PUBLICATION OF THE NORTH JERSEY SECTION OF THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

THE IEEE NORTH JERSEY SECTION NEWSLETTER

◆IEEE
Advancing Technology
for Humanity

Vol. 59, No. 8   SEPTEMBER 2012

Calendar of Events:

- **September 05, 6:00PM-8:45PM IEEE North Jersey Section EXCOM meeting - Clifton,** Read more…
  Location: Clifton Public Library, Allwood Branch Activity Room, 44 Lyall Road, Clifton, NJ 07012, Getting to Clifton Library
  Contact: Naresh Chand (908 723 7001); (nchand@ieee.org), Adriaan van Wijngaarden (avw@ieee.org)

- **September 10, 6:00PM-8:30PM Low Noise Signal Generation and Verification Techniques** – Mike Driscoll of Northrop Grumman
  Read More…
  Location: ECEC-202, 161 Warren Street, Newark, NJ 07102, Getting to NJIT and Parking Information
  Contact: Dr. Ajay Poddar (Cell: 201-560-3806), (akpoddar@synergymwave.com), Prof. Edip Niver (cell: 973-596-3542), (niver@ADM.NJIT.EDU)

- **September 12, 6:20PM-9:00PM The Business Side of the Engineers' Career: A Discussion on Contract Engineering & What You Can Do?**– Richard F. Tax Read More…
  Location: Clifton Memorial Library, 292 Piaget Ave. Clifton, NJ 07011Getting to Clifton Memorial Library
  Contact: Richard Tax rtax@verizon.net, Paul E Ward peward@ieee.org

- **September 13, 6:30PM-8:30PM Legal Issues in a Consulting Business** – Joel Miller Esq. Read More…
  Location: Morris County Library, 30 East Hanover Avenue, Whippany, NJ, Getting to Morris County Library
  Contact: Robert Walker, 973-728-0344, or visit our website, www.TechnologyOnTap.org

- **September 29, 12:00PM-7:00PM Thomas Edison National Historical Park Visit** Read More…
  Location: 211 Main Street, West Orange, NJ 07052 Getting to Edison National Historic Park
  Contact: Sean Kennedy (sean.kennedy@alcatel-lucent.com) or Adriaan van Wijngaarden (avw@ieee.org)

- **October 03, 6:00PM-8:45PM IEEE North Jersey Section EXCOM meeting - Newark, NJ**
  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, 9:00AM-4:30PM IEEE North Jersey Section, MTT-Society and AP-Society Joint Chapter Presents: 27th ANNUAL SYMPOSIUM AND MINI-SHOW**
  Location: Hanover Manor, 16 Eagle Rock Ave., E. Hanover, NJ 07936.
  Contact: (973-992-7425); Please click here for more contacts:

- **October 25, 11:30AM Life Grade Luncheon**
  Location: Hamilton Park Conference Center 175 Park Avenue in Florham Park, New Jersey 07932
  Contact: Ken Oexle (k.oexle@ieee.org)

- **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 IEEE North Jersey Section!**

IEEE Co-Sponsored short courses:

- **September 8, 15, 22, 29, 2012 9:00 AM to 2:30 PM Project Management Course in Four Saturdays:** Donald Hsu (yanyou@hotmail.com), **Location:** FDU, 1000 River Road, Teaneck, NJ 07666 Getting to FDU

- **October 6, 13, 20, 27, 2012 9:00 AM to 2:30 PM C# .NET Programming Course in Four Saturdays -** 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 Goran Djuknic of 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

PUBLICATION OF THE NORTH JERSEY SECTION OF THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

Meeting Announcements:

September 5, 2012

IEEE North Jersey Section EXCOM meeting, Clifton, NJ

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, Allwood Branch Activity Room, 44 Lyall Road, Clifton, NJ 07012

Getting to Clifton Library

Time: 06:00PM to 08:45PM

Contact: Section Chair (Naresh Chand, nchand@ieee.org) and/or the Section Secretary (Adriaan van Wijngaarden, avw@ieee.org).

For Updates and Registration: Click Here

Back to Calendar of Events:

September 10, 2012

Low Noise Signal Generation and Verification Techniques

Sponsored by: IEEE North Jersey AP/MTT Chapter (Co-sponsored by Ajay Poddar, Edip Niver (IEEE MTT/AP-S Chapter Chair)

Speaker: Mike Driscoll of Northrop Grumman

Abstract: The need for improved signal detection capability in Communications and Radar System Performance has resulted in requirements for extremely low noise in the signal generation portion of the hardware.

Depending on the complexity of the signal generator, the signal path circuitry often includes a cascade of a very large number of non-oscillator as well as oscillator-included components such as amplifiers, mixers, switches, filters, PLL ICs, etc. In addition to the spectral performance of the oscillator(s), the cumulative effect of the residual noise characteristics of the non-oscillator components on output signal noise level and jitter can be significant. Tradeoffs must often be made with regard to maintaining adequate inter-component signal level, linear device operation (to minimize multiplicative noise), and DC power consumption. The use of noise modeling and noise analysis spreadsheets has become a mandatory part of the design process. Noteworthy strides have been made in order to enhance signal generator spectral purity by employing new technologies and circuit design techniques. These include the following:

1. Acoustic resonator design and processing optimization and screening for low self-noise

2. High Q microwave resonators

3. Noise enhancement, detection, and reduction using carrier-nulling and feed-back or feed-forward techniques

4. Noise de-correlation via use of multiple devices One result of these improvements, however, is that the output signal at-rest phase noise performance is now degraded by significantly lower levels of vibration and acoustic stress. For this reason, improving the vibration immunity of sensitive components represents a current challenging and important task facing the Frequency Control community. In addition to conventional, mechanical vibration isolation techniques, the successful use of accelerometer-sensed feedback for cancellation of vibration-induced FM in HF crystal oscillators has recently been reported. Here too, the effects of "non-oscillator" component vibration (including mechanical resonances) can be a source of unanticipated signal spectral degradation. Accurate verification of phase noise performance (especially in the presence of vibration and acoustic stress) of low noise signal generator hardware represents an important, related issue. Measurement results obtained using phase noise measurement equipment

can be misleading and lead to erroneous conclusions. This lecture will cover the aforementioned topics with the goal of acquainting the attendees with both a historical and current perspective regarding the design, performance, and testing of low noise signal generation hardware.

This lecture will address on the aforementioned topic for the realization of high performance signal sources with the goal of acquainting the attendees with both a historical and current perspective regarding the design, performance, and testing of low noise signal generation hardware for the applications in current and later generation communication systems.

Biography: Mike Driscoll joined the Westinghouse Defense Centre (now part of Northrop Grumman Electronic Systems) in Baltimore in 1965 after graduating from the University of Massachusetts in Amherst. Since 1968, he has worked primarily on the design and development of low noise signal generation hardware for use in high performance radar systems and other special applications. He was a Senior Consulting Engineer at Northrop Grumman until retiring in February, 2008. He is currently a Contract Engineer, consulting at Northrop Grumman. His responsibilities include the design and development of high stability oscillators as well as characterization and reduction of phase noise in RF signal processing components and circuits. He is a past Secretary, Treasurer, and President of the Baltimore, Washington, and Northern Virginia chapter of the UFFC. He has been a member of the IEEE Frequency Control Symposium Technical Program Committee since 1987. He is an Associate Editor and Associate Editor-in-Chief of the IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control (UFFC) and was the Conference Chair for the 2005 and 2006 IEEE International Frequency Control Symposia (IFCS), and he is the Chair of the 2012 IFCS. In 1991, he was elected as an IEEE Fellow, cited for "Contributions to the development of low-noise acoustic resonator-stabilized oscillators". In 1997, he was the recipient of the IEEE UFFC Society CADY award, cited for Contributions to Low Noise Signal Generator Design. In 2006, he was a recipient of the Northrop Grumman Lifetime Achievement Award. He has published and

presented over 60 papers in IEEE Journals and at IEEE Conferences. He has presented several IEEE Tutorials and Northrop Grumman Instructional Courses and holds 16 U.S. Patents dealing with the subject of Low Noise Signal Generation.

Email: Michael.Driscoll@ngc.com

Address: Northrop Grumman, United States

Location: ECEC-202, 161 Warren Street, Newark, NJ 07102, Getting to NJIT and Parking Information
Time: 06:00PM to 08:30PM

Contact: Dr. Ajay Poddar (Cell: 201-560-3806), (akpoddar@synergymwave.com)

Prof. Edip Niver (cell: 973-596-3542), (niver@ADM.NJIT.EDU)

No Admission Charge.

Agenda:

6:00PM: Networking

6:30PM: Buffet Dinner

7:00PM: Talk

Free dinner will be served at 6:30PM.
All are welcome. You don't have to be IEEE member to attend the talk.

Note: Please register in advance so that organizers can make arrangements for dinner/refreshments for all the attendees.

For Updates and Registration: Click Here

Back to Calendar of Events:

September 12, 2012

The Business Side of the Engineers' Career: A Discussion on Contract Engineering & What You Can Do?

Sponsored by: PACE,

Co-sponsored by Paul Ward

Speaker: Richard F. Tax

Abstract: Contrary to conventional wisdom and Engineer Shortage Propaganda, members of the Engineering Community are facing extreme fluctuations in the demand for their skills and services. Unfortunately, this means that a lifetime career in engineering will be a thing of the past unless; decisive and collective action is taken by members of the Engineering Community to correct the situation.

To begin we will briefly look at a history of engineering manpower demand fluctuations over a 30 year period to familiarize you with the employment situation as shown by the Deutsch, Shea and Evans - High Tech Recruiting Index.

Our primary focus will be on Contract Engineering as an Alternate Employment Path with a detailed program to familiarize you with Contract Engineering. You will learn more from this presentation than many contract engineers know with years of experience

We will start with an introduction to Contract Engineering covering definitions, pay structure and the client, contract house, engineer relationship. You will learn who and what contract engineers are, where they work, when, why, how they get assignments, and whether this is for you. We will cover sources of contract firms and other related information through to getting an assignment and the contract.

Biography: Richard F. Tax is a Senior Life member of IEEE and has served as a contract engineer for more than 35 years. He is currently President of the American Engineering Association Inc., a professional organization dedicated to the enhancement of the Engineering Profession and US Engineering Capabilities.

He has provided design, and development support for: ABEX Research Center, Allied Signal, Bendix, Conrac Corp, Dalto Electronics, DHS Systems, Energetics Science, GE Transportation Div. Holobeam Inc. IREX Medical Sys., ITT Avionics, Lockheed Electronics, .Lockheed Martin, National Medical Care, Singer Kearfott, Technicon, , United Defense, and has designed systems for NASA, FAA, US Army, Navy & Air Force.

Richard is a graduate of Fairleigh Dickinson University with a BSEE degree and is a Senior Life Member of IEEE.

Mr. Tax received the North Jersey Section Award for Leadership in 1979, the Region I United States Activities Board (USAB) Award for Leadership in 1981, the IEEE Centennial Medal in 1984, the USAB Citation of Honor in 1984, the USAB Professional Achievement Award in 1988, and the Region I Award for Outstanding Contributions to Engineering Professionalism in 1989. He has been active in the Section since 1974. Richard has served the section as Member at Large, Vice Chairman, and member of the Education Committee. He was Chairman of the North Jersey Section from 1985 through 1986. In 1987 - 1988 he chaired the 20,000 member Metropolitan Sections Activities Council (METSAC).

He continuously stresses the importance of membership participation at the Section level.

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

Time: 06:20PM to 09:00PM

Contact: Richard Tax rtax@verizon.net,
Paul E Ward peward@ieee.org
No Admission Charge.

For Updates: Click Here

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September 13, 2012

Legal Issues in a Consulting Business

Sponsored by: IEEE Consultants' Network of Northern New Jersey

Speaker: Joel Miller Esq.

Abstract: Legal Issues in a Consulting Business: Operating your consulting business requires more than just technical knowledge. Legal issues do arise that may present a hurdle to the independent practitioner.

Join us for a presentation by Joel Miller, outlining some of the common legal challenges facing a consultant. These include:

– Corporate structure – does it protect you?

– Insurance – professional and commercial liability

– Hold harmless agreements; indemnification

– Contracting and agreements

– Ownership of work product; intellectual property

– Export controls

Biography: Joel Miller has practiced law for over thirty years, specializing in patent, trademark, copyright, unfair competition, and antitrust law. Following graduation from law school, Mr. Miller served as a patent examiner in the U.S. Patent and Trademark Office, examining patent applications in

the fields of telemetry, digital display systems, and computers. He also served as patent counsel and counsel for the Kearfott Division of the former Singer Company, handling patent matters, licensing, trade secret and export issues, and employment-related litigation. Prior to establishing his solo practice in 1991, Mr. Miller was associated with the law firm of Weil, Gotshal & Manges in New York City, where he worked on a variety of patent, trademark, and antitrust matters. Before graduation from law school, Mr. Miller held engineering positions with Aerocom, Inc., Coral Gables, Fla. (ground-based avionics), the Federal Aviation Administration, Washington, D.C. (radar), and Research Cottrell, Inc. (pollution control), and has worked as a bench technician (high-frequency crystal filters), a draftsman, and as a licensed broadcast engineer (WEEX and WJRH, Easton, PA).

Mr. Miller is a member of the District of Columbia, New Jersey, and New York Bars, admitted to practice before the U.S. Patent and Trademark Office, and a Fellow of the American Bar Foundation. He is the Legal Activities Chair for the North Section of the IEEE and is also active in the American Bar Association and the American Intellectual Property Law Association, holding leadership positions and frequently speaking before both groups. Mr. Miller is the author of the book, Patent Appeals at the USPTO: Appellate Advocacy and Practice. Mr. Miller received a B.S. in Electrical Engineering from Lafayette College in 1975 and a J.D. from the University of Miami in 1978.

Please visit www.JoelMillerLaw.com for further details and for contact information.

ABOUT THE NETWORK**:** Founded in 1992, the IEEE Consultants Network of **Northern NJ encourages and pro**motes the use of independent technical consultants by business and industry.

ALL ARE WELCOME!

No fees or registration required.

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

Getting to Morris County Library

Time: 06:30PM to 08:30PM

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

For Updates and Registration: Click Here

Back to Calendar of Events:

September 29, 2012

Thomas Edison National Historical Park Visit
Co-sponsored by GOLD, SAC, WIE

IEEE North Jersey (GOLD, SAC, and WIE) is organizing a visit to the Thomas Edison National Historical Park in Llewellyn Park in West Orange, New Jersey on Saturday 29, 2012. Thomas Edison's laboratory and residence are the home of major inventions, including a long-lasting, practical electric light bulb, the motion picture camera, improved phonographs, sound recordings, silent and sound movies and the nickel-iron alkaline electric storage battery.

Please register using this site, and please provide your e-mail address. We plan to have lunch before the visit or dinner after the visit, and would like to be able to contact you a few days before the event to make final arrangements.

Location: Thomas Edison National Historical Park
211 Main Street, West Orange, NJ 07052
Click here for Map

Time: 12:00PM to 07:00PM

Contact: Sean Kennedy
(sean.kennedy@alcatel-lucent.com) or
Adriaan van Wijngaarden (avw@ieee.org).
No Admission Charge.

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: Section Chair: Naresh Chand, (nchand@ieee.org),
IEEE North Jersey Executive Committee, Secretary, Adriaan J. van Wijngaarden, (avw@ieee.org)
No Admission Charge.

For Updates and Registration: Click Here

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October 25, 2012

Life Grade Luncheon

Sponsored by: PES/IAS Chapters

In conjunction with the IEEE North Jersey Section

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 Avenue in Florham Park, New Jersey 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 October 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 email k.oexle@ieee.org
Location: Hamilton Park Conference Center 175 Park Avenue in Florham Park, New Jersey 07932
Time: 11:30 AM
Contact: Ken Oexle (k.oexle@ieee.org)
Back to Calendar of Events:

Pre-College Cyber Defense Competition

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 Sep 30th 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. March 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 info, 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, please contact the Section's Pre-College coordinator, Har Dayal, at har.dayal@baesystems.com for potential support.

Back to Calendar of Events:

Welcome New Members of IEEE North Jersey Section!

Blinova Olga	Member
De Epstein Karla	Graduate Student Member
Fitzpatrick Rory Shea	Student Member
Fitzpatrick Stephen	Member
Gohel Nehal	Member
Huh Jung-eun	Associate Member
Lisboa Jr. George	Member
Noronha Jose Oscar	Member
Pacamarra Alex	Student Member
SanGiacomo Gary J.	Student Member
Shaw John Michael	Member
Sprycha Maciej	Graduate Student Member
Stavrinou Christopher	Graduate Student Member
Strauss Henry	Member
Tampol Gordon	Member
Ved Rishi Niten	Student Member
Zanko David P	Student Member
Zhong Ling	Graduate Student Member
Henry John	Member

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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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North Jersey Section Nomination Committee Invites Nominations

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 invites nominations for the election of section officers for 2013 for the following positions:

Chair,

Vice Chair 1,

Vice Chair 2,

Secretary,

Treasurer,

Member-at-Large (3 positions)

In addition, Various Societies 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 Society position is that the member should be a member of the society for which he or she should be a member of that society for which the nominations are sent.

The Society Chairs will conduct these elections. A list of Societies is published herewith.

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.

PUBLICATION OF THE NORTH JERSEY SECTION OF THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

THE INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS, INC.

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 forWideband 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.

PUBLICATION OF THE NORTH JERSEY SECTION OF THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

IEEE North Jersey Section Course

Project Management Course in Four Saturdays

(Four weekly classes on Saturday, September 8, 15, 22, 29, 2012)

Location: Fairleigh Dickinson University, Teaneck, NJ

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

The North Jersey Section IEEE is offering a course entitled "Project Management". Dice.com lists 5000+ Project related jobs in the New York tri-state area daily! This course will help you to break down a master project into manageable tasks, pinpoint possible solutions, and provide information to keep the project under control. Using Microsoft Project 2010 software, you will learn to accomplish various project plans. In addition, it will greatly enhance your business, communications and interpersonal skills.   You will receive the IEEE Certificate of Achievement and earn 2 IEEE Continuing Education Units (CEUs), when you complete the course. You may wish to take the PMP Certification exam administered by Project Management Institute (PMI), from the knowledge you learn in this course. This is not an exclusive PMP-PMI examination preparation course. However, past attendees did successfully get the PMP certifications!

Instructor: Donald Hsu, PhD., has been a corporate manager for 11 years and an experienced trainer. Since 2004, he has trained 1100+ in IT Project+, MS Project, Project Management, Contract Procurement Management, and International Management.

> **TOPICS**

1. Explain the need for a project manager

2. Define SOW, PERT, GANTT, CPM, and Scope of the project

3. Identify the team members, resources and plan for the strategy

4. Calculate schedule, budget variances, and monitor project progress

5. Manage changes, estimates, and communications

6. Set a baseline, import tasks from MS Excel, export MS Project files to MS Word

7. Create and modify custom reports, templates and combination views

8. Share resources and create a master plan loaded to Project Server

9. Approve updates and conclude a project plan

10. Analyze global E-Commerce projects

11. Present student Projects

WHERE: Fairleigh Dickinson University, Teaneck, New Jersey

WHEN: Four Saturdays, September 8, 15, 22, 29, 2012 from 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: September 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. 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:_____

Back to Calendar of Events:

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 MCSD 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.

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Back to Calendar of Events:

PUBLICATION OF THE NORTH JERSEY SECTION OF THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

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.

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Back to Calendar of Events:

IEEE SMART TECH
METRO AREA WORKSHOP SERIES
Professional workshops in a learning environment

◆IEEE
Advancing Technology for Humanity

**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.

PUBLICATION OF THE NORTH JERSEY SECTION OF THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

IEEE SMART TECH
METRO AREA WORKSHOP SERIES

◆IEEE
Advancing Technology
for Humanity

Professional workshops in a learning environment

	Friday, October 19	Saturday, October 20
	Three tracks run concurrently all day, choose one full day or two half day sessions: • **Track 1: Introduction to Smart Grid (full day)** » 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** » Morning Session: Foundations of Software Security » Afternoon Session: Managing a Secure Software Development • **Track 3: Wireless Communications** » Morning Session: Cyber Security - Cellular vs IP » Afternoon Session: Machine to Machine Communications	Three tracks run concurrently all day, choose one full day or two half day sessions: • **Track 1: Wireless Communications** » Morning Session: AppInventor Course » Afternoon Session: AppInventor Course (repeated) • **Track 2: Computer Engineering** » Morning Session: Cloud in the Business Environment » Afternoon Session: Cloud Governance & Security • **Track 3: Career Assistance (full day)** » 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	**Detroit, MI**
28-29 September	**Santa Clara, CA**
2-3 November	**Baltimore, MD**

2012 IEEE North Jersey Section Volunteers

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chandnaresh@gmail.com
Vice Chairman 1 - Russell Pepe
rcpepe@ieee.org
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dayalhar@gmail.com
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avw@ieee.org
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mondal@fdu.edu
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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

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chandnaresh@gmail.com
Antennas and Propagation Society/ Microwave Theory and Techniques Society
Chair - Ajay Poddar
akpoddar@synergymwave.com
Vice-Chair – Edip Niver
niver@adm.njit.edu
Circuits and Systems Society / Electron Devices Society
Chair - Durga Misra
dmisra@njit.edu
Communications Society
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nirwan.ansari@njit.edu
Computer Society
Chair - Hanna (Hong) Zhao
zhao@fdu.edu
Controls Society
Chair - David Haessig
davidhaessig@ieee.org
Engineering in Medicine and Biology Society
Chair - Raquel Perez-Castillejos
raquelpc@njit.edu

Industrial Applications Society
Chair - Ken Oexle
k.oexle@ieee.org

Instrumentation Measurement Society
Chair - Russel Pepe
rcpepe@ieee.org
Vice-Chair – Peter J. Pupalaikis
peterp@lecroy.com
Photonics Society
Chair – Naresh Chand
chandnaresh@gmail.com
Power & Energy Society
Chair - Ron Quade
rwquade@ieee.org
Signal Processing Society
Chair - Yun Q. Shi
shi@njit.edu
Systems, Man, and Cybernetics Society
Co-Chair – Mike Liechenstein
itsmikesju@aol.com
Co-Chair – Mengchu Zhou
zhou@njit.edu
Vehicular Technology Society
Chair - Yu-Dong Yao
yyao@stevens.edu

Technical Councils
Technology Management Council
Chair - Tony Almeida
almeida@synergymwave.com

Affinity Groups
Consultants Network
Chair - Peter Schutz
schutze@compuserve.com
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sean.kennedy@alcatel-lucent.com
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zmao@fdu.edu
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a.h.greenberg@ieee.org

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Awards/Recognition
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k.oexle@ieee.org
Audit Committee
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fdchichester@gmail.com
Education
Co-Chair 1 - Donald Hsu
yanyou@hotmail.com
Co-Chair 2- Kalyan Mondal
mondal@fdu.edu

Co-Chair 3 - Mengchu Zhou
zhou@njit.edu
Group coordinator / History
Chair - Howard Leach
h.leach@ieee.org
Membership Development
Chair - Mani Iyer
miyer108@gmail.com
Vice-Chair - Ajay Poddar
akpoddar@synergymwave.com
MTT/AP Trade Show and Symposium
Chair - Kirit Dixit
kdixit@ieee.org
Vice-Chair – Har Dayal
dayalhar@gmail.com
TPC Co-Chair – George Kennall
gkk@lgsinnovations.com
TPC Co-Chair – Ajay Poddar
akpoddar@synergymwave.com
Newsletter
Chair - Anisha Apte
anisha_apte@ieee.org
Nominations
Chair - Kirit Dixit
kdixit@ieee.org
PACE
Chair - Richard Tax
rtax@verizon.net
Vice-Chair – Paul E Ward
peward@ieee.org
Pre-College Activities
Chair - Har Dayal
dayalhar@gmail.com
Vice-Chair – Hitaish Sharma
hitaish@gmail.com
Student Activities
Chair - John C Taylor
john.taylor1204@gmail.com
Webmaster
Chair – Adriaan van Wijngaarden
avw@ieee.org
Industrial Liaison
Chair-Kirit Dixit
kdixit@ieee.org
Intersection activities
Chair- Amit Patel
a.j.patel@ieee.org
Legal Activities
Joel Miller
jm@joelmillerlaw.com