



THE IEEE NORTH JERSEY SECTION NEWSLETTER

Vol. 59, No. 9

OCTOBER 2012

Calendar of Events

- October 01, 4:30PM-6:30PM: ED/CAS and ECE and Physics Dept. of NJIT: Research Activities and Opportunities at Center for Energy Efficient Electronic Science at UC Berkeley:** Dr. M. Josephine Yuen, Executive Director of Center for Energy Efficient Electronic Sciences at UC Berkeley. [Read More...](#)
Location: NJIT, ECE-202, 161 Warren Street, Newark, NJ 07102, [Getting to NJIT and Parking Information](#)
Contact: Dr. Durga Misra (973) 596-5739 (dmisra@njit.edu) or Dr. Edip Niver (973) 596-3542 (niver@njit.edu)
- October 03, 6:00PM-8:45PM: IEEE North Jersey Section EXCOM meeting - Newark, NJ, [Read More...](#)**
Location: NJIT, ECE-202, 161 Warren Street, Newark, NJ 07102, [Getting to NJIT and Parking Information](#)
Contact: Naresh Chand, (nchand@ieee.org), Adriaan J. van Wijngaarden, (avw@ieee.org)
- October 04, 4:30PM-6:30PM: CAS/ED, NJIT: Challenges in Synthesizing Quantum Computers:** Susmita Sur-Kolay, Advanced Computing and Microelectronics Unit Indian Statistical Institute, Kolkata 700108 INDIA, [Read More...](#)
Location: NJIT, ECE-202, 161 Warren Street, Newark, NJ 07102, [Getting to NJIT and Parking Information](#)
Contact: Dr. Durga Misra (973) 596-5739 (dmisra@njit.edu) or Dr. Edip Niver (973) 596-3542 (niver@njit.edu)
- October 04, 9:00AM-4:30PM: MTT/AP-Society Joint Chapter - 27th ANNUAL SYMPOSIUM AND MINI-SHOW [Read More...](#)**
Location: Hanover Manor, 16 Eagle Rock Ave., E. Hanover, NJ 07936.
Contact: (973-992-7425); Please click [here](#) for more contacts:
- October 08, 3:00PM-7:00PM: Student Activities Committee: Stevens IEEE Day [Read More...](#)**
Location: Jacobus Lounge, 1 Castle Point on Hudson, Hoboken, NJ 07030 [Getting to Stevens Institute of Technology](#)
Contact: John C Taylor (john.taylor1204@gmail.com)
- October 08, 5:00PM-7:00PM: Photonics Society and Aerospace and Electronics Systems Society: Storage Aware Routing for Content Delivery Applications:** Dr. Shweta Jain, Assistant Professor, Math and Computer Science, York College CUNY, NY, New York, United States, [Read More...](#)
Location: 2nd Floor, China meeting room, 400 Crossing Blvd. Bridgewater, NJ 08807, [Getting to: 400, Crossing blvd. Bridgewater](#)
Contact: Naresh Chand, (908) 723 7001 (naresh.chand@huawei.com)
- October 10, 6:30PM-9:00PM: Professional Activities Committee: Engineers Meet for Politics and the Engineering Profession, [Read More...](#)**
Location: Clifton Memorial Library, 292 Piaget Ave, Clifton, NJ 07011
Contact: Paul Ward, (peward@ieee.org, (973 790-1625), Richard F. Tax, rtax@verizon.net (201- 664-6954)
- October 11, 12:00PM-1:00PM: Computer Society and School of Computer Sciences and Engineering, FDU: FlashLinq: Enabling Proximal Internet:** Dr. Junyi Li: Vice President of Engineering at Qualcomm Flarion Technologies [Read More...](#)
Location: Auditorium M105, Muscarelle Center, Fairleigh Dickinson University, Teaneck, NJ 07666 [Getting to FDU](#)
Contact: Hong Zhao (201)-692-2350, (zhao@fdu.edu); Howard Leach (h.leach@ieee.org)
- October 11, 6:30PM-8:30PM: IEEE CNNJ: Magnetic Materials in Electronic Applications:** Howard H. Liebermann, Ph.D., a member of the Consultants' Network, specializes in magnetic materials and devices, in physical metallurgy and alloy design. [Read More...](#)
Location: Morris County Library, 30 East Hanover Avenue, Whippany, NJ, [Getting to Morris County Lib](#)
Contact: Robert Walker, 973-728-0344, or visit our website, www.TechnologyOnTap.org.
- October 11, 4:45PM-6:30PM: IEEE Communications Society: Dynamic Spectrum Access in Wireless Networks:** Zhensheng Zhang, Cubic Corporation, Senior Principal Scientist, Networking Research
Location: NJIT, ECE-202, 161 Warren Street, Newark, NJ 07102, [Getting to NJIT and Parking Information](#)
Contact: Nirwan Ansari (973)596-3670.
- October 19, 9:00AM-2:00PM: PES and IAS: Lighting [Read More...](#)**
Location: Phillips Lighting NA - Lighting Application Center, Room Number: Off the main lobby, 200 Franklin Square Drive, Somerset, NJ 08873
[Getting to Phillips Lighting - NA](#)
Contact: Ron Quade (rwquade@ieee.org) or Ken Oexle (k.oexle@ieee.org)
- October 23, 6:00PM-8:30PM: North Jersey Section PACE, WEI, and GOLD: Speak Well, Lead Well with Toastmasters:** Brian Cort, ACS*, ALB*; Rebecca George, ACB*, ALB*; Holly Anderson, CC*, CL*; and Host - Mani Iyer, CTM*, [Read More...](#)
Location: Bell Laboratories, Alcatel-Lucent, Room 6A-106, 600 Mountain Ave, Murray Hill, NJ 07974, [Getting to Bell Labs](#)
Contact: Mani Iyer (mani.iyer@ieee.org), Adriaan van Wijngaarden (avw@ieee.org)
- October 25, 11:30AM: IEEE North Jersey Section in conjunction with the PES/IAS Chapters: Life Grade Luncheon**
Location: Hamilton Park Conference Center 175 Park Avenue in Florham Park, New Jersey 07932
Contact: Ken Oexle (k.oexle@ieee.org)
- October 29, 6:00PM-8:45PM: Photonics Society and Aerospace and Electronics System Society present: Tutorial: Introduction to Linear Photonics (Sending RF/Microwave over Fiber):** John Mac Donald of Linear Photonics, LLC./Linearizer Technology, Inc. [Read More...](#)
Location: Huawei Technologies, China meeting room, 2nd floor, 400 Crossing Blvd. Bridgewater NJ 08807
Contact: Naresh Chand (naresh.chand@huawei.com) Cell: (908) 723 7001
- October 30, 5:30PM-6:30PM: COMSOC: Distinguishing Users with Capacitive Touch Communication:** Marco Gruteser of Rutgers University;
Location: NJIT, ECE-202, 161 Warren Street, Newark, NJ 07102, [Getting to NJIT and Parking Information](#)
Contact: Nirwan Ansari (973)596-3670. Check <http://web.njit.edu/~ieeenj/comm.html> for latest updates. [Read More...](#)



Upcoming November Events

- **November 07, 3:00PM-4:00PM: Vehicular Technology Society: Evolution to 4G Wireless – the dominant role of LTE:**
Dr. Vijay K. Varma of Applied Communication Sciences (formerly Telcordia Advanced Technology Solutions), Red Bank, NJ.
[Read More...](#)
Location: Babbio Center, Room 319, Steven Institute of Technology, Hoboken, NJ 07030
[Getting to Stevens Institute of Technology](#)
Contact: Prof. Yu-Dong Yao, yu-dong.yao@stevens.edu, Dr. Mani Iyer, mani.iyer@ieee.org
- **November 07, 6:00PM-8:45PM: IEEE North Jersey Section EXCOM meeting - Clifton, NJ, [Read More...](#)**
Location: Clifton Public Library - Allwood Branch, Activity Room, 44 Lyall Road, Clifton, NJ 07012
Contact: Adriaan J. van Wijngaarden, IEEE North Jersey Executive Committee, Secretary, E-mail: avw@ieee.org

Reminders and Announcements:

- **Pre-College Cyber Defense Competition**
- **North Jersey Section Nomination Committee Invites Nominations**
- **How to subscribe to this newsletter if you are not a North Jersey IEEE Member?**
- **Welcome! New Members of the IEEE North Jersey Section**

IEEE Co-Sponsored Short Courses

- **October 6, 13, 20, 27, 2012 9:00 AM to 2:30 PM C# .NET Programming Course in Four Saturdays**
Instructor: Donald Hsu (yanyou@hotmail.com),
Location: NJIT, Newark, NJ 07102 [Getting to NJIT and Parking Information](#)
- **October 06, 9:00AM-3:00PM Software Defined Radio: Introduction to Transceiver Front End – One day Course**
Instructor: Goran Djuknic, BAE Systems, (gd@ieee.org) [Read More...](#)
Location: Becton Hall, Classroom 204, Fairleigh Dickinson University, 1000 River Road, Teaneck, NJ 07666 [Getting to FDU](#)
- **October 19 - 20, 7:00AM-7:00PM IEEE Smart Tech – Metro Area Workshop Series – Westchester NY**
For Details See Page 12

Prior registration is encouraged and appreciated.

You do not have to be an IEEE member to attend any event.

For up to date information, visit our website: [IEEE North Jersey Section](#) or visit [Webinabox.vTools](#)

Meeting Announcements:

October 1, 2012

**ED/CAS and the ECE Dept and Physics
Dept of NJIT present:**

**Research Activities and Opportunities at
Center for Energy Efficient Electronic
Science at UC Berkeley**

Speaker: M. Josephine Yuen, Research Activities and Opportunities at Center for Energy Efficient Electronic Science at UC Berkeley

Abstract: Information about Summer Research Opportunities and the Programs at the Center for Energy Efficient Electronic Science will be discussed. The 9-week residential program for rising undergraduate juniors and seniors to do research with our Center's faculty at Berkeley, MIT and Stanford will be presented. The Center has faculties in a variety of technical disciplines, including Physical Electronics, Optoelectronics, Electronics Materials, Spintronics, and even Synthetic Organometallic Chemistry. A line-up of faculties can be found at the website <http://www.e3s-center.org/people/about-res.htm>. In addition, information regarding a Summer Research Workshop, a one-week residential program on hands-on electronics at Berkeley for rising sophomores to help them be competitive as applicants for future research opportunities will be shared. A very high level of the research that is in progress will also be discussed.

Biography: Dr. M. Josephine Yuen is currently the Executive Director of the Center for Energy Efficient Electronic Sciences at UC Berkeley.

Previously, she was a program director in the SBIR/STTR program of the National Science Foundation; a position she held after spending 30 years in industry, working for large and small companies and as a consultant. She held executive positions at three small businesses. From 2005 to 2009, she was the CEO of Triformix, Inc., a California small business which develops and manufactures precision polymer optics for the communications, consumer products and medical industries. Earlier, she was employed for more than two decades at AT&T and then its spinoff, Lucent Technologies. She started as a Member of Technical Staff in Bell Laboratories and eventually held Director-level positions in product development, product management, manufacturing, and supply-line management.

She was also on the adjunct faculty at Rothman Institute of Entrepreneurship at Fairleigh Dickinson University, where she taught MBA courses in Entrepreneurship, and developed and taught a course in Innovation Management for the Executive MBA program.

Dr. Yuen is a Physical Chemist by training with a B.S. from Wayne State University and a Ph.D. from Cornell University. She also was a post-doctoral fellow at Argonne National Laboratory.

Email: joyuen@eecs.berkeley.edu

Meeting Agenda:

Refreshments: 4:30 PM

Presentation: 5:00 PM

All are welcome: You do not have to be an IEEE Member to attend.

Location: NJIT, ECE-202, 161 Warren Street, Newark, NJ 07102

[Getting to NJIT and Parking Information](#)

Time: 04:30PM to 06:30PM

Contact: Dr. Durga Misra (973) 596-5739 (dmisra@njit.edu) or Dr. Edip Niver (973) 596-3542 (niver@njit.edu)

[For Updates and Registration: Click Here](#)

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October 3, 2012

**IEEE North Jersey Section EXCOM
meeting - Newark, NJ**

Agenda: This executive committee (EXCOM) meeting of the IEEE North Jersey Section will be held at the New Jersey Institute of Technology (NJIT), in Newark, NJ.

The meeting will take place in the ECE Building, Room ECE-202, 161, Warren Street, Newark, NJ.

There will be a get-together with a buffet starting at 6 pm.

The meeting starts at 7 pm EST and typically ends at 8:45 pm.

The meeting is meant to discuss and coordinate the section's activities and new initiatives.

Everyone is welcome to attend this meeting.

Please register in advance for this meeting using vTools to provide the meeting organizers an accurate head count. You can change/cancel the registration if your plans change.

The meeting agenda typically includes reports from the Secretary and Treasurer, reports from the Chapter and Affinity Group Chairs and Representatives, Committee Chairs, news related to the IEEE and the North Jersey Section, planning and new initiatives.

Location: New Jersey Institute of Technology
ECE-202, 161 Warren Street, Newark, NJ 07102

[Getting to NJIT and Parking Information](#)

Parking is available at 154 Summit Street, Newark, NJ 07102.

Time: 06:00PM to 08:45PM

Contact: Naresh Chand, Chair, nchand@ieee.org,
Adriaan van Wijngaarden, Secretary, avw@ieee.org

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October 4, 2012

CAS/ED and NJIT present:

Challenges in Synthesizing Quantum Computers

Speaker: Prof. Susmita Sur-Kolay, Advanced Computing and Microelectronics Unit, Indian Statistical Institute, Kolkata, India

Abstract: Many decades after quantum mechanics was accepted as a more accurate model of the physical world, Richard Feynman proposed the brilliant vision of building computers based on quantum mechanical systems in 1981. The two major drivers for the development in this field are the need to overcome the limitations both in the theory of computing with classical deterministic digital computing models and in the technology of building them.

With a brief introduction to the motivation for quantum computing, we will discuss the basic model and the operations. Notwithstanding the limitations in physical realizations, the progress in the technology of quantum computers during the last quarter of a century is sketched very briefly. The main focus is on synthesis methodology for quantum computers at the logical level starting with a set of fundamental quantum gates.

Biography: Research contributions of Prof. Susmita Sur-Kolay are in the areas of algorithmic CAD for VLSI physical design, fault modeling and testing, logic synthesis of quantum computers and graph algorithms. She has authored/co-authored several technical papers in international journals and refereed conference proceedings, two edited books and a chapter in the Handbook on Algorithms for VLSI Physical Design. She has served as on Technical Program Committees of many international conferences and as Technical Program Co-Chair for three of these, on the editorial board of Proc. of IEE CDT and as an Associate Editor of the IEEE Transactions on VLSI Systems. She is a Member of ACM, Senior Member of IEEE, the IEEE WIE AG Chair (2011-12) of Kolkata Section, and was a Distinguished Visitor of IEEE Computer Society (India), 2006-2009. Among other awards, she was the recipient of the President of India Gold Medal (summa cum laude) at IIT Kharagpur (1980) and IBM Faculty Award (2009). She is currently a visiting professor at Princeton University.

Email: surkolay@gmail.com

Location: New Jersey Institute of Technology
ECE-202, 161 Warren Street, Newark, NJ 07102

[Getting to NJIT and Parking Information](#)

Parking is available at 154 Summit St, Newark, NJ.

Time: 04:30PM to 06:30PM

Contact: Dr. Durga Misra (973) 596-5739 (dmisra@njit.edu) or Dr. Edip Niver (973) 596-3542 (niver@njit.edu)

October 8, 2012

Student Activities Committee presents:

Stevens IEEE Day

Meeting Agenda: On campus celebration of the IEEE allows students to get to know more about the IEEE, and specifically the IEEE Stevens Chapter.

Location: Jacobus Lounge, 1 Castle Point on Hudson, Hoboken, NJ 07030

[Getting to Stevens Institute of Technology](#)

Time: 3:00PM to 7:00PM

Contact: John C Taylor, (john.taylor1204@gmail.com)

[For Updates and Registration: Click Here](#)

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October 8, 2012

Photonics Society and Aerospace and Electronics Systems Society present:

Storage-Aware Routing for Content Delivery Applications

Speaker: Dr. Shweta Jain, Assistant Professor, Math and Computer Science Department, York College CUNY, New York, NY

Abstract: Since the commercialization of the Internet, we have seen rapid transformation both in the way people connect to the Internet and the applications they use over the network. End-hosts are primarily wireless and mobile devices rather than wired clients and applications have shifted from primarily conversation based to content centric. In order to support this transformation, there is a significant amount of research focus on network architecture that is designed for user mobility and content centric applications. Researchers believe that the solution lies in caching content closer to its consumer so that it may be served from a wireless access point, optical network terminator, cellular base station or a storage router in the network. Fortunately the cost of storage continues to fall and hence storage on routers and other point of connection devices is becoming feasible. This talk is about a Storage Aware Routing (STAR) protocol that uses storage and historical information about path costs to make routing decisions. When downstream paths are expensive, STAR freezes content transmission and caches the data at intermediate routers. It then waits for better/cheaper paths to be discovered; perhaps the existing path may improve when the mobile user switches to a faster network, or network conditions may improve. As seen in simulation using ns2 and emulation on the ORBIT testbed, STAR works well with a hop by hop transport protocol, and performs better in terms of throughput and delay

compared to a link state routing protocol. STAR is an address based routing protocol but can be extended to hybrid address and content routing. As a content routing protocol, STAR uses the same principles of history and storage to find multiple cached locations for the requested content. It then selects the best location and resumes its address based routing functionality to fetch the requested data. As STAR automatically stores content when routes become expensive, the most busy/expensive routes are likely to have more copies of the most popular content. Intuitively, this approach may result in an overall reduction in content delivery latency.

Biography: Shweta Jain is an Assistant Professor in the Math and Computer Science Department at York College CUNY since Fall-2010. Prior to York College, she was a Research Associate at WINLAB Rutgers University from 2008-2010 and Senior Engineer at Staccato Communications (now Veebeam Ltd.) from 2007-2008. She completed her PhD from Stony Brook University in 2007. Her research areas include medium access and routing for wireless ad-hoc, mesh and RFID networks. She is an educator and researcher. She is currently teaching Introduction to Computing (C++) and Data Communications at York College. She is also working on protocol design for the next generation networks, measuring performance of competing/cooperating wireless technologies in the ISM band from an application layer perspective. She is an area editor for the ICST Journal on Emerging Internet Infrastructures and an active reviewer for several IEEE and ACM journals. She has served in the organizing committees of several conferences including the IEEE Sarnoff Symposium, IEEE International Conference on Internet Multimedia Systems Architecture and Application and ACM International Symposium on Mobile Ad Hoc Networking and Computing.

Email: SJain@york.cuny.edu

Location: 2nd Floor, China meeting room
400 Crossing Blvd. Bridgewater, NJ 08807

[Getting to 400 Crossing blvd. Bridgewater](#)

Time: 5:00PM to 7:00PM

Contact: Naresh Chand, (908) 723 7001
(naresh.chand@huawei.com),

[For Updates and Registration: Click Here](#)

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October 10, 2012

Professional Activities Committee presents: Engineers Meet for Politics and the Engineering Profession

Meeting Agenda: The North Jersey Section Professional Activities Committee will meet to discuss politics and its influence on Engineering jobs. From the bottom up, PACE will hold an informal discussion with pizza, and light refreshments. This is the significant side of the profession. This affects students and engineers of all ages and disciplines. Come, bring your friends and spouses and discuss the

profession with your views about the future for New Jersey Engineers. Students (SAC) GOLD and Women in Engineering (WIE) are invited.

Offer your suggestions for future meetings, topics and speakers for 2013.

About the Meeting:

This meeting is to bring members of the Section together for an evening of discussion, hospitality and refreshments. Our PACE meetings offer opportunities for lively discussions. Historically, once members get started they just don't want to leave. Our meetings are entertaining, thought provoking and provide opportunities to network.

Job Notices: Bring any job notices or employment information to the meeting. Employment Opportunities are always welcome.

All are invited. We encourage North Jersey Section Ex-Com officers to attend. When they do, our Section membership can meet with them on a first name basis.

Bring your associates, friends and spouses and we will talk about the Profession.

What is best for Engineers and the Profession?

Location: Clifton Memorial Library, 292 Piaget Ave, Clifton, NJ 07011.

Time: 6:30PM to 9:00PM

Contacts: Paul Ward, peward@ieee.org, (973 790-1625) and Richard F. Tax, rtax@verizon.net (201- 664-6954),

[For Updates and Registration: Click Here](#)

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October 11, 2012

Computer Society and School of Computer Sciences and Engineering, FDU present:

FlashLinQ: Enabling Proximal Internet

Speaker: Dr. Junyi Li, Vice President of Engineering at Qualcomm Flarion Technologies

Abstract: FlashLinQ is a wireless communications system founded on the realization of a "wireless sense"-a sense whose embodiment in devices provides Internet application peers with a direct awareness of each other's physical proximity and relevance, creating a new form of proximity-aware internetworking, and thereby realizing a necessary step towards what we term a "Mobile Proximal Internet". The need for such a system arises from the pervasive spread of Internet devices and applications in our daily lives, and the practical limitations of current communications technologies in conveying knowledge of mutual proximity and relevance. In this talk, we introduce a mobile proximity-aware social network use case and describe the overview of air link technology.

Biography: Dr. Junyi Li is a Vice President of Engineering at Qualcomm Flarion Technologies, responsible for conceptualizing and developing next-generation wireless

networking solutions. He was a key inventor of Flash-OFDM, arguably the first commercially deployed OFDMA-based mobile broadband wireless communications system. He holds over 150 U.S. patents and has more than 400 pending patent applications. He was a founding member of Flarion Technologies, a startup acquired by QUALCOMM in 2006. Prior to that, he was with Bell-Labs research in Lucent Technologies. He has a Ph.D. degree in E.E. from Purdue University and an MBA from the Wharton School at University of Pennsylvania. He is a Fellow of the IEEE.

Location: Auditorium M105, Muscarelle Center
Fairleigh Dickinson University, Teaneck, NJ 07666

[Getting to FDU](#)

Time: 12:00PM to 1:00PM

Contact: Hong Zhao (201)-692-2350, zhao@fd.edu; Howard Leach h.leach@ieee.org

[For Updates and Registration: Click Here](#)

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October 11, 2012

IEEE Consultants Network presents:

Magnetic Materials in Electronic Applications

Speaker: Howard H. Liebermann, Ph.D.

Abstract: A modern designer needs to be well versed in wide-ranging areas of technical knowledge. Magnetic materials may seem to be out of the mainstream, a niche – yet quite often they comprise a significant, if not major portion of the project.

We will attempt to familiarize the attendees with magnetics technology. In the course of the presentation, we will discuss magnetic material structures and properties and their applications.

We will begin with fundamental concepts and how they may be utilized in practice, leading to a comprehensive understanding of magnetic materials.

We will cover some simple concepts in metallurgy and physics, such as magnetic domain wall structure and motion – continuing to practical engineering solutions and utilization of various kinds of magnetic materials.

As with so many other areas of technology, the continual refinement of properties and performance of magnetics results in the development of new improved products.

Biography: Howard H. Liebermann, Ph.D., a member of the Consultants' Network, specializes in magnetic materials and devices, in physical metallurgy and alloy design.

Howard received a B.S. in Metallurgical Engineering from the Polytechnic Institute of Brooklyn, and a MSc and PhD in Materials Science and Engineering from the University of Pennsylvania.

His practice offers consulting in issues related to solder for electronic applications and in magnetic alloys for electrical power, high frequency and anti-theft systems, as well as in

design of experiments and Six-Sigma training. Howard's has 39 patents to his credit and is an author or co-author of 84 technical papers, several book chapters and has edited a technical book entitled "Rapidly Solidified Alloys".

Howard Liebermann's office is in Succasunna, NJ and he can be reached at (201) 841-0274 or at hllieber@optonline.net

About the network: Founded in 1992, the IEEE Consultants Network of Northern NJ encourages and promotes the use of independent technical consultants by business and industry.

Location: Morris County Library, 30 East Hanover Ave, Whippany, NJ

[Getting to Morris County Library](#)

Time: 6:30PM to 9:00PM

No Admission Charge

Contact: Robert Walker, 973-728-0344, or visit our website, www.TechnologyOnTap.org.

[For Updates and Registration: Click Here](#)

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October 11, 2012

IEEE Communication Society presents:

Dynamic Spectrum Access in Wireless Networks:

Speaker: Zhensheng Zhang, Cubic Corporation, Senior Principal Scientist, Networking Research

Abstract: Current frequency planning and assignment for wireless communications are done manually and result in inefficient use of spectrum. When observed in a frequency-time plane, the actual instantaneous use of spectrum is minimal. The need for dynamic spectrum access is paramount given the loss of available spectrum due to Government auction combined with the increased demand placed by modern wideband communications systems. A gap exists between the need for spectrum and the ability to access it dynamically in the frequency-time plane. To fill in this gap, Dynamic Spectrum Access (DSA) and cognitive radios/networks have been proposed in wireless networks. In this talk, we present a high level, brief overview on the recent developments of the dynamical spectrum access techniques, focusing on a broad range of areas: motivations, standard activities, three models for dynamic spectrum access, characteristics of the available bandwidth of the primary users, sensing technologies and sensing intervals to detect white spaces/available spectrum, spectrum allocation and management algorithms (such as liner programming, graph coloring, game theory, machine learning), tradeoff between spectrum/performance gain versus additional overhead used in implementing DSA. We also present a brief overview of the security issues associated with DSA networks and recent DARPA programs related to dynamic spectrum access, including robust communications under extreme conditions, cognitive jamming and anti-jamming.

Biography: Zhensheng Zhang received his Ph.D. in electrical engineering from the University of California, Los Angeles. Dr. Zhang has over twenty years' experience in design and analysis of network architecture, protocols and control algorithms, with very strong backgrounds in performance analysis, modeling and simulation of the communication networks. He is currently with Cubic Corporation, Senior Principal Scientist, Networking Research. Before joining Cubic, he worked at SDRC/Argon/Boeing for 8 years as Principal Scientist, serving as Principal Investigator for many DOD projects. He worked at Sorrento Networks, Department of System Architecture, for 2 years, responsible for designing the next-generation optical metro networks using the GMPLS control framework. Prior to Sorrento Networks he was with Bell Laboratories, Lucent Technologies, focusing on research and development in wireless networks. Dr. Zhang served as Editor of IEEE Transaction on Wireless Communications from 2002 to 2006. He served as the General Chair of Broadband Wireless Networking Symposium, October 2004. He was a Guest Editor for the IEEE JSAC special issue on Overlay Networks (2003) and the Journal of Wireless Networks issue on multimedia wireless networks (August 1996). Dr. Zhang is a Member at Large of the IEEE San Diego section (2004, 2011, 2012) and is the Chair of IEEE Communications Society San Diego Chapter (2004-2012). His research interests include wireless ad hoc networks and wireless sensor networks. He has given many invited talks and tutorials on wireless ad hoc networks at various conferences. He is an IEEE ComSoc Distinguished Lecturer (2010-2013). Dr. Zhang is the IEEE Globecom2012 TPC Co-Chair.

Location: NJIT, 202 ECEC; 161 Warren Street, Newark, NJ 07102 [Getting to NJIT and Parking Information](#)

Time: 5:00 pm (refreshment starts at 4:45 pm)

Contact: Nirwan Ansari (nirwan.ansari@njit.edu), (973)596-3670.

For Updates and Registration: contact Prof. Nirwan Ansari

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October 19, 2012

PES and IAS Chapters present:

Lighting

Abstract: The following topics will be discussed:

- Light and Color – you'll leave with a basic vocabulary to use with your customers and colleagues
- Including a visual experience of CRI, CCT and a host of other lighting terms.
- Comparative light level and wattage measurements of both traditional and the latest light source technologies.
- Three technologies:
 - *Ceramic Metal Halide - including what it is, when to use it, and experience it in the High Bay Theater to compare it with High Pressure Sodium and Quartz Metal Halide*

- *High Performance Fluorescent - lamp and ballast systems, and high performance luminaries, shown side-by-side, and measured for performance hands-on.*
- *Solid State Lighting - LED - how it works, its strengths, weaknesses and how it differs from the traditional light source. Again, we will light it up, experience it, and measure its performance.*

• Along the way we will sprinkle in the legislative changes driving some of this technological change.

Lighting has changed and is continuing to change at a dramatic pace. Come experience light.

Biography: Paul Hafner is the founder and principal of The Sustainable Learning Collaborative, and principal faculty at the Philips Lighting Application Center. Paul has more than 25 years of experience in lighting as an educator, salesperson, and manager of large construction projects. Paul has worked on numerous energy-efficient revitalization projects in both the private and public sector and has conducted workshops for professionals, distributors, and end users. Paul is Lighting Certified and a member of the IESNA and ASTD. He lives in Buffalo, New York.

Email: paul.hafner@philips.com

Location: Philips Lighting NA Lighting Application Center (off the main lobby, 200 Franklin Square Drive, Somerset, NJ 08873)

[Getting to Phillips Lighting](#)

Agenda: The seminar fee includes lunch, refreshments and handouts. Non-members joining IEEE within 30 days of the seminar will be rebated 50% of the IEEE registration charge.

Four hours of instruction will be provided. If desired, IEEE Continuing Education Units (0.4 CEUs) will be offered for this course - a small fee of \$45 will be required for processing.

Please pay attention to the "Registration Fee" and choose the appropriate choice either with or without CEUs.

Time: 9:00AM to 2:00PM

Contact: Ron Quade rwquade@ieee.org or Ken Oexle k.oexle@ieee.org

For Updates and Registration: [Click Here](#)

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October 23, 2012

GOLD, WIE, and PACE present:

Speak Well, Lead Well with Toastmasters

Speakers: Brian Cort, ACS, ALB; Rebecca George, ACB, ALB; Holly Anderson, CC, CL; and the host, Mani Iyer, CTM

Abstract: Are you nervous about an upcoming presentation? Want to increase your confidence in communication? Want to grow your career as a technical leader? Toastmasters International and its member clubs in the North Jersey area

such as the Cosmopolitan Toastmasters club in Murray Hill offer valuable communication and leadership training. They also offer 8-week Speechcraft programs in which you will learn techniques to improve your ability to deliver both written and impromptu speeches through live practice with Toastmasters advisors committed to helping you succeed as a speaker and develop your confidence. Techniques like speech organization, body language, and vocal variety will help you enhance your personal presence.

Come, hear, and actively participate in the dynamic seminar offered by the three experienced Toastmasters and others from the Cosmopolitan Toastmasters club.

Biographies: Brian Cort, ACS, ALB, is a current club officer and the Immediate Past President of both the Murray Hill Speakers Club and Cosmopolitan Toastmasters; He served as Toastmasters Area 32 Governor for 2011 to 2012. He is a Distinguished Member of Technical Staff at Alcatel-Lucent, and currently works on 4G Wireless technology.

Rebecca George, ACB, ALB, is the President of the Cosmopolitan Toastmasters. She works as a Global Human Resources Manager for the Wireless Division at Alcatel-Lucent. Rebecca has been a Toastmaster for 4 years and enjoys helping people realize that honing the skill of public speaking is a gateway to improving all of a person's communication and leadership skills, creating a platform for career growth.

Holly Anderson, CC, CL, is a member of the Cosmopolitan Toastmasters club and is currently serving as the Vice President of Education. She has also served as the club Treasurer and Sergeant at Arms. Holly is a Human Resource Business Partner supporting the Wireless organization in North America.

Mani Iyer, CTM, is a member of the Cosmopolitan Toastmasters club and is currently serving as the Treasurer. He has also served as the President of the Holmdel Toastmasters club. Mani is a certified IEEE Wireless Communications Professional and an Engineer in the Wireless Division at Alcatel-Lucent.

Toastmasters Educational Designations, (e.g., CC/CL Competent Communicator/Leader; ACB Advanced Communications Bronze)

Please see <http://www.toastmasters.org> to learn more about these designations.

Location: Bell Laboratories, Alcatel-Lucent, Room 6A-106, 600 Mountain Ave, Murray Hill, NJ 07974 [Getting to Bell Labs](#)

Time: 6:00PM to 8:30PM

Contact: Mani Iyer mani.iyer@ieee.org
Adriaan van Wijngaarden; avw@ieee.org

[For Updates and Registration: Click Here](#)

[Back to Calendar of Events:](#)

October 25, 2012

IEEE North Jersey Section in conjunction with the PES/IAS Chapters present:

Life Grade Luncheon

The PES/IAS Chapters in conjunction with the IEEE North Jersey Section will sponsor a luncheon for North Jersey Section Life Grades (Members, Senior Members and Fellows) on Thursday October 25 at the Hamilton Park Conference Center 175 Park Ave, Florham Park, NJ 07932.

The luncheon will begin at 11:30 AM in the Arrive 1 & 2 meeting rooms. Cost is \$ 5.00 per person.

Advanced registration is required prior to Oct. 18. We can accommodate only 30 people. Registration will be processed in the order of receipt. Reservations cannot be accepted at the door.

To request a reservation form, please e-mail Ken Oexle (k.oexle@ieee.org)

Location: Hamilton Park Conference Center, 175 Park Ave, Florham Park, NJ 07932

Time: 11:30 AM

Contact: Ken Oexle (k.oexle@ieee.org)

[Back to Calendar of Events:](#)

October 29, 2012

Photonics Society and Aerospace and Electronics System Society present:

Tutorial: Introduction to Linear Photonics (Sending RF/Microwave over Fiber)

Speaker: John Mac Donald of Linear Photonics, LLC/Linearizer Technology, Inc.

Abstract: This tutorial talk will begin with an overview of analog microwave photonic link technology with an emphasis on advanced techniques for enhancing system linearity. The distinctions between analog (linear) and digital photonics will be included. A discussion of direct and external modulation techniques, receivers and link performance will be presented, along with typical performance characteristics of readily-available equipment. The requirements of key systems where fiber optics is either actively employed, or remains out of reach for technical or cost considerations will be reviewed. The use of both pre and post distortion linearization and feed forward techniques to improve system performance will be included. The contrast in performance versus requirements will be used to highlight the growth opportunities for next-generation optical links. We will conclude with a review of the activities and techniques for improving the cost and technical capabilities of microwave fiber optic links, and how the growth opportunities will be addressed.

Biography: John MacDonald is Vice President and General Manager of Linear Photonics, L.L.C., a firm specializing in the development and manufacture of microwave and

millimeterwave fiber transmitters and receivers for commercial and government customers. Prior to his current role, he was Engineering and Product Line Manager for Specialty and EDFA Products at JDS Uniphase Corp, and Engineering Manager for Power Amplifier Products at Lockheed Martin Commercial Space Systems. He has over 20 years experience in RF, microwave, and fiber optics engineering and management. He is the author of numerous publications ranging from fiber optic design to phased array antenna development.

Location: Huawei Technologies, China meeting room 2nd floor, 400 Crossing Blvd. Bridgewater NJ

Time: 5:00PM to 7:30PM

Contact: Naresh Chand naresh.chand@huawei.com

Cell: (908) 723 7001

[For Updates and Registration: Click Here](#)

[Back to Calendar of Events:](#)

October 30, 2012

COMSOC presents:

Distinguishing Users with Capacitive Touch Communication

Speaker: Marco Gruteser, Rutgers University

Abstract: As we are surrounded by an ever-larger variety of post-PC devices, the traditional methods for identifying and authenticating users have become cumbersome and time-consuming. This talk will present a capacitive communication method through which a device can recognize who is interacting with it. This method exploits the capacitive touchscreens, which are now used in laptops, phones, and tablets, and many other devices, as a signal receiver. The signal that identifies the user can be generated by a small transmitter embedded into a ring, watch, or other artifact carried on the human body. We explore two example system designs with a low-power continuous transmitter that communicates through the skin and a signet ring that needs to be touched to the screen. Experiments with our prototype transmitter and tablet receiver show that capacitive communication through a touchscreen is possible, even without hardware or firmware modifications on a receiver. This latter approach imposes severe limits on the data rate, but the rate is sufficient for differentiating users in multiplayer tablet games or parental control applications. Controlled experiments with a signal generator also indicate that future designs may be able to achieve data rates that are useful for providing less obtrusive authentication with similar assurance as PIN codes or swipe patterns commonly used on smartphones today.

Biography: Marco Gruteser is an Associate Professor of Electrical and Computer Engineering at Rutgers University and a member of the Wireless Information Network Laboratory (WINLAB). He has pioneered privacy algorithms for location data and is also recognized for his work on connected vehicle applications. Beyond these topics, his 90+

peer-reviewed articles and patents span a wide range of wireless, mobile systems, and pervasive computing issues. He received his MS and PhD degrees from the University of Colorado in 2000 and 2004, respectively, and has held research and visiting positions at the IBM T. J. Watson Research Center and Carnegie Mellon University. His recognitions include an NSF CAREER award, a Rutgers Board of Trustees Research Fellowship for Scholarly Excellence, as well as best paper awards at ACM MobiCom 2012, ACM MobiCom 2011 and ACM MobiSys 2010. His work has been featured in numerous media outlets including the MIT Technology Review, NPR, the New York Times, and CNN TV.

Location: NJIT, ECE-202, 161 Warren Street, Newark, NJ 07102, [Getting to NJIT and Parking Information](#)

Time: 5:30PM to 6:30PM

Contact: Nirwan Ansari (973)596-3670

Check <http://web.njit.edu/~ieeenj/comm.html> for updates

[For Updates and Registration: Click Here](#)

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November 07, 2012

North Jersey VTS and Stevens Institute of Technology present:

Evolution to 4G Wireless – the dominant role of LTE

Speaker: Dr. Vijay K. Varma, Applied Communication Sciences (formerly Telcordia Advanced Technology Solutions), Red Bank, NJ.

Abstract: The trend towards All-IP networks and the increased demand for multimedia services prompted the wireless industry to adopt a packet based radio-access technology and an optimized packet core network. Evolved Packet System (EPS), an evolution to GSM and UMTS technologies - with an industry-adopted name of Long Term Evolution (LTE) – has become the most dominant technology in the race for 4G wireless. This talk will address the evolution from GSM/UMTS technologies to 4G wireless dominated by the LTE. The talk will cover the drivers for 4G, the architectural details of LTE and the Evolved Packet Core (EPC), QoS support for real-time services, and seamless mobility within and across multiple radio access networks provided by LTE. This will be followed by a status of LTE deployments and projections worldwide, and brief preview of Voice over LTE (VoLTE) – a technology that will change the way telephone networks operated for over 100 years.

Biography: Dr. Vijay K. Varma is a Senior Scientist in the Applied Communication Sciences (formerly Telcordia Advanced Technology Solutions), Red Bank, NJ. He has over 25 years experience in wireless communications has published several papers in this area, given many tutorials, organized many workshops, and given and chaired panel sessions at various IEEE conferences. He was the Technical Program Vice-Chair for the IEEE WCNC conference in 2005 and is an associate editor for IEEE Vehicular Technology Magazine.

Dr. Varma received the M.Tech. degree from the Indian Institute of Technology, Kanpur, and the Ph.D. degree from Southern Methodist University, Dallas, TX, both in Electrical Engineering. He is a Senior Member of the IEEE. He received the Frederick E. Terman award in 1985 and Telcordia CEO Award in 2010.

Email: v.varma@ieee.org

Location: Babbio Center, Room Number: 319, Steven Institute of Technology, Hoboken, NJ 07030

[Getting to Stevens Institute of Technology](#)

Time: 3:00PM to 4:00PM

Contact: Prof. Yu-Dong Yao, yudong.yao@stevens.edu

Dr. Mani Iyer, mani.iyer@ieee.org

[For Updates and Registration: Click Here](#)

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November 07, 2012

IEEE North Jersey Section EXCOM meeting - Clifton, NJ

Meeting Agenda: This executive committee (EXCOM) meeting of the IEEE North Jersey Section will be held in the Activity Room of the Clifton Public Library (Allwood Branch, 44 Lyall Road, Clifton, NJ 07012, T: (973) 471 0555).

There will be a get-together with a buffet starting at 6 pm.

The meeting starts at 7 pm EST and typically ends at 8:45 pm, when the library closes. The meeting is meant to discuss and coordinate the section's activities and new initiatives.

Everyone is welcome to attend this meeting.

Please register in advance for this meeting using vTools to provide the meeting organizers an accurate head count. You can change/cancel the registration if your plans change.

Location: Clifton Public Library, Activity Room, Allwood Branch, 44 Lyall Road, Clifton, NJ 07012, **Phone:** (973) 471 0555).

[Getting to Clifton Public Library](#)

Time: 6:00PM to 8:45PM

Contact: Naresh Chand (nchand@ieee.org) and/or Adriaan van Wijngaarden (avw@ieee.org).

[For Updates and Registration: Click Here](#)

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Pre-College Cyber Defense Competition

The Air Force Association Chapter 195 is sponsoring the \$375.00 enrollment fee for 4 teams!

In support of the Section's IEEE Pre-College activities, the following is provided on the Air Force Association's "CyberPatriot"—The National High School Cyber Defense Competition.

The "Shooting Star" Chapter 195 of the Air Force Association will be sponsoring up to four high school CyberPatriot V teams. CyberPatriot was created to help motivate students to pursue science, technology, engineering, and mathematics (STEM) through a high school cyber defense competition.

The CyberPatriot V Open Division, which can enroll up to 1250 high school teams, is patterned after the National Collegiate Cyber Defense Competition. Each high school team consists of a teacher/coach, two to five students, and up to five alternates.

The Open (high school) Division team enrollment deadline is extended to Oct 06th with competition dates scheduled for Nov 16th, Dec 7th, and Jan 11th.

The final in-person all paid competition will be held at the AFA's Cyber Futures Conference, at the Gaylord National Hotel and Convention Center, National Harbor, MD, Mar. 14-15, 2013.

The Open Division enrollment fee per team is \$375.00. However, for the first four high schools within Morris or Union Counties to fully enroll, the "Shooting Star" Chapter 195 will pay the enrollment fee.

For more details and to enroll, see: <http://www.uscyberpatriot.org/>.

For AFA Chapter 195 information:

Contact: Howard Leach, 973-540-1283.

The Northrop Grumman Foundation is the Presenting Sponsor for Cyber-Patriot V. CyberPatriot's founding partners are SAIC and CIAS at the University of Texas-San Antonio.

For schools outside of Morris and Union Counties:

Contact the Section's Pre-College coordinator:

Har Dayal, at dayalhar@gmail.com

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North Jersey Section Nomination Committee Invites Nominations

North Jersey Section 2013 Nominations Final Petition Call and Current Slate:

The North Section is seeking new volunteers to help conduct business for the benefit of its membership. There are a variety of volunteer positions open and available. They range from technical to non-technical, leadership or just participatory.

North Jersey Section Nomination Committee is making its final call for any petitions for nominations for 2013 section officer election for any of the listed positions.

The final voting ballot will be published in November.

The Nominating Committee of the North Jersey Section of IEEE has proposed the following candidates to run for Section offices in the year 2013.

Chair	Russell Pepe
Vice Chair 1	Adriaan J. van Wijngaarden
Vice Chair 2	Ajay Poddar
Secretary	Chris Peckham
Treasurer	Kalyan Mondal
Member-at-large1	Mengchu Zhou
Member-at-large2	Goran Djuknic
Member-at-large3	John Taylor

In addition, several Society Chapters will hold election of their respective officers (Chair, Vice Chair, etc.). The members are encouraged to nominate for these positions if interested. One requirement for a Society position is that the member should be a member of the society for which he or she is nominated.

The Society Chairs will conduct the elections. A list of Societies as well as contact information is provided on the last page of this Newsletter.

Also, there are a number of volunteer opportunities available in all capacity at various committees. The members are encouraged to apply for any of these positions.

Please contact Kirit Dixit (kdixit@ieee.org), or Amit Patel (a.j.patel@ieee.org) and send in your nominations with your *name, address, membership number, e-mail* and *position* for which the nomination is desired.

How to subscribe to this newsletter if you are not a North Jersey IEEE Member?

To subscribe, send an email to: listserv@listserv.ieee.org, with the body containing "subscribe northjerseypublic"

To unsubscribe, send an email to: listserv@listserv.ieee.org, with the body containing "signoff northjerseypublic"

Additionally, you can join the IEEE North Jersey Section Facebook Fan Page at: www.facebook.com/pages/IEEE-North-Jersey-Section

Follow us on Twitter at: twitter.com/ieeenorthjersey

Or join the LinkedIn IEEE North Jersey Section Group at: [LinkedIn Group Invitation](#)

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Welcome! New Members of the IEEE North Jersey Section

Name	Current IEEE Current Grade
Barry Michael James	Student Member
Buddam Raja Parthav Reddy	Graduate Student Member
Byron Kevin F	Member
Choudhury Golam Mabud	Member
Cooke Maynard	Student Member
Costa M. Ruwan Kushan	Student Member
Dogan Burcu	Graduate Student Member
Dumervil Ralph Wood Gaspard	Student Member
Echeverry Edward D	Student Member
Ferati Pajtim	Student Member
Fesq BJ	Member
Gonzales Tomas	Student Member
Grasso S Vincent	Graduate Student Member
Greendyk Eric	Student Member
Jandroep Nehemiah Tony	Graduate Student Member
Khan Talha Zubair	Graduate Student Member
Lorne Kelly	Member
Meharg David	Member
Mena Hector R	Member
NG JOSE	Member
Nachnani Harish	Graduate Student Member
Ng Brian	Student Member
Orejuela Desirray	Student Member
Pecot Jonathan	Member
Pryce Stephen	Graduate Student Member
Schur Brandon William	Student Member
Shehadeh Feras	Student Member
Siddique Mohammad Kamran	Graduate Student Member
Stellar Ryan	Graduate Student Member
Tomaska Miroslav	Student Member
Xing Zheng	Student Member
Xue Weiyu	Graduate Student Member
Yu Andrew	Student Member



NORTH JERSEY SECTION
MTT-Society & AP-Society Joint Chapter
PRESENTS

27th ANNUAL SYMPOSIUM AND MINI – SHOW



THURSDAY OCTOBER 4, 2012

PLACE: Hanover Manor, 16 Eagle Rock Ave., E. Hanover, NJ 07936. Ph#973-992-7425

The conference presents a series of lectures describing the state of the art in Microwave, RF, and Wireless Communications, technologies by leaders in their respective fields.

MINI SHOW FEATURING LATEST PRODUCTS - (9:30 AM TO 4:30 PM)

TECHNICAL SESSIONS (8:50AM to 4:40PM)

Time	Topic	Speakers	Title	Affiliation
8:50	Opening Remarks	George Kannell	Tech. Chair IEEE MTT/AP NJ	LGS Bell Labs
9:00-9:30	RF2D Technologies for Wideband Military Electronic Systems	Tim Fountain	Business Segment Manager	Tektronix
10:00	802.11AC Technology and Test challenges	Brian Kane	Applications Engineer	Agilent Technologies
10:00	BREAK - MINI SHOW EXHIBITION			
10:30-11:00	Small Licensed Transmitters and Their RF Exposure assessment	S. Majkowski D. Moongilan	Distinguished Member of Technical Staff	Alcatel Lucent
11:00-11:30	Fundamentals of Wireless Communications and 4G Technologies	Fanny Mlinarsky	President	Octoscope
11:30-12:00	Microwave Near-field Imaging of Human Tissue: Hopes, Challenges, Outlook	Dr. Natalia Nikolova	IEEE Fellow, P.Eng.(ON), Professor	McMaster University
12:00	LUNCH - MINI SHOW EXHIBITION			
1:00-1:45	Antenna System Design and Platform Placement Analysis using Advanced Electromagnetic Simulation	Charlotte Blair	Senior Applications Engineer	Ansys, Inc.
1:45-2:30	Use of the overdrive voltage in the design of an internally matched MMIC Low Noise Amplifier	Aaron Vaisman	Design Engineer	Mini Circuits
2:30-3:00	Coaxial Cables And Connectors: The Basics	Rich Pouliot	President	RF Depot
3:00	BREAK - MINI SHOW EXHIBITION			
3:30-4:00	Perspective on Microwave Monitor and Control Interfaces	Wayne Miller	President	Wayne Miller Assoc.
4:00-4:30	Patent Law for Engineers: How to safeguard your idea	Joel Miller, Esq.	Patent Attorney	JoelMillerLaw.com
4:30	Closing remarks	Kirit Dixit	Chair IEEE MTT/AP NJ	Microcom Sales

Registration is on-site. Details are in the September issue of the IEEE NORTH JERSEY SECTION NEWSLETTER and Section Home page <http://www.ieee.org/go/njsection> calendar.

ALL ARE WELCOME (IEEE Membership not required). REGISTRATION IS ON-SITE

THERE IS NO CHARGE TO ATTEND THE SYMPOSIUM OR SHOW. COMPLEMENTARY BREAKFAST / LUNCH INCLUDED FOR ALL.

FOR FURTHER INFORMATION

Chair / Exhibition:	Kirit Dixit	201-669-7599	kdixit@microcomsales.com
Chair MTT/APS Symposium	Har Dayal	973-633-4618	dayalhar@gmail.com
Technical Program Chair:	George Kannell	973-437-9990	gkk@lgsinnovations.com
Publicity:	Arthur Greenberg		a.h.greenberg@ieee.org
Event / Location Coordinator:	Ken Oexle	973-386-1156	
MTT/AP Chapter Chair	Dr. Ajay Poddar	201-560-3806	akpoddar@synergymwave.com
MTT/AP Chapter Vice Chair	Professor. Edip Niver		edip.niver@njit.edu
Event Coordinator:	Russell Pepe	201-960-6796	rpepe@att.net

Special thanks to Dru Reynolds of Reynolds, Recruiters & NJ Coast Section for her invaluable assistance.

IEEE North Jersey Section Course C# .NET Programming Course in Four Saturdays

(Four weekly classes on Saturday, October 6, 13, 20, 27, 2012)

Location: New Jersey Institute of Technology, Newark, NJ

IEEE North Jersey Section and New Jersey Institute of Technology are co-sponsoring this course

The IEEE North Jersey Section offers a course entitled "C# .NET Programming". Since 2004, C# .NET has been employed in enterprise development systems for Fortune global 500 firms. Dice.com lists 1000+ C# .NET jobs (up from 720 last year) in the New York tri-state area daily! This course will cover the fundamentals of C# language, the .NET framework, window and web-based applications, ADO.NET, ASP.NET, and XML. It will be useful for anyone to develop applications based upon these tools. You will receive the IEEE Certificate of Achievement and earn 2 IEEE Continuing Education Units (CEUs), when you complete this course. Microsoft Corporation has MCAD and MCS D certifications. You may wish to get certified by taking the necessary Microsoft exams with the knowledge gained from this course. Past attendees got jobs at AT&T, Goldman Sachs, IBM, ITT, Microsoft, Verizon, and others.

Instructor: Instructor: Donald Hsu, PhD., has been a corporate manager for 11 years and is an experienced trainer. Since 2006, he has trained 700+ people in C++, Java, Oracle, WebLogic, and XML, UNIX, and C #.NET in 8 different organizations.

TOPICS

1. Compare the enterprise development tools using Java to C# .NET
2. Define Visual Studio .NET Version 2008 to latest
3. Identify C# syntax, data type, control structures and common language runtime
4. Distinguish methods, arrays, object-oriented programming
5. Build graphical user interface, multithreading, files and streams
6. Explain the benefit of using extensible markup language (XML)
7. Select database, SQL server, and ADO .NET
8. Choose ASP .NET, web forms, web services, advanced topics
9. Present student Projects

WHERE: New Jersey Institute of Technology, Newark, NJ

WHEN: Four Saturdays, October 6, 13, 20, 27, 2012, 9:00 AM to 2:30 PM.

COST: IEEE members \$500; Non-IEEE members \$550; Unemployed IEEE members \$250.

CONTACT: Donald Hsu yanyou @ hotmail.com

DEADLINE: October 1, 2012 E-REGISTER: [For Updates and Registration: Click Here](#)

Please mail the completed registration with a check (**payable to "North Jersey Section IEEE"**) to: Dr. Donald Hsu, Chair Education Committee, IEEE North Jersey Section, P.O. Box 2093, Fort Lee, NJ 07024.

Name: _____ Email address _____

___ Non-member

___ IEEE Member Member #: _____ Member of _____ technical society

Employer: _____

Employer Address: _____

Home Address: _____

Business (day) telephone #: _____ Home telephone #: _____

Please enclose required fee payable to: **North Jersey Section IEEE**

As soon as a completed registration form and the payment are received, you are officially registered for this course. Registration status will be notified by email.

___ I wish to receive IEEE Completion Certificate Signature: _____

[Back to Calendar of Events:](#)

IEEE North Jersey Section Course

Software Defined Radio: Introduction to Transceiver Front End

(One-day short-Course on Saturday, October 6, 2012)

Location: Fairleigh Dickinson University, 1000 River Road, Teaneck, NJ 07666

IEEE North Jersey Section and Fairleigh Dickinson University are Co-sponsoring this course

Topic: The IEEE North Jersey Section offers a course entitled, “Software Defined Radio: Introduction to Transceiver Front End.” Signal processing stages between antenna and a software programmable digital signal processor (DSP), where baseband processing is performed, are called the front-end of the transceiver. In this course, we first give a brief review of the historic development of the transceiver front end, from analog to today’s almost fully digital. Included here is a discussion of some basic concepts like signal-to-noise ratio, noise factor and noise figure, and receiver sensitivity. We then proceed to theoretical and implementation aspects of digital up- and down-conversion, including the CORDIC algorithm, sub-sampling, cascaded-integrator-comb (CIC) and half-band filters. We briefly cover channel filtering and filter bank channelizers. Finally, we present in some detail the newest part of the digital front end, sample rate conversion (SRC), including interpolation and decimation, integer and rational factor SRC, as well as related concepts and implementation issues. After completing this course, students will understand the functionalities and implementation methods of all the elements of the transceiver front-end in software-defined radios.

Instructor: Dr. Goran Djuknic of BAE Systems obtained his PhD in Electrical Engineering from the City College, City University of New York, in the area of Wireless Communications. He spent several years in the academia, at Stevens Institute of Technology, where he taught courses in Communications and Networking. He has extensive industry experience, first at Bell Laboratories, Lucent Technologies, where he worked on the development of wireless data applications and experimental wireless communications systems, including BLAST (Bell Labs Layered Space Time coding) over UMTS and High-Speed Downlink Packet Access (HSDPA) system. At ITT Corporation, he worked on the development of the navigation payload for the third-generation GPS, and obtained several patents for an innovative method for generating GPS carrier signals. Currently, in BAE Systems, he works on the development of various aspects of software defined radios.

WHERE: Becton Hall, Classroom 204, Fairleigh Dickinson University, 1000 River Road, Teaneck, NJ 07666, [Getting to FDU](#)

WHEN: Saturday, October 6, 2012 from 9:00 AM to 3:00 PM.

COST: IEEE members \$125; Non-IEEE members \$175; Unemployed IEEE members \$62.50

CONTACT: Goran Djuknic (gd@ieee.org)

DEADLINE: October 1, 2012 E-REGISTER: [To register online: Click Here](#)

Please mail the completed registration with a check (**payable to “North Jersey Section IEEE”**) to: Dr. Kalyan Mondal, Fairleigh Dickinson University, School of Computer Sciences and Engineering, 1000 River Road, T-MU1-01, Teaneck, NJ, 07666

Name: _____ Email address _____

___ Non-member

___ IEEE Member Member #: _____ Member of _____ technical society

Employer: _____

Employer Address: _____

Home Address: _____

Business (day) telephone #: _____ Home telephone #: _____

Please enclose required fee payable to: **North Jersey Section IEEE**

As soon as the completed registration form and the payment are received, you are officially registered for this course.

Registration status will be confirmed by email.

___ I wish to receive IEEE Completion Certificate Signature: _____

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**IEEE Smart Tech Metro Area Workshop series
is coming to Westchester, NY 19-20 October, 2012
At the Crowne Plaza White Plains
Sponsored by IEEE MGA and Region 1 Southern Area**

IEEE Smart Tech Metro Area Workshops provide participants with a unique learning experience with topics on the cutting-edge of technical innovation today.

These two-day seminars are focused on providing an opportunity for participants to learn first-hand from the field experts. Each workshop is a springboard to a deeper understanding of technology and its myriad applications and potential for innovation.

Receive two days of instruction, plus meals, for only US\$129 for members*, and US\$179 for non-members, when you register by 15 September.

On Friday, choose one of three parallel, all-day tracks:

- **Introduction to Smart Grid**
- **Computer Engineering:** Foundations of Software Security and Managing a Secure Software Development
- **Wireless Communications:** Cyber Security and Machine to Machine (M2M) Communications

On Saturday, choose from one of three tracks:

- **Wireless Communications:** AppInventor Course
- **Computer Engineering:** Cloud in the Business Environment and Cloud Governance & Security
- **Career Assistance:** Managing Your Career as a Business

All courses are eligible for CEU credits.

For more information including registration, detailed agenda, and course descriptions visit www.ieee.org/metroevents

REGISTRATION FEES	Early Bird (Register by September 15)	Regular Rate (after September 15)
IEEE Members*	US\$129	US\$159
Non-IEEE Members	US\$179	US\$209

As a special incentive for non-members, if you join IEEE at the Workshop, you will receive a US\$50 credit toward your first-year membership dues in lieu of the member discount on your registration fee.

*Society affiliates are not eligible for the member rate.



	Friday, October 19	Saturday, October 20
	<p>Three tracks run concurrently all day, choose one full day or two half day sessions:</p> <ul style="list-style-type: none"> • Track 1: Introduction to Smart Grid (full day) <ul style="list-style-type: none"> » Morning Session: Smart Grid Principles including renewable & energy storage options, definitions, focus areas and monitoring equipment » Afternoon Session: Integration of Smart Grid applications & equipment into utility operations; cyber security & network communications technology and techniques • Track 2: Computer Engineering <ul style="list-style-type: none"> » Morning Session: Foundations of Software Security » Afternoon Session: Managing a Secure Software Development • Track 3: Wireless Communications <ul style="list-style-type: none"> » Morning Session: Cyber Security - Cellular vs IP » Afternoon Session: Machine to Machine Communications 	<p>Three tracks run concurrently all day, choose one full day or two half day sessions:</p> <ul style="list-style-type: none"> • Track 1: Wireless Communications <ul style="list-style-type: none"> » Morning Session: AppInventor Course » Afternoon Session: AppInventor Course (repeated) • Track 2: Computer Engineering <ul style="list-style-type: none"> » Morning Session: Cloud in the Business Environment » Afternoon Session: Cloud Governance & Security • Track 3: Career Assistance (full day) <ul style="list-style-type: none"> » Morning Session: Develop networking, job seeking, professional development and organizational skills. » Afternoon Session: Utilize IEEE resources to help manage your career, prepare resumes, prepare for interviews and search for jobs.
7:00-8:00am	Registration and Continental Breakfast	Registration and Continental Breakfast
8:00am	Opening Session	Opening Session
8:30-10:00am	Track Session	Track Session
10:00-10:30am	Break	Break
10:30am-12:00pm	Track Session	Track Session
12:00-1:00pm	Lunch	Lunch
1:00-2:30pm	Track Session	Track Session
2:30-3:00pm	Break	Break
3:00-4:30pm	Track Session	Track Session
4:30-5:30pm	Networking Break	Workshop Series Ends at 4:30pm
5:30pm-7:30pm	Keynote Address and Evening Reception	

For more information including registration, detailed agenda, and course descriptions visit www.ieee.org/metroevents

IEEE Smart Tech is coming to three other U.S. cities later this year:

7-8 September
28-29 September
2-3 November

Detroit, MI
Santa Clara, CA
Baltimore, MD

2012 IEEE North Jersey Section Volunteers

Executive Committee

Chair - Naresh Chand
chandnaresh@gmail.com
Vice Chairman 1 - Russell Pepe
rcepe@ieee.org
Vice Chairman 2 - Har Dayal
dayalhar@gmail.com
Secretary - Adriaan van Wijngaarden
avw@ieee.org
Treasurer - Kalyan Mondal
mondal@fd.edu
Members at Large
 1. Chris Peckham
cdp@ieee.org
 2. Mengchu Zhou
zhou@njit.edu
 3. Goran Djuknic
gd@ieee.org
Junior Past Chair - Amit Patel
a.j.patel@ieee.org
Senior Past Chair - Kirit Dixit
kdixit@ieee.org

Society Chapters

Aerospace Electronic Systems Society
Chair - Naresh Chand
chandnaresh@gmail.com
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