicle self-defense, marine autonomous vehicle control system, global product distribution system, industrial parts dealership distribution system, manufacturing automation control system.

Dr. Ma earned a Ph.D. in computer science from the Texas A&M University at College Station, a M.S. in computer science from the University of Tennessee at Knoxville, MBA from the Southern Methodist University at Dallas, and a B.S. in computer science from the University of Illinois at Urbana-Champaign. He has been on a continuous learning track in acquisition, software development, and technology management since the late 1970s. He enjoys snow skiing, engineering, and spending time with his family at Boston.

Meeting Location: Constant Contact, Inc., Reservoir Place, 3rd Floor Great Room, 1601 Trapelo Rd., Waltham, MA (Exit 28B, I-95/Route 128)

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

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

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

Reservations: ENET Constant Contact meetings are free to ENET members and $20 for non-members. No reservations are needed for the 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.

Communications Society – 7:00PM, Thursday, 5 January

The Internet is Broken: Session-oriented Networks are the Answer

Recent calls to reinvent the Internet – or start over – are increasing in frequency and volume. We don't have to look very far to see the problems introduced by network complexity. Even with sophisticated orchestration and coordination, complex systems are inherently inefficient, unstable, and insecure:

- $75B spent on security and still nearly half-a-trillion dollars from data breaches each year [Forbes]
- $1M+ is what it costs a company on average for every network slowdown and outright outage [IHS]
- 50% of cloud implementations suffer business impacting performance issues due to the network [Gartner]

There are big problems with the world's networks, but solutions currently available today (such as SDN/NFV) are complex in their own right — and merely incremental. The real challenge is that we need to transform the existing infrastructure from the inside without discarding what's currently deployed.

Twenty-five years ago, the world standardized on the TCP/IP stack and the Internet exploded. However, there has been little innovation in routing since then. Today's networks are built on the same fundamental protocols put in place decades ago before anyone could envision current demands, never mind what we need for the next few decades.

The solution to tomorrow's networking challenges require a new perspective – a different way of thinking about routing.

So we'll ask: what if? What if we reimagine the Internet with a session-oriented approach? Could we then:

- Replace overlays with more secure, stable and agile end-to-end networking at a fraction of the cost and overhead?
- Align services and applications with network sessions?
- Remove middle-boxes and infuse security, load balancing and monitoring functions natively across the network?
- Provide zero trust security and encryption automatically?

Patrick MeLampy, one of the co-founders of 128 Technology, has served as the company's chief operating officer and director since the company's inception. With Andrew Ory, Patrick co-founded Acme Packet Inc. and served as its chief technology officer since August 2000. He served as vice president of engineering of Priority Call Management (PCM) since 1989. At PCM, Patrick developed and supported the company's network telecommunications products and grew the engineering team from two to 75 members. He has developed intellectual property portfolios at PCM, LHS, PCM, and Acme Packet. Patrick earned a B.S. degree in mechanical engineering from the University of Pittsburgh and an M.B.A. from Boston University.

Venue Note: This is our venue at the new Verizon Technology Center Campus in Waltham.

The meeting begins at 7 PM at the new meeting auditorium at the Verizon Technology Center. The address is 60 Sylvan Road, Waltham, MA 02451. The entrance is by the far corner – with the picnic tables out front – and not the tower or the new building. It

is most easily reached by the West Street entrance. Important Note: Verizon Technology Center requests the names of the meeting attendees in advance of the meeting. If you plan to attend, please send a note via e-mail with your name to John Nitzke at RF@ieee.org by Wednesday, January 4th.
The meeting is preceded by dinner at Bertucci's, 475 Winter St, Waltham at 5:30 PM. The speaker will be joining us at dinner.

Directions to Bertucci's restaurant in Waltham: Take Exit 27B on I95/128, heading west on Winter Street. After exiting, stay all the way to the right and take the first right turn into the shopping plaza. Please let Bob Malupin know if you plan to attend the dinner at Bertucci's. Bob can be contacted at Robert.Malupin@VerizonWireless.com .

Directions to Verizon Technology Center (old Verizon Labs location), 60 Sylvan Rd. campus, Waltham, MA 02451: Take Exit 27B on I95/128, heading west on Winter Street. Stay all the way to the right. Verizon Technology Center is 1/2 mile ahead. At the second traffic light, turn left onto WEST ST. and then take the first right (at the Verizon sign) which leads into the Verizon campus. Take the first left. The building and entrance for the meeting are on your right. Note that the entrance to the auditorium area is by the far corner – with the picnic tables out front – and not the tower or the new building.

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

Life Members - 4:00PM, Wednesday, 11 January

MUNICIPAL POLICING:
The Mission and Direction, of Recent Times

Speaker: Chief Howard Mintz, Retired

Municipal policing has been the focus of much media and political attention. News reports and some civil demonstrations have focused on Use of Force incidents involving controversial discretion. Other media including Reality TV, movies, and popular police shows often paint an inaccurate picture of everyday policing in the United States.

Much has changed over the past 35 years. The evolution has been motivated by: technology, shrinking budgets, criminological theory, and changes in law, social problems, accountability, better training and the constant threat of terrorism.

In the 1980s, a police academy curriculum would focus on crime control, traffic enforcement and protection of life and property. In addition to the above, millenials will prepare for Homeland Security, mental health and social problems as well as understanding the role of bias in human relations and decisions.

Retired chief Howard Mintz received a Bachelor of Science Degree in Criminal Justice from Northeastern University. He also earned a Professional Certificate in Leadership and Management from Suffolk University. Attending an ongoing electronics workshop provided by IEEE member Len Long has been a great source of technological learning.

Prior to his 32 years of policing, he was a Correction Counselor for the Massachusetts Department of Correction. He was also a volunteer intern for the State Police Intelligence Bureau.

Howard Mintz rose through the ranks from patrolman to chief with the City of Newton. Numerous projects during his career included: developing a domestic violence curriculum; teaching: report writing, constitutional law and incident command. Other areas of concentration were: bicycle and pedestrian safety, adding a clinical social worker to the primary police response and follow-up, active shooter training, tactical response capability and Inclusionary Leadership Training.

WHEN: January 11 3:30pm refreshments, talk @ 4:00 pm – 5:00 pm.

WHERE: Lincoln Lab Auditorium 244 Wood Street Lexington, MA 02421 USA

The meeting will be held at the Lincoln Lab Auditorium, 244 Wood Street. Lexington, MA at 4:00 PM . Refreshments will be served at 3:30 PM. Registration is in the main lobby. Foreign national visitors to Lincoln Lab require visit requests. Please pre-register by e-mail to reception@ll.mit.edu and indicate your citizenship. Also, please register at http://www.ieeeboston.org/Register/

Please use the Wood Street Gate. For directions go to http://www.ll.mit.edu/; for other information, contact Steve Teahan, Chairman, at (978)763-5136, or Steve.F.Teahan@raytheon.com

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

Reliability Society – 5:30PM, Wednesday, 11 January

Phased-Arrays and Radar: Advances and Breakthroughs

Covered will be recent developments and breakthroughs in Active Electronically Steered Arrays (AESAs) and radar including Extreme MMIC, graphene, digital beam forming (DBF, including LM space fence radar with element level DBF having 172K A/Ds). Potential continuation ofMoore's Law:

1. via Spintronics - which could revolutionize computer architecture away from John von Neumann model,
2. viaMemristor–which potentially allows one to do what mouse brain does in a shoe box instead of a computer the size of a city requiring a nuclear power plants,
3. via Graphene which has potential for Thz clock speed transistors, or
4. via Quantum Computing - which has the potential of orders of magnitude advance in computation power per 2 years. New Kymeta Metamaterial Antenna finally explained in simple terms.

Also cover PARC (A Xerox Co.) and Echodyne matmaterial antnnas. MIMO (Multiple Input Multiple Output):Explained in simple physical terms instead of with heavy math; where it makes sense to use and how conventional arrays can do as well. Printed

Electronics: Low cost 1.6 GHz printed diodes achieved (goal 2.4 GHz). Has potential for revolutionary low cost microwave electronics. Electrical andOptical Signals on Same Chip;IR transparent in silicon.Biodegradable Arrays of Transistors or LEDs:Imbedded under skin for detecting cancer or low glucose.Quantum Radar: See stealth targets. Will include latest Photos from Travels to Ukraine, Turkey, China, Israel and Dubai. Talk given so that lay person can also appreciate it.

Dr. Eli Brookner Bio: MEE & DrSc Columbia Un ’55 &’62; BEE CCNY, ’53. Raytheon 1962-2014 (retired) ; Principal Engineering Fellow; worked on radars for air traffic control, military defense, space & navigation: on ASDE-X, ASTOR RADARSAT II, AGBR, major Space Based Radar programs, NAVSPASUR, COBRA DANE, PAVE PAWS, MSR, COBRA JUDY Replacement, THAAD, SIVAM, SPY-3, Patriot, BMEWS, UEWR, SRP, Pathfinder, Upgrade for >70 ARSRs, AMDR, Space Fence, 3DELRR. Before Raytheon: Columbia Un Electronics Research Lab. [now RRI], Nicolet, & Rome AF Lab; Awards: IEEE 2006 Dennis J. Picard Medal for Radar Technology & Application; IEEE ’03 Warren White Award; Journal of Franklin Institute Premium Award best paper, 1966; IEEE Wheeler Prize for Best Applications Paper, 1998. Fellow: IEEE, AIAA, & MSS. 4 books: Tracking, Phased Arrays & Radar. >10,000 attended courses in 25 countries. Banquet & keynote speaker 13 times. > 230 publications. > 100 invited. 6 papers in Books of Reprints. 9 patents.

This meeting will be held on Wednesday, January 11, 2017 at MIT Lincoln Laboratory, Forbes Road Facility, 3 Forbes Road, Lexington, MA.

- 5:30-6:00 Sign In, Networking, Light Dinner & Refreshments
- 6:00-6:10 Chapter Chair Greetings & Announcements
- 6:10-7:30 Dr. Eli Brookner, IEEE Distinguished Lecturer
- 8:30-7:45 Q&A Session, Meeting Adjourns

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

Locally held IEEE Conferences

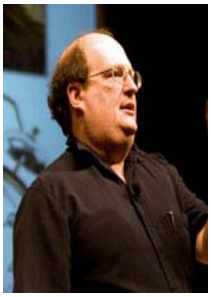
2017 IEEE International Symposium on Technolgies for Homeland Security
April 25 - 26, 2017
www.ieee-hst.org
(The technical program will be online by January 6, 2017)

2017 IEEE International Midwest Symposium on Circuits and Systems
Augsut 6 - 9, 2017
www.MWSCAS2017.org
(Call for Papers Deadline, March 10, 2017)

2017 IEEE High Performance Extreme Computing Conference HPEC ‘17
September 12 - 14, 2017
www.ieee-hpec.org
Submission deadline is May 19, 2017

Computer, and Communications Societies, GBC/ACM and BostonCHI – 7:00PM, Tuesday, 17 January

Unintuitive and Insecure: Fixing the Failures of the Authentication User Experience



Jared M. Spool, co-CEO of Center Centre and founder of UIE

- "Which username did I use?"
- "Do they want my email address or my nickname?"
- "Which password did I use?"
- "What was my favorite vegetable when I created this account?"

Nothing wrecks a great user experience like a login form. Our password rules make it hard to remember what we've used, and stupid security questions lock us out of our accounts. And none of these security gymnastics actually prevent our personal information from leaking into the world. (In fact, we often inadvertently make it easier.)

If it's not usable, it's not secure. Unusable authentication systems are a bellwether of poor end-to-end experience. Once you've frustrated a user with their account creation or session authentication, it's extremely hard to win them back.

Security isn't sexy, but when we get it right, we reduce risk and increase user satisfaction. In this entertaining presentation, Jared will explain how to make authentication design a top priority in your experience architecture. He'll show you where the real risks are and why you shouldn't trust others to handle your design's security elegantly.

Jared will walk you through:

- How to best protect your users without making them frustrated.
- How Amazon reduces fraud and makes money with a multi-state security model.
- How to keep the Paranoids at bay without degrading the user experience.

Jared M. Spool is a co-founder of Center Centre and the founder of UIE.

In 2016, with Dr. Leslie Jensen-Inman, he opened Center Centre, a new school in Chattanooga, TN to create the next generation of industry-ready UX Designers. They created a revolutionary approach to vocational training, infusing Jared's decades of UX experience with Leslie's mastery of experience-based learning methodologies.

You'll also find him as the conference chair and keynote speaker at the annual UI Conference and UX Immersion Conference, and he manages to squeeze in a fair amount of writing time. He is author of the book, Web Usability: A Designer's Guide and co-author of Web Anatomy: Interaction Design Frameworks that Work.

You'll find his writing at uie.com. You can also follow his adventures on the Twitters at @jmspool, where he tweets daily about UX design, design strategy, design education, and the wondrous customer service habits of the airline industry.

This meeting will be held at Vistaprint's facility at 275 Wyman St in Waltham. Park in the garage or the large parking lot in back of the garage and walk around to the main entrance. 275 Wyman St can be reached from the North by taking exit 28 from rt 128/95 makng a left hand turn onto Trapelo Rd, and then another right hand turn onto Smith St (which becomes Wyman St after about 1/2 mile) once you

cross Rt 128. From the South, take exit 27A-B from I-95/128 and stay in the exit lane until you get to the Wyman St turn off. Don't take the sharp right onto 3rd Ave and Totten Pond Rd. There'also a short-cut coming from Canbridge on Rt 2. Get off Rt 2 at the Waltham St/Lexington exit, take a left hand turn onto Hayden Ave, then make another left at the traffic light onto Smith St.

Informal reception coordinated by BostonCHI at 6:30 pm
Vistaprint, 275 Wyman St., Waltham, MA
[Admission is free, but you must register at http://jaredspooljan2017.eventbrite.com]

We will be taking Jared to dinner at Green Papaya after the talk at about 9pm.

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.

For more information contact Peter Mager
p.mager@computer.org
To assist us in planning this meeting, please pre-register at http://www.ieeeboston.org/Register/.

Entrepreneurs' Network, 6:00PM, Tuesday, 17 January

Compensation and Equity for Early Stage Leadership Teams

Meeting location – Pivotal Labs, 145 Broadway, 3rd Floor, Cambridge, MA

It's been said that 70% of the investment decision of an early-stage company is the team. That's so because so often everything goes wrong and only great teams can respond to competitors, markets, funding environments, staff departures, PR disasters and the like.

Yet how do your build that early stage leadership team to attract investment if you don't have the cash to pay competitive salaries and benefits. That's the conundrum of ENET's presentation in Cambridge, Tuesday January 17th.

Our speakers will discuss use of startup equity as a key weapon of choice to recruit needed talent to build your A-team. We will discuss allocation of equity and vesting. We will discuss using compensation and equity addressing the key team needs of your startup for.

- Domain expertise
- Connections
- Experience with related ventures
- Ability to make significant contributions
- Part-time vs. Full-time

Our two speakers are prominent investors and serial entrepreneurs. One has founded a number of tech companies and was named 2013 Angel Investor of the Year. Our other speaker was managing director of Tech Stars and currently holds key positions mentoring New England startup companies. We are also seeking a third speaker who will address the special compensation and equity issued recruiting early stage teams in medical device and life sciences fields. The panel will be moderated by ENET's long term chairman who received and

IEEE-USA award for contribution to the entrepreneurial community and has been recognized as one of the "Top 20 Boston Startup Attorneys".

Speaker: Andy Palmer. Co-Founder/CEO @ Tamr (aka CueBall) http://www.tamr.com/the-simple-truth-happy-people-healthy-company/ is an angel and seed investor and serial entrepreneur who specializes in accelerating the growth of mission-driven startups. Andy has helped found and/or fund more than 50 innovative companies in technology, health care and the life sciences. Andy's unique blend of strategic perspective and disciplined tactical execution is suited to environments where uncertainty is the rule rather than the exception. Andy has a specific passion for projects at the intersection of computer science and the life sciences. See https://www.linkedin.com/in/andypalmer Most recently, Andy co-founded Tamr, a next generation data curation company and Koa Labs, a start-up club in the heart of Harvard Square, Cambridge, MA. Andy was honored as "2013 Angel Investor of the Year" by the New England Venture Capital Association. He is a graduate of Bowdoin College, and has an MBA from Dartmouth's Tuck School of Business, and has been a research affiliate at MIT. Andy has also written on the subject for this meeting, in his article "The Simple Truth: Happy People, Healthy Company: How generosity can be a competitive advantage for early-stage startups."

Speaker: Katie Rae, Managing Director @ Project 11, a pre-seed venture fund investing in tech-driven startups. Katie is Co-Founder, Chairman @ Startup Institute, teaching people how to join great startups and be effective on day 1, and Chairman of Techstars Boston. Previous to Project 11, for a period of about 4 years, Katie was Managing Director of Tech Stars Boston and also for 4 years she a lecturer at MIT. Katie has also been an exec @ Microsoft, Eons, Lycos, AltaVista. Katie is a graduate of Oberlin College and has an MBA from Yale School of Management.

Moderator: Robert Adelson, business and tax attorney, partner at Boston law firm of Engel & Schultz LLP (www.ExecutiveEmploymentAttorney.com), and Chairman of The Boston Entrepreneurs' Network. Rob has been an attorney for over 30 years specialized in business, tax, stock and options, employment, contracts, financings, trademarks and intellectual property. Rob began as an associate at major New York City law firms before returning home to Boston in 1985 where he has since been a partner in small and medium sized firms before joining his present firm in 2004. Rob represents entrepreneurs, start-ups and small companies, independent contractors and employees and executives, and family businesses. Rob is a frequent speaker on business law topics and author of numerous articles published in Boston Business Journal, Mass High Tech and other publications. He has been named among the "Top 20 Boston Startup Lawyers" by ChubbyBrain.com, a website that provides tools for entrepreneurs.

Rob has been on the ENET Board since 2002 and Chairman since 2009 and is also a Co-Founder and Board member of the 128 Innovation Capital Group. In January 2016, he received the professional achievement award from IEEE-USA for "extreme dedication and contributions to the IEEE entrepreneurship community." He holds degrees from Boston University, B.A., summa cum laude, Northwestern University (Chicago), J.D., Law Review, and New York University, LL.M. in Taxation.

Meeting Location: Pivotal Labs, 145 Broadway, 3rd Floor, Cambridge, MA .

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

Refreshments: PIZZA, CHIPS AND SOFT DRINKS WILL BE SERVED AT THE MEETING.

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

Consultants Network – 6:30PM, Tuesday, 24 January

Tax Reporting for 2016

Tom Babaian

Along with death and the common cold, taxes are one of life's few certainties, and for a business these can be complicated. This event is for every small business owner who wants to learn how to take care of 2016 tax obligations and will cover

- General Information
- Tax Reporting
- Tax Preparation
- Reporting Issues for Independent Consultants
- What to Look for in a CPA or Professional Tax Preparer
- What Not to Look For
- Tax Tips
- Tax Pitfalls

Tom Babaian has over 25 years experience in public and industry accounting. Tom spent time in healthcare and manufacturing accounting early in his career. Tom spent many years working for several Boston area based CPA firms before starting his own practice in 2001. Tom enjoys working with smaller businesses and assisting entrepreneurs in achieving their goals.

Tom is a graduate of Temple University (1987 & 1992) and a member of the Massachusetts Society of CPAs, the Massachusetts Association of Public Accountants and the American Society of Tax Problem Solvers.

Where: Constant Contact, 1601 Trapelo Road, Waltham, MA 02451

PLEASE NOTE: The meeting is open to the public. No charge for Consultants Network members or employees of Constant Contact; $5 entrance fee for all others. Casual dress. Registration (no registration required).

The Consultants Network meeting starts at 6:30 PM. The meeting will take place at Constant Contact, Reservoir Place - 1601 Trapelo Road, Waltham, MA 02451. A no host, PRE-MEETING DINNER will take place at 5:15 PM (sharp) at Bertucci's, 475 Winter Street, Waltham, MA 02451 (exit 27B, Rte 128).

Driving Directions
To Bertucci's: Follow I-95/route 128 to Winter St in Waltham. Take exit 27B from I-95/Route 128. Turn left on Wyman S, then left on Winter St. Bertucci's is the 1st right after crossing the bridge over I 95/Route128.

To Constant Contact:
Follow I-95/route 128 to Trapelo Rd in North Waltham, Waltham. Take exit 28 from I 95/route 128. Constant Contact is the 1st right after crossing the bridge over I 95/Route128.

Consultants Network meetings generally take place on the fourth Tuesday of each month, but are not held during the summer months. Check the Consultants Network website for meeting details and last-minute information.

For more information,
e-mail chairman@boston-consult.com

Technology and Engineering Management Society (TEM) – 6:30PM, Tuesday 24 January

Virtual Teams in Engineering Projects: Managing Complexities, Expectations and Cultural Factors Successfully"

Have you adopted the use of distributed teams for your projects? Are you in the business of providing engineering services to clients virtually? Are you managing or part of established global engineering centers? Do you see a tendency to overemphasize technical skills? Are non-technical issues going unresolved while technical issues are being obsessed over?

Engineering projects are one of the largest adopters of virtual teams. Companies have been adopters of the use of distributed teams or workshare, as often referred to, for their projects over the past couple of decades.

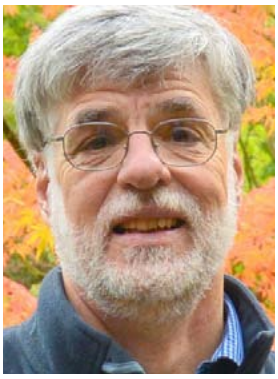
One of the most interesting and challenging key requirements for the success of an engineering project involving Virtual Teams is its early stage structural formation and its executive sponsorship. But what happens next? Is it a guaranteed success? Would the project take off and meet all its goals or just some of them? Who declares the project either as a success or failure? What is controllable and what is not?

Our TEM Society meeting is focused on learning and sharing how to successfully lead an engineering project based on the experiences of professionals who have managed the nuances of several virtual engineering projects in real life.

It will focus on how a professional engineering manager can manage a project successfully, irrespective of his basic engineering training in traditional fields or other modern inter-disciplinary fields like Bio-medical engineering, etc., through applying effective techniques, soft skills, and management knowledge and tools. You will also learn how these practical tips have worked for successful professional engineering managers.

The speaker panel is composed of executives who have led successful virtual projects across their careers. Hear from people who have been senior executives, entrepreneurs and CEOs with experience delivering seminars, webinars and workshops to guide company executives to success.

Join us to gain insights and more with our speakers who will share their experiences in what promises to be an enlightening discussion with networking opportunity as well.



Dr. Daniel McGrath, Chief Engineer, BAE Systems
Dr. Daniel McGrath, Chief Engineer for Low-Level-Imaging at BAE Systems, has spent 35+ variously as an individual contributor and technical manager in the area of image sensor design and technology. This work has spanned large companies including Texas Instruments, Polaroid, and Eastman Kodak and smaller companies including a start-up.

A common thread is that each has involved teams working across distance and time differences that has been key to their technology development and their successful integration of products. The experience included organizing remotely-located team

members, managing remotely-located reports, working for internationally-distant bosses, and collaborating with remote suppliers and remote customers. Dan has also had the experience of working with remote collaborators and organizing international conferences. He has come out of this with a feeling that it not only can work, but also be a positive. He will share from this experience his personal guidelines for success and a few concerns for the wary.

Apparao Karri, CEO and Co-Founder of Cintell
With 20+ years of cross functional experience building sales and marketing SaaS solutions for the enterprise, Apparao is an entrepreneurial product leader. His experience includes product leadership roles at NetProspex, Lionbridge, and Avention (formerly OneSource). Apparao holds an MBA from Babson College and lives outside of Boston, MA where he is an adventurous dad and avid volleyballer.

Apparao is an experienced Business & Technology Management Professional with proven ability to deliver results in different types of business settings,. Experienced in providing visionary guidance as well as hands on leadership for products / services initiatives in the Information / Business Technology space. Innovative thinking balanced with results driven process orientation is my key strength.

Specialties: Leadership, General Management, Entrepreneurship, Product Marketing & Management, Pre-Sales, Services Delivery & Management, Project & Program Management, Software Architecture, Social Media, Crowd Sourcing, Cloud Computing, Global eCommerce, SaaS, Data Management, Analytics.He has Masters in Software Systems from BITS Pilani and an MBA from Babson.

About: At TEM Society our aim is to provide knowledge to make strategic and critical decisions. We draw upon real-life scenarios from across the spectrum of engineering specialties. We expect our meetings will serve those looking to Lead Engineering Programs, Projects and Technologies. You can learn from leaders, get mentored by experts, share experiences and network with accomplished professionals.
http://ieee-tems.org/node/23)

Meeting Location: 39 Marrett Road, Lexington, MA 02421

Admission: Free to TEM Society Members and Non-Members

Registration: To register for this meeting (no charge), please send below info via e-mail, to: karthik.ganesan@ieee.com Limited Numbers for this meeting will be restricted so early registration is recommended.

Name:……
Affiliation:…… …….

60th IEEE International Midwest Symposium on Circuits and Systems

Boston, MA, USA | August 6th-9th, 2017
www.mwscas2017.org

Tufts University · DRAPER · IEEE · CAS

CALL FOR PAPERS IEEE INTERNATIONAL MWSCAS 2017

The IEEE International Midwest Symposium on Circuits and Systems is the oldest Circuits and Systems Symposium sponsored by IEEE. The 60th edition will be held on the campus of Tufts University, Boston, MA, USA, August 6 - 9, 2017. MWSCAS 2017 will include oral and poster sessions, student paper contest, tutorials given by experts in circuits and systems topics, and special sessions. Topics include, but are not limited to:

Track 1. Analog Circuits and Systems I
- 1.1 Analog Circuits
- 1.2 Analog Systems
- 1.3 Biomedical Electronics
- 1.4 Bioengineering Systems and Bio Chips
- 1.5 Other Analog Circuits and Systems

Track 2. Analog Circuits and Systems II
- 2.1 Linear Analog Systems
- 2.2 Non-linear Analog Systems
- 2.3 System Architectures
- 2.4 Neuromorphic Systems

Track 3. Digital Circuits and Systems I
- 3.1 Digital Integrated Circuits
- 3.2 System On a Chip (SOC) and Network on a Chip (NOC)

Track 4. Digital Circuits and Systems II
- 4.1 Digital Filters
- 4.2 Hardware-Software Co-Design
- 4.3 Other Digital Circuits and Systems

Track 5. Communications Circuits and Systems
- 5.1 Communications Circuits, Computers and Applications
- 5.2 Communications Systems and Control
- 5.3 Information Theory, Coding and Security
- 5.4 Communications Theory
- 5.5 Other Communications Circuits and Systems

Track 6. RF and Wireless Circuits and Systems
- 6.1 RF Front-End Circuits
- 6.2 Mixed-Signal RF and Analog and Baseline Circuits
- 6.3 Wireless Mobile Circuits and Systems and Connectivity
- 6.4 VCO's and Frequency Multipliers, PLL's and Synthesizers
- 6.5 Other RR and Wireless Circuits and Systems

Track 7. Sensor Circuits and Systems
- 7.1 Technologies for Smart Sensors
- 7.2 Sensor Fusion
- 7.3 Control Systems
- 7.4 Mechatronics and Robotics
- 7.5 Other Sensor Circuits and Systems

Track 8. Converter Circuits and Systems
- 8.1 Analog to Digital Converters
- 8.2 Digital to Analog Converters
- 8.3 DC-DC Converters
- 8.4 Other Converter Circuits and Systems

Track 9. Signal and Image Processing
- 9.1 Analog and Mixed Signal Processing
- 9.2 Digital Signal Processing
- 9.3 Signal Processing Theory and Methods
- 9.4 Image, Video and Multi-Dimensional Signal Processing
- 9.5 Other Signal and Image Processing

Track 10. Hardware Design
- 10.1 Processor and Memory Design
- 10.2 MEMS/NEMS
- 10.3 Nano-Electronics and Technology
- 10.4 Optics and Photonics
- 10.5 Power Management, Power Harvesting and Power Electronics
- 10.6 Photovoltaic Devices/Panels and Energy Harvesting

Track 11. Hardware Security
- 11.1 Hardware Authentication and Physically Unclonable Functions (PUFs)
- 11.2 Trusted Microelectronics
- 11.3 Hardware Anti-Tamper
- 11.4 Architectural System Security
- 11.5 Other Hardware Security

Prospective authors are invited to submit a full paper (4 pages) describing original work. Only electronic submissions will be accepted. Papers should include title, abstract, and topic category from the list above in standard IEEE two-column format for consideration as lecture or poster. Both formats have the same value, and presentation method will be chosen for suitability. All submissions should be made electronically through the MWSCAS 2017 web site (http://www.mwscas2017.org). Students are encouraged to participate in the best student paper award contest. Accepted papers will be published in the conference proceedings subject to advance registration of at least one of the authors.

IMPORTANT DATES

March 18: Tutorial and Special Session proposals deadline
March 18: Regular and Student paper submission deadline
April 1: Special session and invited paper submission deadline
April 29: Notice of acceptance
May 20: Final camera-ready paper deadline

www.mwscas2017.org

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CALL FOR PAPERS

www.ieee-hpec.org

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IEEE Boston Section

The IEEE High Performance Extreme Computing Conference (HPEC '17) will be held in the Greater Boston Area, Massachusetts, USA on 12 – 14 September 2017. The HPEC charter is to be the premier conference in the world on the confluence of HPC and Embedded Computing.

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

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

HPEC accepts two types of submissions:

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

IMPORTANT DATES:

Submission Deadline: **May 19, 2017**
Notification of Acceptance: **June 16, 2017**

Preference will be given to papers with strong, quantitative results, demonstrating novel approaches or describing high quality prototypes. Authors of full papers can mark their preference for a poster display or an oral presentation. Presenters who wish to have hardware demonstrations are encouraged to mark their preference for a poster display. Accepted extended abstracts will be displayed as posters. All paper and extended abstract submissions must use the approved IEEE templates. Full paper submissions with the highest peer review ratings will be published by IEEE in the official HPEC proceedings available on IEEE eXplore. All other accepted submissions and extended abstracts are published on ieee-hpec.org. Vendors are encouraged to sign up for vendor booths. This will allow vendors to present their HPEC technologies in an interactive atmosphere suitable for product demonstration and promotion.

We welcome input (hpec@ieee-hpec.org) on tutorials, invited talks, special sessions, peer reviewed presentations, and vendor demos. Instructions for submitting will be posted on the conference web site shortly.

Simulink Model based FPGA Digital Design and Digital Signal Processing

Time & Date: 6 - 9PM, TBD

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

Speakers: Cherif Chibane, Rick Rosson; MIT Lincoln Laboratory

Description:

Over the last 30 years, applications for Field Programmable Gate Array (FPGA) designs have increased exponentially. FPGA's have moved from just digital designs to other areas such as embedded controllers, Digital Signal Processing, communication systems, and configurable computing. This has made exposure to and mastery of FPGA design crucially important for many people in industry and academia.

This course provides a detailed overview of FPGA technologies, a top-down design workflow, modeling and simulation, standard design tools, and applications. Using a mixture of theory and hands-on laboratories, the course provides students what they need to know in modeling, simulation, design, verification, and implementation of multi-disciplinary applications targeting FPGA's. This course provides plenty of hands-on lab exercises to reinforce the key concepts. While the material covered in this class targets Xilinx devices, it can be easily used for others devices such as ALTERA and other FPGA devices.

Presenters:

This course will be jointly presented by Cherif Chibane and Rick Rosson of MIL Lincoln laboratory. Their combined and complementary expertise will greatly benefit attendees from industry and academia.

Cherif Chibane is currently with MIT Lincoln laboratory as a research staff. He was one of the early adopters of FPGA's for configurable computing. Prior to MIT-LL, he was part of the BAE Systems team that pioneered the use FPGA's for Software Denied Radio (SDR). He has more than 25 years in the design of advanced configurable computing using FPGA's for DSP, digital logic, and embedded designs.

Rick Rosson is a senior modeling and simulation engineer at MIT Lincoln Laboratory. Prior to joining MIT-LL, Rick served as a senior applications engineer at MathWorks for 9 years, with a focus on digital signal processing, statistical signal processing, embedded systems design, modeling and simulation, and data analysis and visualization. Rick holds a Master of Science in Electrical Engineering from Boston University and a Master of Science in Management from the MIT Sloan School of Management.

Agenda

Session #1

- Course Overview
- Model based benefits in today's FPGA designs.
- Simulink/Matlab Overview
- Simulink Examples

Session #2
• FPGA Technologies Overview
• Xilinx ISE Overview
• Fixed point Vs floating point overview
• HDL/FPGA Examples

Session #3
• Preparing Simulink models for HDL code generation
• Generating HDL code from Simulink
• Verifying the generated code
• Code Generation Examples

Session #4
• Modeling Signal Processing and Communications Systems in Simulink®
• Signal Processing Examples
• Implementing Signal Processing Systems on FPGA's

Session #5
• Advanced Topics using FPGA's
• End-To-End Design and Verification
• End-To-End Design Example

Registration and dates will be available on our website (www.ieeeboston.org) by January 7

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.

SAVE THE DATE! PLAN TO ATTEND!

PLENARY SPEAKER: Kay C. Goss, CEM President, World Disaster Management, LLC
Internationally recognized expert, lecturer, author on Emergency Management and General Resiliency

The 16th annual IEEE Symposium on Technologies for Homeland Security (HST '17), will be held 25-26 April 2017 **must attend event**, 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**

There are over 110 paper and posters to be presented at the symposium with 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.

In addition there will be plenary sessions as well as ample networking activities to interact and exchange ideas with speakers and other symposium attendees.

Contact Information
For more detailed information on sponsorship and Exhibit Opportunities, visit the website http://ieee-hst.org/ or email: information@ieee-hst.org.

The symposium technical program as well as the conference registration and hotel reservation pages will be available our website (www.ieee-hst.org) by January 10, 2017.

Organizing Committee

General Chair:	James Flavin, MIT Lincoln Laboratory
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John Aldridge, MIT Lincoln Laboratory

Cyber Security
Claire Applegarth, Mark Peters; MITRE

Software Development for Medical Device Manufacturers

An intensive Two-day Workshop

Time & Date: 8:30AM - 4:30PM, Wednesday & Thursday, April 5 & 6, 2017

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

Speakers: Steve Rakitin, President, Software Quality Consulting, Inc.

OVERVIEW:

Developing software in compliance with FDA, EU regulations and international standards is challenging. This two-day intensive course provides practical guidance and suggestions for developing software that complies with applicable FDA and EU regulations, guidance documents and international standards such as IEC 62304 and ISO 14971. The focus of this course is interpreting Design Controls for software. Each section of the Design Controls regulation (820.30) is discussed from the software perspective. Corresponding requirements from IEC 62304 are woven into the flow.

In-depth discussion of critical topics such as Requirements, Software Verification & Validation, Risk Management and Fault Tree Analysis are included. In addition, techniques for validating software development tools and software used in Manufacturing and Quality Systems are also discussed. Interactive group exercises are included to facilitate discussion and learning.

WHO SHOULD ATTEND

Software and firmware engineers, software managers, RA/QA staff, validation engineers, and project managers. Anyone interested in learning how to develop medical device software in compliance with regulations, standards and guidance documents.

COURSE OUTLINE

- **Introduction**
  - Medical Device Definitions – FDA and EU
  - Regulatory Roadmap and FDA/EU Device Classification Schemes
  - FDA Regulations and Guidance Documents for Software
  - Standards – ISO 13485, IEC 62304, ISO 14971, EN-14971, IEC 60601, and IEC 62366-1
  - All Software is Defective

- **Interpreting Design Controls for Software**
  - Software Development Models
  - Design and Development Planning
  - Design Inputs
    - **About Requirements…**
    - **Requirements Exercise**
  - Design Outputs
  - Design Reviews
  - Design Verification
    - Software Verification Techniques
  - Design Validation
    - Software Validation Process
  - Design Transfer
  - Design Changes
  - Design History File

- **Validation of…**
  - Software Tools used to develop Medical Device Software
  - Software used in Manufacturing
  - Software used in Quality Systems

- **Risk Management**
  - Standards and Regulations
  - Terms and Concepts
  - Risk Management Process
  - Risk Management Tools and Techniques
    - **Fault Tree Exercise**
  - Data Collection and Analysis
  - Documentation Requirements

- **Summary**

- **Comprehensive reference materials included**

Speaker Bio:

Steven R. Rakitin has over 40 years experience as a software engineer including 25 years of experience in the medical device industry. He has worked with over 85 medical device manufacturers worldwide, from startups to Fortune 100 corporations. He has written several papers on medical device software risk management as well as a book titled: Software Verification & Validation for Practitioners and Managers.

He received a BSEE from Northeastern University and an MSCS from Rensselaer Polytechnic Institute. He earned certifications from the American Society for Quality (ASQ) as a Software Quality Engineer (CSQE) and Quality Auditor (CQA). He is a Senior Life member of IEEE and a member of MassMEDIC. He is on the Editorial Review Board for the ASQ Journal Software Quality Professional.

As President of Software Quality Consulting Inc., he helps medical device companies comply with FDA regulations, guidance documents, and international standards in an efficient and cost-effective manner.

Decision (Run/Cancel) Date for this Courses is Friday, March 24, 2017

Payment received by March 20
IEEE Members $465
Non-members $495

Payment received after March 20
IEEE Members $495
Non-members $545

Registration will be available on our website (www.ieeeboston.org) by January 7

More Digital Signal Processing (DSP) for Wireless Communications

Time and Dates: 6 - 9PM, Wednesdays, March 22, 29, April 5, 12, 26

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

Speaker: Dan Boschen, Microsemi

Course Summary

This course is a continuation of the IEEE course "DSP for Wireless Communications" also taught by Dan Boschen, detailing digital signal processing most applicable to practical real world problems and applications in radio communication systems. Students need not have taken the Part I course if they are familiar with basic DSP concepts.

This course brings together core DSP concepts to address signal processing challenges encountered in radios and modems for modern wireless communications. Specific areas covered include carrier and timing recovery, equalization, automatic gain control, and considerations to mitigate the effects of RF and channel distortions such as multipath, phase noise and amplitude/phase offsets.

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

Target Audience:

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

Benefits of Attending/ Goals of Course:

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

Topics / Schedule:

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

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

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

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

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

Speaker's Bio:
Dan Boschen has a MS in Communications and Signal Processing from Northeastern University, with over 20 years of experience in system and hardware design for radio transceivers and modems. He has held various positions at Signal Technologies, MITRE, Airvana and Hittite Microwave designing and developing transceiver hardware from baseband to antenna for wireless communications systems. Dan is currently at Microsemi (formerly Symmetricom) leading design efforts for advanced frequency and time solutions.

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

Decision (Run/Cancel) Date for this Courses is Monday, March 13, 2017

Payment received by March 9
IEEE Members $325
Non-members $360

Payment received after March 9
IEEE Members $360
Non-members $425

Registration will be available on our website (www.ieeeboston.org) by January 7

Locally held IEEE Conferences

2017 IEEE International Symposium on Technolgies for Homeland Security
April 25 - 26, 2017
www.ieee-hst.org
(The technical program will be online by January 6, 2017)

2017 IEEE International Midwest Symposium on Circuits and Systems
Augsut 6 - 9, 2017
www.MWSCAS2017.org
(Call for Papers Deadline, March 10, 2017)

2017 IEEE High Performance Extreme Computing Conference HPEC '17
September 12 - 14, 2017
www.ieee-hpec.org
Submission deadline is May 19, 2017

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.

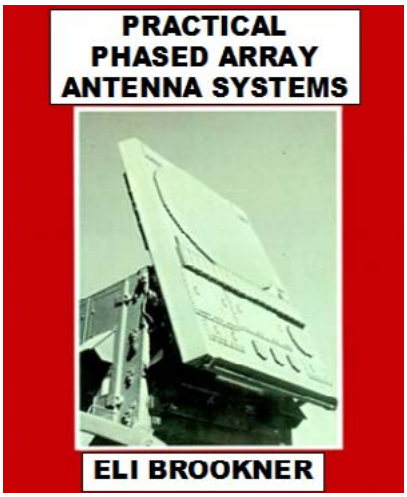
Phased-Array and Adaptive-Array Fundamentals and Their Recent Advances

Time & Date: 6 - 9PM, Mondays, Feb. 27, March 6,13, 20, 27, April 3, 10, 24, May 1, 15 (Snow/make-up days May 22, June 5, 12)

Location: MITRE Corp., 202 Burlington Rd., Bedford, MA (tentative)

Speaker: Dr. Eli Brookner, Raytheon, (Retired)

Text: Practical Phased Array Antenna Systems", Dr. Eli Brookner (included with registration)



"Practical Phased Array Antenna Systems", Dr. Eli Brookner, Editor, Artech House, 1991, Hardcover, 258 pages, List Price $179, Hardcover, 258 pages. Covers array fundamentals: phase and time-delay steering; grating lobes for 1- and 2-dimensional arrays; effects of errors and failures on gain, sidelobes and angle accuracy; array weighting, thinning, blindness, mutual coupling, elements, phase-shifters and feeds; limited field of view (LFOV) arrays; SPY-1; example design.

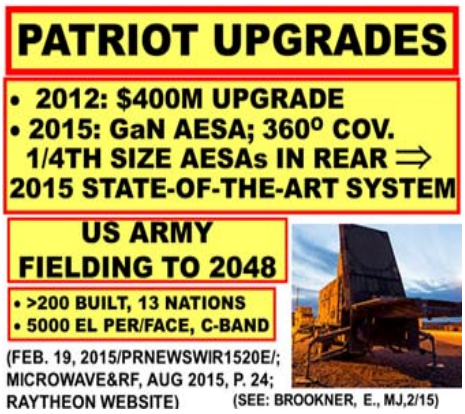
This course is based on the book entitled Practical Phased Array Antenna Systems by Dr. Eli Brookner. The book covers array basics and fundamentals which do not change with time. The course, the book and the notes will provide an ideal introduction to the principles of phased array antenna design and adaptive arrays. The course material and notes cover in addition recent developments in phased arrays updated to 2017.

With the explicitly tutorial approach the course and book offers a concise, introductory-level survey of the fundamentals without dwelling on extensive mathematical derivations or abstruse theory. Instead a physical feel will be given. The book provides extensive curves, tables and illustrative examples. Covered in easy terms will be sidelobe cancellation, full adaptive array processing without suffering its computation complexity (through the use of adaptive-adaptive array processing also called beam-space processing and eigenbeam processing). Finally, Space-Time Adaptive Array (STAP) for airborne platforms will be explained and related to the displaced phase center antenna (DPCA).

All Attendees of the class will receive trial trial license of MATLAB and Phased Array System Toolbox from MathWorks in addition to a set of examples which help demonstrate key array concepts covered in the course.

This course is intended for the engineer or scientist not familiar with phased-array antennas as well as the antenna specialist who wants to learn about other aspects of phased-array antenna systems as well as get the latest developments in array systems, such as: MIMO, metamaterial arrays, Extreme MMIC arrays, stealthing and cloaking. The major emphasis will be on the system aspects of phased-arrays.

Lecture #1. Monday February 27; Phased Array Fundamentals: Electronically Scanned Array (ESA) explained with tube COBRA DANE used as example. Covered will be: Near and Far Field Definitions, Phased Steering, Switched-Line Phase Steering; Time Delay Steering, Subarraying, Array Weighting, Monopulse, Duplexing, Array Thinning, Embedded Element, dual polarized circular waveguide element, advantage of triangular lattice over square lattice, Tour of COBRA DANE (6 stories high) via color slides.



Lecture #2. Monday March 6; Linear Array Fundamentals: Conditions for no grating lobes; beamwidth vs scan angle; sine space; Array Factor; sidelobe level vs antenna beamwidth; directivity; antenna efficiency factors; array weightings; array frequency scanning; array bandwith.

Lecture #3. Monday March 13; Planar Arrays: Array Factor; array separability; sine-space (sinα-sinß space, T- space); grating lobes location for triangular and rectangular lattice; directivity; very useful bell curve approximation; array thinning system issues.

Lecture #4. Monday March 20; Array Errors: Effects of element phase and amplitude element errors and element failures; simple physical derivation of error effects; paired echo theory; subarray errors; quantization errors; examples.

Lecture #5. Monday March 27; Radiating Elements: Waveguide; dipole; slotted waveguide; microstrip patch; stacked patch; notch (wideband); spiral; matching (wide-angle); waveguide simulator; practical limitations, mutual coupling and array blindness; scattering matrix; design procedure; polarization missmatch loss.

Lecture #6. Monday April 3; Active Phased Arrays: 2nd generation solid state hybrid active electronically scanned array (AESAs) covered using PAVE PAWS as example, T/R Module Introduced, Cross Bent Dipole Element, Mutual Coupling, Array Blindness, Tour of PAVE PAWS (6 stories) via color slides. 3rd Generation AESAs: THAAD (TPY-2), SPY-3, IRIDIUM, F-15 APQ-63(V)2, APG-79, XBR, AMDR and upgraded Patriot; GaAs and GaN microwave integrated circuits (Monolithic Microwave Integrated Circuit, MMIC).

Lecture #7. Monday April 10; Array Feeds: Corporate and space fed; Reactive (lossless) and matched (Wilkinson); even/odd node analysis. Se-

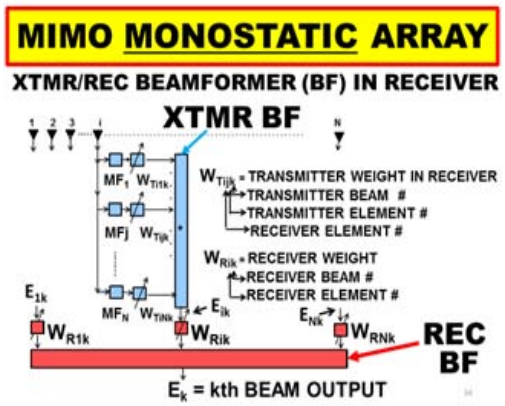
rial; Ladder; Lopez; Blass; Radial, Butler matrix; microstrip/stripline; Rotman Lens; SLQ-32; PATRIOT space-fed array; reflectarray.

a.) LOCKHEAD MARTIN (LM) SPACE FENCE RADAR SITE, b.) CUTAWAY OF TRANSMIT ARRAY, c.) CROSS-SECTION OF RADAR-ON-A-BOARD TRANSMIT LRUs (MICROWAVE J. SEPT-2016: HTTP://WWW.MICROWAVEJOURNAL.COM/ARTICLES/26872V

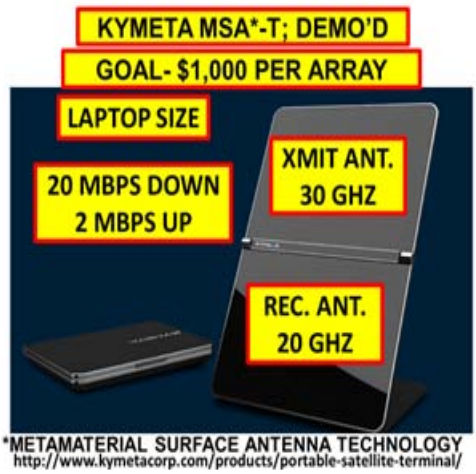
<u>System Considerations:</u> sequential detection, beam shape loss; receiver and A/D dynamic range; polarization miss-match loss; AESA noise figure and system temperature taking into account array mismatch.

<u>Phase Shifters:</u> Diode switched-line, hybrid-coupled, loaded-line; ferrite phase-shifters: non-reciprocal latching; diode vs ferrite; MEMS (Micro-Electro-Mechanical Systems) and its potential for a low cost ESA.

Lecture #8. Monday April 24; Limited Scan (Limited Field of View [LFOV]) Arrays: Explained using simple high school optics for TPS-25, 1st Electronically Scanned Array (ESA) put in production. Fundamental Theorem specifying minimum number of phase shifters needed for a specified scan angle. Method for realizing this minimum using overlapped array antenna elements as with HIPSAF lens array system and Microwave Landing System (MLS); reflector; randomized oversized elements; LFOV using sum and difference patterns; use of spatial filters to reduce grating lobes and sidelobes. <u>Hemispherical Coverage Dome Antenna.</u>

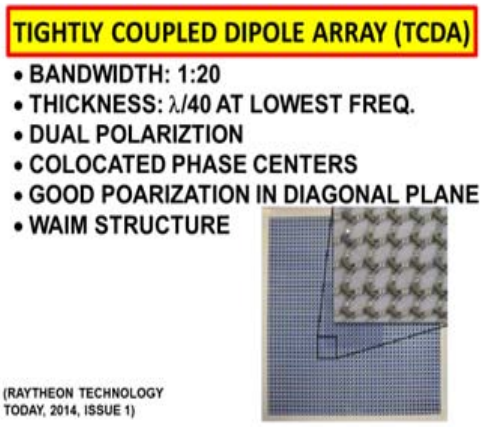


Lecture #9. Monday May 1; Phased Array Amazing Advances and Breakthroughs --



<u>Part 1: SYSTEMS:</u> Patriot now has GaN active electronically scanned array (AESA) providing 360o coverage, now a 2015 state-of-the-art AESA radar system; S-band AMDR provides 30 times the sensitivity and number of tracks as SPY-1D(V); 3, 4, 6 faced "Aegis" radar systems developed by China, Japan, Australia, Netherlands, USA;

<u>EXTREME MMIC:</u> can now put on single chip 256-Element 60 GHz Transmit Phased Array, such arrays may be used for the internet-of-things and in cell phones which by 2020 is expected to number 50 billion, expect such single chip arrays to cost only few dollars in future; All the RF circuitry for mm-wave automobile radars being put on a chip, in future such radars could be produced for just a few dollars; Valeo Raytheon (now Valeo Radar) developed low cost, $100s, car 25 GHz 7 beam phased array radar; ~2 million sold.

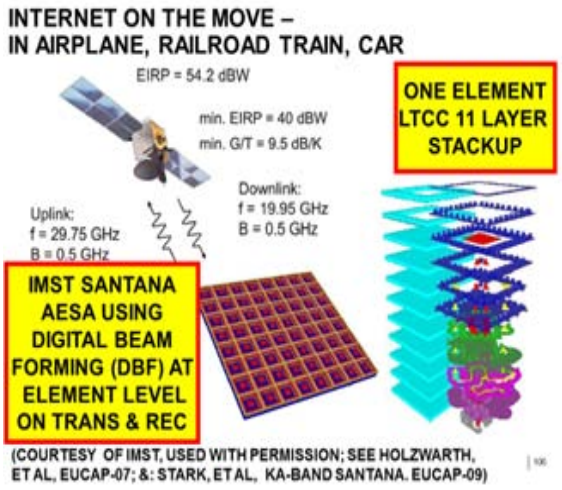


<u>LOW COST PACKAGING:</u> Raytheon, Rockwell Collins, Lincoln-Lab./MA-COM and South Korea developing low cost flat panel S and X-band AESAs using commercial components, practices and printed circuit boards (PCBs);

<u>DIGITAL BEAM FORMING (DBF):</u> Israel, Thales, Australia and Lockheed Martin(LM) have under

development array with an A/D for every element channel (LM array has 172,000 channels and A/Ds); Raytheon developing mixer-less direct RF A/D having >400 MHz instantaneous bandwidth, reconfigurable between S and X-band.

MOORE'S LAW: Not dead yet; Slowed down but has much more to go; potential advance via: graphene, spintronics, memristors, synaptic transistors and quantum computing.

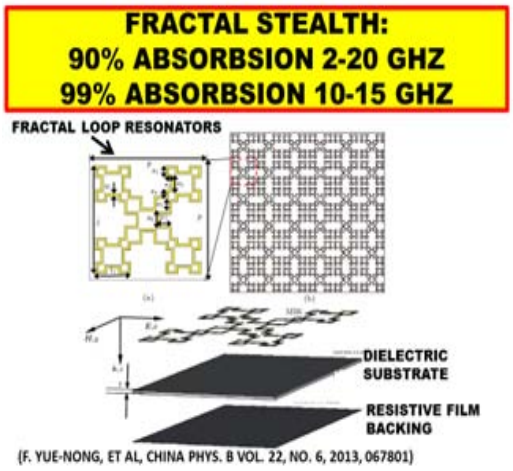


MATERIALS: GaN can now put 5X to 10X the power of GaAs in same footprint, 38% less costly, 100 million hr MTBF, Raytheon invested $200 million to develop GaN.

METAMATERIALS: Material custom made (not found in nature): 20 and 30 GHz metamaterial electronically steered antennas demonstrated December 2013 transmission to satellites and back, goal is $1K per antenna, how this antenna works explained for first time; 2-20GHz stealthing by absorption simulated using <1 mm coating; target made invisible over 50% bandwidth at L-band using fractals; Focus 6X beyond diffraction limit at 0.38 μm; 40X diffraction limit, λ/80, at 375 MHz; In cell phones provides antennas 5X smaller (1/10th λ) having 700 MHz-2.7 GHz bandwidth; The Army Research Laboratory in Adelphi MD has funded the development of a low profile metamaterial 250-505 MHZ antenna having a □/20 thickness; Provides isolation between antennas with 2.5 cm separation equivalent to 1 m separation; used for phased array WAIM.

Sidelobe Cancellers (SLC): The simple single-loop, feed-forward canceller is introduced in easy physical terms. This is followed by a discussion of the simple single-loop feedback canceller with and without hard limiting. The normalized feedback SLC will also be covered. Next the multiple-loop SLC (MSLC) will be covered. Applied to the MSLC will be the Gram-Schmidt, Givens and Householder orthonormal transformation methods. Systolic array implementations will be given.

Lecture #10. Monday May 15; Fully Adaptive Arrays: The optimum weight for a fully adaptive array is developed using a very simple derivation. Methods for calculating this optimum weight are given using the Sample Matrix Inversion (SMI) algorithm, the Applebaum-Howells adaptive feedback loop method, a recursive method, and Gram-Schmidt, Givens and Householder orthonormal transformations developed for the tracking problem and for the MSLC. The use of eigenvector beams and a whitening filter will also be developed. It will be shown how the latter reduces the transient response. Methods for obtaining the benefits of a fully adaptive array without its high computation and large transient time disadvantages are given. These are the adaptive-adaptive array processing procedures, the use of eigenbeam space, and the method of finding the largest eigenvectors and in turn their eigenbeams. The STAP algorithm covered.



Phased Array Amazing Advances and Breakthroughs --

Part 2: NEW MIMO (MULTIPLE INPUT MULTIPLE OUTPUT) ARRAYS: Explained in simple physical terms rather than with heavy math. Gives attendees an understanding of where it makes sense to

use. Contrary to what is claimed MIMO array radars do not provide 1, 2 or 3 orders of magnitude better resolution and accuracy than conventional array radars; also contrary to claims made MIMO should not provide better minimum detectable velocity for airborne radars.

MIMO and JAMMING: MIMO does not provide better barrage-noise-jammer, repeater-jammer or hot-clutter rejection than conventional array radars. SAR/ISAR: Principal Components of matrix formed from prominent scatterers track history used to determine target unknown motion and thus compensate for it to provide focused ISAR image. Technology and Algorithms: A dual polarized, low profile, (□/40), wideband (1:20) antenna can be built using tightly coupled dipole antennas (TCDA); Lincoln Lab increases spurious free dynamic range of receiver plus A/D by 40 dB; MEMS: Has potential to reduce the T/R module count in an array by a factor of 2 to 4; Can provide microwave filters tunable from 8-12 GHz that are 200 MHz wide;

LOW COST PRINTED ELECTRONICS: 1.6 GHz printed diodes achieved (goal 2.4 GHz).

ELECTRICAL AND OPTICAL SIGNALS ON SAME CHIP: Will allow data transfer at the speed of light; IR transparent in silicon.

BIODEGRADABLE ARRAYS OF TRANSISTORS OR LEDS: Imbedded under skin for detecting cancer or low glucose.

QUANTUM RADAR: Has potential to defeat stealth targets.

NEW POLARIZATIONS: OAMS, (ORBITAL ANGULAR MOMENTUM) unlimited data rate over finite band using new polarizations??

Your Registration Includes: 1 textbook; 15 Reprints; over 800 Vugraphs; trial license of MATLAB and Phased Array System Toolbox from MathWorks with examples demonstrating key array concepts covered in the course.

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Decision (Run/Cancel) Date for this Courses is Monday, February 20, 2017

Payment received by February 15
IEEE Members $300
Non-members $340

Payment received after February 15
IEEE Members $340
Non-members $370

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Locally held IEEE Conferences

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September 12 - 14, 2017
www.ieee-hpec.org
Submission deadline is May 19, 2017

QA and Testing in DevOps Automation

Time & Date: 8AM - 5PM, Thursday, April 27

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

Speaker: Rajkumar Joghee Bhojan, Wipro Technologies

Introduction: In most of the IT organizations, there are hundreds of applications are getting deployed per release. Currently, Agile projects release cycle duration is reduced dramatically. In this "Fail Fast" environment, choosing right test automation tool and its framework becomes imperative for delivering quality software. This day-long course (lecture/lab) will address the following questions: How to create new ways of adopting QA and testing in their core software? Are we able to deliver better product using existing testing methodologies?

Format: lecture/lab

Topics

- Comprehend the need of automated testing.
- Employ TestNG and Eclipse to execute and write tests.
- Develop a group of test classes with the use of WebDriver.
- Building POM framework
- Running Tests in Parallel
- Understanding how to use Jenkins and GitHub for Selenium Tests
- Design tests to minimize code using inheritance

Target Audience: IT Professionals, Students both UG and PG with Computer Knowledge and Researchers

Benefits of Attending the Course:

- Learning recent technologies in Test Automation space.
- Will get knowledge of Selenium and its techniques in trending technologies

*** Gain Hands-on experience in Selenium WD.**

- Latest technologies used in Software Testing
- Participants can directly implement the taught methodologies in their software projects

Speaker Bio: Rajkumar J.Bhojan is a Test Architect (TA), Wipro Technologies, Quincy, MA, USA. He has over two decades of professional experience in both IT and Academics. He holds M.Sc., (Phy), MCA, and M.Phil (CS). He has executed IT projects in diverse geographies including India, Australia & USA. He has worked as a QA Manager, Scrum Master, Corporate Trainer and Principal Consultant in reputed organizations. He has presented many technical papers at International conferences, Journals, IEEE forums and Google Tech Talks. He is a Certified Scrum Master and has rich experience in Agile/scrum Methodologies. He is a member in IEEE and ACM.
http://sites.ieee.org/sem/files/2013/07/May_2014-WL_Rev1.pdf
http://www.atagg.agiletestingalliance.org/speakers.html. http://princetonacm.acm.org/tcfpro/
He also spoke at Google Tech Talks (GTAC-2016).
https://www.youtube.com/watch?v=RfQi5PNO4L8.

Course Materials, PPT - deck, Working notes and Sample Scripts.

Decision (Run/Cancel) Date for this Courses is Friday, December, 30, 2016

Payment received by December 27
IEEE Members $395
Non-members $415

Payment received after December 27
IEEE Members $415
Non-members $435

Registration will be available on our website (www.ieeeboston.org) by January 7

Call for Technical 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