

The



# IEEE Newsletter

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

*NJ Section PACE, GOLD, WIE:*

## Engineers Meet: Learn Our Approach to Regaining Control Over Your Financial Life

On Wednesday, October 14, 2009 the North Jersey Section Professional Activities Committee, Graduates of the Last Decade and Women in Engineering will host a meeting to discuss approaches that can assist in assessing your personal financial situation. Our speakers will be Matthew Niemczyk, Financial Advisor of Ameriprise Financial, and TJ Spizzo, CRPC Advanced Financial Advisor of Ameriprise Financial.

### About the Meeting

Today, everyone seems to be talking about the economy. Talk about your own personal financial situation at our timely and informative seminar: **Understand Today, Own Your Tomorrow: A New Perspective on Your Finances.**

During this complimentary seminar, you'll learn ways to:

- Invest your savings safely and securely.
- Get back on track toward reaching your retirement goals.
- Uncover gaps in your financial plan.

There's no cost or obligation, and this seminar will not sell you any specific products or services. That's because Ameriprise Financial is committed to helping you learn more about what you can do to feel financially prepared for today's constantly changing economy.

### About the Speakers

Matthew Niemczyk received his BS in Business Economics from the Pennsylvania State University. He has been working in the investment industry for over 7 years and is currently a fully certified financial advisor for Ameriprise Financial. His areas of focus include personal financial planning for retirement, retirement income strategies, education funding, and investments. He works with his clients to design a personal financial plan based on their life goals. This strategy focuses on helping them become more confident about managing their financial objectives.

TJ Spizzo received his BS in Business and Environmental Economics from Rutgers University. He is currently a fully certified, Advanced Financial Advisor with Ameriprise Financial. TJ has over 12 years experience in the investments industry and currently holds his Chartered Retirement Planning Counselor designation. His area of focus is on personal financial planning for retirement, retirement income strategies, tax management strategies, and Protection planning/family security. His mission is to help his clients reach their financial goals through a personal relationship based on personalized, knowledgeable advice. TJ is, also, actively involved in volunteering in the Mahwah Youth Sports Boosters Association.

### All Welcome!

Members and students from all professional societies and engineering disciplines are welcome. We now have attendees from IEEE, ASME, NSPE, ASCE and AEA. For information about these groups see:

[www.aea.org](http://www.aea.org)  
[www.ieeeusa.org/policy/care](http://www.ieeeusa.org/policy/care)  
[www.ieeeusa.org](http://www.ieeeusa.org)  
[www.programmersguild.org](http://www.programmersguild.org)  
<http://web.njit.edu/~ieeenj/>  
[www.asme.org/sections/northjersey](http://www.asme.org/sections/northjersey)

CARE is the Congressional Advocacy Recruitment Effort CARE is a voluntary network of IEEE members who are interested in public policy. To help and for information go to [www.ieeeusa.org/policy/care/](http://www.ieeeusa.org/policy/care/).

**Time:** 6:30 PM to 9:00 PM, Wednesday, October 14, 2009. Refreshments will be served.

**Place:** Clifton Memorial Library, 292 Piaget Ave, Clifton, NJ, (973) 772-5500.

**Information:** Paul Ward, (973) 790-1625, PWARD1130 "AT" aol.com, Richard F. Tax, (201) 664-6954, rtax "AT" aea.org, Dr. Katherine Duncan, (973) 209-8607, kduncan "AT" ieee.org.

## ***No job? Take a hot course to get a job!***

**IEEE North Jersey Education Committee ran programming and management courses since 1993. 229 IEEE members and non-members completed these courses. Proven benefits: They got jobs at AT&T and Microsoft Corporation.**

**We need hot courses, instructors and classrooms.** If you can teach a hot course (the course that people can get jobs), email your one-page abstract and your resume. If your NJ firm can provide a conference room, evening or Saturday morning, contact Donald Hsu, Chair, yanyou "AT" hotmail.com. Thank you and act NOW!

**OCTOBER 2009**

# October 2009

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### IEEE NJ SECTION HOME PAGE

<http://web.njit.edu/~ieeenj/>

### IEEE NJ SECTION NEWSLETTER HOME PAGE

<http://web.njit.edu/~ieeenj/NEWSLETTER.html>

### REPORT ADDRESS CHANGES TO:

IEEE Service Center, 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331, (732) 981-0060. It is not necessary to inform the North Jersey Section when you change your mailing address. "The IEEE Newsletter" and other section mailings use a list provided by IEEE's national headquarters.

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Dr. Katherine Duncan (kduncan "AT" ieee.org)  
Dr. Mengchu Zhou (zhou "AT" njit.edu)

**The North Jersey Section Executive Committee usually meets the first Wednesday (except holidays and December) of each month at 7:00 PM. Meetings are open to all members. For information on meeting agenda contact Secretary Russell Pepe at (201) 960-6796, rpepe "AT" ieee.org.**

## NJ Communications Society: Internet 2.0: Hype or Hope?

On Thursday, October 8, 2009, the IEEE Communications Society will host a presentation titled "Internet 2.0: Hype or Hope?" The speaker will be IEEE COMSOC Distinguished Lecturer Professor Henning Schulzrinne.

### About the Talk

The Internet has become a core civilizational infrastructure, along with energy, water and transportation. However, there are increasing concerns that the current design of the Internet has ossified, yielding ever more complex systems that remain unreliable. I will try to outline some of the key challenges facing the Internet, from address exhaustion, routing scaling and fairness to security and manageability, and summarize some of the research and early standardization efforts that try to address these problems.

### About the Speaker

Professor Henning Schulzrinne, Levi Professor of Computer Science at Columbia University, received his PhD from the University of Massachusetts in Amherst, Massachusetts. He was an MTS at AT&T Bell Laboratories and an associate department head at GMD-Fokus (Berlin), before joining the Computer Science and EE departments at Columbia University. He served as chair of Computer Science from 2004 to 2009.

Protocols co-developed by him, such as RTP, RTSP and SIP, are now Internet standards, used by almost all Internet telephony and multimedia applications. His research interests include Internet multimedia systems, ubiquitous computing, mobile systems. He is a Fellow of the IEEE.

### All Welcome!

You do not have to be a member of the IEEE to attend.

**Time:** 6:00 PM, Thursday, October 8, 2009, refreshment will be offered at 5:45 PM.

**Place:** New Jersey Institute of Technology (NJIT), Room 202, ECE Center (Intersection between Warren & Summit Streets), Newark, NJ. Directions are available at <http://www.njit.edu/about/visit/gettingtonj.it.php>.

**Information:** Dr. Nirwan Ansari (973) 596-3670 (nirwan.ansari "AT" njit.edu) or Yanchao Zhang (973) 642-7817. Also check <http://web.njit.edu/~ieeenj/comm.html> for the latest updates.

## NJ VTS & MTT-S/AP-S Chapters: Long Term Evolution (LTE) Radio Access Network (RAN) Overview

On October 22, 2009, the IEEE North Jersey Section Vehicular Technology Society and MTT/AP Chapters will host a joint talk entitled "Long Term Evolution (LTE) Radio Access Network (RAN) Overview" by Dr. Matthijs A. Visser.

### About the Talk

Long Term Evolution (LTE) has been almost universally selected as the technology of choice for 4<sup>th</sup> generation wireless communications systems. It has been designed to meet high throughput and low latency requirements to support next generation wireless services. LTE allows for high spectral efficiency, flexible bandwidth utilization from 1.4 to 20 MHz, and high peak data rates through the use of higher order modulation (64-QAM) and multi-antenna techniques (MIMO). For example, peak rates in 10 MHz bandwidth are: for the downlink 75 Mbps with 2x2 MIMO, and for the uplink 20 Mbps with 16-QAM. This talk will give an overview of the LTE air interface, including OFDM, Downlink and Uplink air interface structure, LTE channels, peak rates, MIMO, scheduling and resource allocation, etc.

### About the Speaker

Dr. Matthijs A. Visser received his PhD in Electrical Engineering from the New Jersey Institute of Technology in 1999, and prior to this a Masters degree in Electrical Engineering from Delft University of Technology in Delft, the Netherlands. Dr. Visser is currently employed by Alcatel-Lucent where for the past 1.5 years he has worked on LTE trial activities. He has over 10 years of wireless industry experience and is the holder of two patents.

### All Welcome!

You do not have to be a member of IEEE to attend. Pre-registration is requested!

**Time:** 7:00 PM, Thursday, October 22, 2009. A free buffet will begin at 6:30 PM.

**Place:** Alcatel-Lucent, Room WH15E-1, 67 Whippany Rd, Whippany, NJ.

**Information:** For information, directions and to register please contact Stephen Wilkowski (973)-386-6487 (swilkowski "AT" alcatel-lucent.com) or Arthur Greenberg (a.h.greenberg "AT" ieee.org).

# IEEE North Jersey Section Activities

## October 2009

**Oct. 1** – “2009 MTT/AP Symposium and Mini-Show” – MTT-S/AP-S Chapter, 9:00 AM - 4:30 PM, Hanover Manor, 16 Eagle Rock Avenue, E. Hanover, NJ. Kirit Dixit (201) 669-7599 (kdixit “AT” ieee.org), Art Greenberg (a.h.greenberg “AT” ieee.org), Har Dayal (973) 633-4618 (har.dayal “AT” baesystems.com), or George Kannell (973) 386-4170 (gkk “AT” gsinnovations.com).

**Oct. 7** – “NJ Section Meeting”, 6:30 PM, “Executive Committee Meeting” - 7:00 PM, ITT, 77 River Rd, Clifton, NJ. Russell Pepe at rpepe “AT” ieee.org.

**Oct. 8** – “Internet 2.0: Hype or Hope?” by Professor Henning Schulzrinne, NJ Communications Society Chapter, 6:00 PM, New Jersey Institute of Technology (NJIT), Room 202, ECE Center (Intersection between Warren & Summit Streets), Newark, NJ. Dr. Nirwan Ansari (973) 596-3670 (nirwan.ansari “AT” njit.edu) or Yanchao Zhang (973) 642-7817. Also check <http://web.njit.edu/~ieeenj/comm.html> for the latest updates.

**Oct. 14** – “Engineers Meet: Learn Our Approach to Regaining Control Over Your Financial Life” by Matthew Niemczyk and TJ Spizzo, NJ PACE, GOLD, WIE, 6:30 PM to 9:00 PM, Clifton Memorial Library, 292 Piaget Ave, Clifton, NJ. Paul Ward, (973) 790-1625, PWARD1130 “AT” aol.com, Richard F. Tax, (201) 664-6954, rtax “AT” aea.org, Dr. Katherine Duncan, (973) 209-8607, kduncan “AT” ieee.org.

**Oct. 14 - Dec. 9** – “C# .NET Programming” by Donald Hsu, PhD, 6:30 PM to 9:00 PM, Advanced Technical Marketing, Suite 113, 1719 Route 10, Parsippany, NJ. Donald Hsu, yanyou “AT” hotmail.com.

**Oct. 22** – “Long Term Evolution (LTE) Radio Access Network (RAN) Overview” by Dr. Matthijs A. Visser, NJ VTS & MTT-S/AP-S, 7:00 PM, Alcatel-Lucent, Room WH15E-1, 67 Whippany Rd, Whippany, NJ. Pre-registration is requested! Stephen Wilkowski (973)-386-6487 (swilkowski “AT” alcatel-lucent.com) or Arthur Greenberg (a.h.greenberg “AT” ieee.org).

**Oct. 29** – “Life Grade Luncheon”, Hamilton Park Conference Center, Florham Park, NJ. Ken Oexle (973) 386-1156.

**Oct. 29** – “General Meeting – Topic TBD”, NJ Consultants' Network, 6:30 PM - 8:30 PM, Morris County Library, Large Meeting Room, 30 East Hanover Ave, Whippany, NJ. Contact Robert Walker at r.d.walker “AT” ieee.org or (973) 728-0344.

**Oct. 30** – “Combined Heat & Power Seminar” by Scott Yappen, Don Bachman, and Gearoid Foley, 9:00 AM to 2:00 PM, Automatic Switch Company, 50 Hanover Road, Florham Park, NJ. Ronald W. Quade, PE, (732) 205-2614 or rwquade “AT” ieee.org.

### Upcoming Meetings

**Nov. 4** – “NJ Section Meeting”, 6:30 PM, “Executive Committee Meeting” - 7:00 PM, ITT, 77 River Rd, Clifton, NJ. Russell Pepe at rpepe “AT” ieee.org.

**Nov. 11** – “Engineers Meet: Learn Ways to Define Your Retirement Goals and Plan to Reach Them in Today’s Changing Market” by Matthew Niemczyk and TJ Spizzo, NJ PACE, GOLD, WIE, 6:30 PM to 9:00 PM, Clifton Memorial Library, 292 Piaget Ave, Clifton, NJ. Paul Ward, (973) 790-1625, PWARD1130 “AT” aol.com, Richard F. Tax, (201) 664-6954, rtax “AT” aea.org, Dr. Katherine Duncan, (973) 209-8607, kduncan “AT” ieee.org.

**Nov. 30** – “Multimodal Biometrics Uses in Person Identification and Verification” by Dr. George J. Proeller, NJ Computer, SP, I&M, & TMC, 7:00 PM, Public Meeting Room, Morris County Library, 30 E. Hanover Ave, Whippany, NJ. Michael Malm, (201) 355-6167, mmalm “AT” ieee.org, Yun Shi, (973) 596-3501, shi “AT” njit.edu, Russell Pepe (201) 960-6796, rpepe “AT” ieee.org, or Saumil Vyas, saumil.ieee.org.

**Dec. 2** – “Volunteer Open House, Officer Training Workshop and Senior Membership Info Session”, NJ Section, 6:00-9:00 PM, New Jersey Institute of Technology (NJIT), Room 202, ECE Center (Intersection between Warren & Summit Streets), Newark, NJ. RSVP required. Amit Patel, Section Chair, a.j.patel “AT” ieee.com.

**Members and Non-Members Welcome**  
**PLEASE POST**

*NJ Computer, SP, I&M, & TMC:*  
**Multimodal Biometrics  
Uses in Person  
Identification and  
Verification**

On Monday, November 30, 2009, the IEEE North Jersey Section Computer Society, Signal Processing Society, Instrumentation and Measurement Society, and Technical Management Council Chapters will host a presentation entitled "Multimodal Biometrics Uses in Person Identification and Verification" by Dr. George J. Proeller.

**About the Talk**

Accurate person identification and authentication grows in importance each day. Whether to access a location, use a device with attendant access to information, or to travel, the need to ensure person identity increases as does the population of those needing these services. This discussion begins with an overview of biometrics and biometric systems then transitions to focus on the application of multi-modal biometrics to better facilitate person identification and authentication.

**About the Speaker**

Dr. George J. Proeller is an experienced security engineer and also serves as an Adjunct Professor of Computer Science at Colorado Technical University where he teaches courses in computer security at the graduate and doctoral level. He holds numerous Security Certifications and graduate degrees including Masters of Science in Computer Security and Software Engineering from the Colorado Technical University where he also earned a Doctorate in Computer Science with an emphasis on Enterprise Information Systems.

Dr. Proeller is active in several professional organizations including the Information Systems Security Association (ISSA), the Industrial Advisory Board of the Colorado State University, and the IEEE. Internationally, George is engaged in the Security Outreach and Awareness Project to extend Information Security awareness and education to students in South America.

**All Welcome!**

You do not have to be a member of the IEEE to attend. Bring your friends and network during the free pre-meeting buffet starting at 6:00 PM.

**Time:** 7:00 PM, Monday, November 30, 2009, pre-meeting buffet starting at 6:00 PM.

**Place:** Public Meeting Room, Morris County Library, 30 E. Hanover Ave,

Whippany, NJ, (973) 285-6930.

**Information:** Michael Malm, (201) 355-6167, mmalm "AT" ieee.org, Yun Shi, (973) 596-3501, shi "AT" njit.edu, Russell Pepe (201) 960-6796, rcpepe "AT" ieee.org, or Saumil Vyas, saumil.ieee.org.

*NJ Section PACE, GOLD, WIE:*

**Engineers Meet:  
Learn Ways to Define Your  
Retirement Goals and Plan  
to Reach Them in Today's  
Changing Market**

On Wednesday, November 11, 2009 the North Jersey Section Professional Activities Committee, Graduates of the Last Decade and Women in Engineering will host a meeting to help you define goals and plan for your retirement. Our speakers will be Matthew Niemczyk, Financial Advisor at Ameriprise Financial and TJ Spizzo, CRPC Advanced Financial Advisor at Ameriprise Financial.

**About the Meeting**

If you're looking for help defining your ideal retirement, along with planning to save and invest for it, then you should attend our informative seminar: **Retirement: Planning Beyond the Numbers®.**

During this complimentary seminar, you'll learn ways to:

- Envision your ideal retirement.
- Build a plan to help you reach your retirement goals, even in a changing economy.
- Position your finances as you plan for a long retirement.

This is an informational seminar, and there's no cost or obligation to attend. Ameriprise Financial is committed to helping you learn more about your options in managing your financial resources and giving you straight forward guidance on personal money management and investment strategies.

You will receive our Dream Book® guide, to help you explore your retirement dreams.

**About the Speakers**

Matthew Niemczyk received his BS in Business Economics, from the Pennsylvania State University. He has been working in the investment industry for over 7 years and is currently a fully certified financial advisor for Ameriprise Financial. His areas of focus include personal financial planning for retirement, retirement income strategies, education funding, and investments. He works with his clients to design a personal financial plan based on their life goals. This

strategy focuses on helping them become more confident about managing their financial objectives.

TJ Spizzo received his BS in Business and Environmental Economics from Rutgers University. He is currently a fully certified, Advanced Financial Advisor with Ameriprise Financial. TJ has over 12 years experience in the investments industry and currently holds his Chartered Retirement Planning Counselor designation. His area of focus is on personal financial planning for retirement, retirement income strategies, tax management strategies, and protection planning/family security. His mission is to help his clients reach their financial goals through a personal relationship based on personalized, knowledgeable advise. TJ is, also, actively involved in volunteering in the Mahwah Youth Sports Boosters Association.

**All Welcome!**

Members and students from all professional societies and engineering disciplines are welcome. We now have attendees from IEEE, ASME, NSPE, ASCE and AEA. For information about these groups see:

- [www.aea.org](http://www.aea.org)
- [www.ieeeusa.org/policy/care](http://www.ieeeusa.org/policy/care)
- [www.ieeeusa.org](http://www.ieeeusa.org)
- [www.programmersguild.org](http://www.programmersguild.org)
- <http://web.njit.edu/~ieeenj/>
- [www.asme.org/sections/northjersey](http://www.asme.org/sections/northjersey)

CARE is the Congressional Advocacy Recruitment Effort CARE is a voluntary network of IEEE members who are interested in public policy. To help and for information go to [www.ieeeusa.org/policy/care/](http://www.ieeeusa.org/policy/care/).

**Time:** 6:30 PM to 9:00 PM, Wednesday, November 11, 2009. Refreshments will be served.

**Place:** Clifton Memorial Library, 292 Piaget Ave, Clifton, NJ, (973) 772-5500.

**Information:** Paul Ward, (973) 790-1625, PWARD1130 "AT" aol.com, Richard F. Tax, (201) 664-6954, rtax "AT" aea.org, Dr. Katherine Duncan, (973) 209-8607, kduncan "AT" ieee.org.

# **Volunteer Open House, Officer Training Workshop and Senior Membership Info Session at NJIT December 2, 2009**

The IEEE North Jersey Section is proud to announce its annual end of the year executive committee meeting and updated workshop agenda. Each year, the election results for new officers for the North Jersey Section for the following year are announced by the tellers committee at the December executive committee meeting. The new officers are then installed and take office in the coming January. This year's agenda has been expanded to address a number of key topics in response to member requests.

A number of section IEEE members and non-members have been inquiring how they can become more informed about and involved with the section and different IEEE activities being held throughout the year. Some from increased attendance and others from increased active participation and volunteering for different events.

From those who are already active volunteers, many have inquired how they can take on leadership roles in the section and beyond and what is exactly involved and expected with officer positions. Lastly, many members have inquired how they can apply for a senior-member grade elevation and go about obtaining required elements of their senior member application.

To help the membership, the December executive committee meeting will host a volunteer open house which will give all attendees the opportunity to meet North Jersey Section chapter and committee officers, as well as a chance to talk and explore individually, potential volunteering opportunities with their areas of interest. Current vacant positions will also be reviewed.

There will also be an officer training session for the newly elected officers to educate them and committee members on their responsibilities and basic required operations of the section. Lastly, there will be an information session on the senior member grade elevation process for those seeking senior membership with an active application in process.

All section members are invited to attend, especially those who are interested in learning how to stay better informed of section and area wide IEEE activities that are occurring. For those

interested in becoming more active in general IEEE activities, in becoming actual volunteers, officers or seeking senior member grade elevation. Student and Graduate Student members are encouraged to attend and learn how they can continue their IEEE participation beyond the university.

The event will be held on Wednesday, December 2, 2009, 6-9PM at NJIT in the ECE Building, Lecture Room 202. There is free parking in the enclosed parking deck next to the ECE building and a free buffet dinner will be served for all attendees. RSVP is required on-line at the following address

[http://meetings.vtools.ieee.org/meeting\\_view/list\\_meeting/1073](http://meetings.vtools.ieee.org/meeting_view/list_meeting/1073)

or contact Amit Patel, Section Chair, [a.j.patel@at.ieee.com](mailto:a.j.patel@at.ieee.com).

## **IEEE and North Jersey Section Going Web 2.0, Facebook & Linked-In**

If you are reading this article, there is a good chance you are reading this either on a paper newsletter or on a static webpage. Some of that will be changing to provide the reader alternative channels of accessing important information.

This article tries to provide a brief introduction to RSS, Really Simple Syndication, which is the core technology behind Web 2.0 features, applications, and how IEEE is now using it.

There are many detailed descriptions of RSS and how it works (see Wikipedia for a good introduction to RSS and XML), but in the context of Web 2.0, it is an XML (eXtensible markup language) based push technology that allows for moving information from the content producer to the appropriate client software being used to aggregate data from many sources to present to the user.

Many people are already using such client software without actually knowing that it is RSS and XML driving it under the hood. For example, news portal sites like Yahoo utilize RSS, Google Reader is an aggregator that also collects subscribed feeds as diverse as news stories, daily blogs, to audio and video podcasts. Popular social networking sites like Facebook and Linked-In are also powered by this technology and push member's status changes and postings out to email, twitter and SMS.

So what does this have to do with the IEEE? One great example of how the IEEE currently uses Web 2.0 is the individualized myIEEE (<http://www.ieee.org/web/membership/myieee.html>) portal

that every single member has as part of their membership. It allows for customization of products and services of interest to the member as well as notification of IEEE wide events of interest in different categories.

Additionally, a little over a year ago the IEEE introduced a new meeting and event announcement system which allows for publishing feeds of these events to the public. This data is then collected using the subscriber's favorite client aggregator software.

Many people make use of one or more of such technologies and can now integrate their access to local IEEE event notifications. Over the course of the next year the North Jersey Section will roll out all meeting and event notifications using RSS. You can begin to participate now using the following URL:

[meetings.vtools.ieee.org/meetings/rss/1/NORTH%20JERSEY](http://meetings.vtools.ieee.org/meetings/rss/1/NORTH%20JERSEY)

Paste this address into your RSS reader or aggregator software of choice. You can even use Microsoft Outlook 2007 to collect notifications. Just go to the tools, account settings, RSS feeds tab and paste this URL into the dialog box.

Additionally, if you use Facebook or LinkedIn, the North Jersey Section now has a Facebook fan page that you can become a fan of and all these meeting postings will be notified via the fan page which you can join here:

[www.facebook.com/pages/IEEE-North-Jersey-Section/](http://www.facebook.com/pages/IEEE-North-Jersey-Section/)

If you use LinkedIn, you can join the *IEEE North Jersey Section Group* to receive the same event notifications as well. Just go to

[www.linkedin.com](http://www.linkedin.com)

and search for IEEE North Jersey Section under the groups menu.

Click through links for both the fan page and group will be available off the main North Jersey Section website at [web.njit.edu/~ieeenj](http://web.njit.edu/~ieeenj). As the process of rolling out better integrated Web 2.0 functionality continues via myIEEE and our Facebook fan page and Linked-In group, the updates will be publicized in future articles. For now, try out RSS feeds and our Fan Page and or Group to see how you can make better use of this information using your notification channel of choice.

(Reprinted with permission)  
NJIT Press Release:

## **NJIT Honors Electrical Engineering Expert Who Focuses on Nanotubes, Graphene**



*Professor Haim Grebel, IEEE NJ Section LEOS Chair*

Haim Grebel, of Livingston, an NJIT electrical engineering professor, whose work focuses on understanding the properties of structures at the nanoscale, especially singlet-walled carbon nanotubes and graphene, has received the NJIT Excellence in Research Award.

The honor was awarded September 2, 2009 at the University Convocation, an annual celebration. Grebel is a professor in NJIT's Newark College of Engineering where he is the director of the Electronic Imaging Center. He has been instrumental establishing a nanotechnology research focus at NJIT, both experimentally and theoretically.

Grebel has authored and co-authored numerous publications on Nanotechnology aspects and frequently delivers invited talks on the subject in international conferences. His research has been supported by the National Science Foundation, the US Army and the US Navy. He is the chair of the North Jersey Chapter of the Laser and Electro Optics Society and often organizes talks and mini-conferences on optics and nanotechnology. He holds a BS degree from Tel-Aviv University, Israel and MS and PhD degrees from the Weizmann Institute of Science, Israel, all in physics.

Convocation at NJIT traditionally honors select faculty and staff members who have demonstrated the highest level of excellence over a sustained period. "We reward them not only for their achievement, but because their leadership serves as a testament to NJIT's commitment to excellence," said Donald H. Sebastian, PhD, Acting

Provost and vice president of research and development.

A. Zachary Yamba, EdD, President of Essex County College, was the keynote speaker. Yamba is the longest-serving college president in New Jersey, who is widely credited with transforming Essex County College into the vibrant and progressive institution that today enrolls more than 20,000 students. Yamba was one of the early founders of a partnership that has enabled ECC and neighboring NJIT, Rutgers-Newark and the University of Medicine and Dentistry of New Jersey to collaborate on numerous collegiate and community initiatives in the city's University Heights district.

## **North Jersey Section Seeks Committee Chairs and Volunteers**

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. For Society Chapter Chairs, you must be a member of the corresponding IEEE Society.

If you would like to become involved with volunteering in some of these efforts or positions or just become more informed about what is happening at the North Jersey Section, please contact Dr. Chandra Gupta at [c.gupta "AT" ieee.org](mailto:c.gupta@ieee.org). You are welcome to attend the Section business meeting held the first Wednesday of every month to find out more and other volunteer activities that require some help.

Some committees needing volunteers include the following. Please contact the person indicated for additional information.

- Power Electronics Society Chapter Chair - contact [c.gupta](mailto:c.gupta@ieee.org) below.
- GOLD (Graduates of the Last Decade) Affinity Group Volunteers and Committee members needed - contact [northjerseygold "AT" ieee.org](mailto:northjerseygold@ieee.org)
- WIE (Women in Engineering) Affinity Group Volunteers and Committee members needed - contact [kduncan "AT" ieee.org](mailto:kduncan@ieee.org)
- EMBS (Engineering in Medicine and Biology Society) is seeking a chair and active committee volunteers - contact [c.gupta "AT" ieee.org](mailto:c.gupta@ieee.org).
- Membership Development Committee Chair and Volunteers - contact [c.gupta](mailto:c.gupta@ieee.org) below.

Additionally, if interested volunteers would like to get more general information about the Section, including a complete

listing of all chapters and committees, visit the North Jersey Section website <http://web.njit.edu/~ieeenj/>, or contact Dr. Chandra Gupta [c.gupta "AT" ieee.org](mailto:c.gupta@ieee.org).

## **North Jersey Section Seeks Volunteers to Conduct Business at the Section Level**

The NNJ IEEE Section ExCom is seeking new volunteers to help conduct business at the section level for an elected or nominated position for the benefit of its membership in the North Jersey section and surrounding areas. You must be an active IEEE member to hold an elected office at the section level. There are a variety of volunteer positions open and available. They range from long-term to short-term, technical to non-technical, leadership or just participatory. All activities have varying levels of time commitment. For Chapter Chairs, you must be a member of the corresponding IEEE Society.

If you would like to become involved with volunteering in some of these efforts or positions or just become more informed about what is happening at the NNJ IEEE Section, please contact Dr. Chandra Gupta at [c.gupta "AT" ieee.org](mailto:c.gupta@ieee.org) or Har Dayal at [har.dayal "AT" baesystems.com](mailto:har.dayal@baesystems.com). You can even attend the section business meeting held the first Wednesday of every month to find out more and other volunteer activities that require some help.

Additionally, if interested volunteers would like to get more general information about other activities in our section, visit the North Jersey Section website for newsletter information <http://web.njit.edu/~ieeenj/> or contact Dr. Chandra Gupta, [c.gupta "AT" ieee.org](mailto:c.gupta@ieee.org).

**Think you can code?**

**GET READY** for...

# IEEE**X**TREME

## PROGRAMMING COMPETITION 3.0

IEEE**X**treme is a global 24-hour online contest where IEEE Student Branch teams solve a challenging set of programming problems.

### WHO CAN COMPETE?

- Teams of up to three IEEE student or graduate student members from IEEE Student Branches.
- Student Branches can form multiple teams.

### WHERE IS THE COMPETITION HELD?

- Student Branches will host the IEEE**X**treme event for their local team, and all of the head-to-head competition will happen online.

### WHAT COULD I WIN?

- Fame: Competing in the world's most Xtreme programming contest is a big deal—winning means you get unlimited bragging rights.
- Fortune: Grand prize is a trip to the IEEE conference of your choice, anywhere in the world. Other prizes include cool gear and prizes from our sponsors.

**Competition begins**  
24 October at 00:00:00 UTC

**Register Now**  
[www.ieee.org/xtreme](http://www.ieee.org/xtreme)



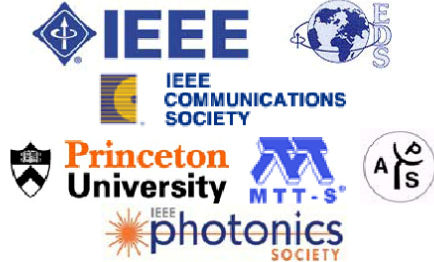
# Call for Papers

## The 33<sup>rd</sup> IEEE Sarnoff Symposium 2010

### Sponsor

**IEEE Princeton/Central Jersey  
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### Co-Sponsors (approved and pending)



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Since 1978 the IEEE Sarnoff Symposium has been bringing together a tremendous and rich diversity of telecom experts from industry, universities, and government. The popularity of the Sarnoff Symposium, again being held in the historic Nassau Inn located in the heart of downtown Princeton, NJ, continues to grow as the premier forum for researchers, engineers, and business executives in the North East drawing an attendance from all over the world. Besides the technical paper presentations, the Symposium will include *tutorials, student paper poster presentations, executive panels, and exhibition.*

Prospective authors are encouraged to submit a full paper for review. Only original papers that have not been published or submitted for publication elsewhere will be considered. The submission process is carried through the *EDAS conference management system* (<http://edas.info/>). The manuscripts must follow the IEEE two-column format with single-spaced, 10-point font in the text. The maximum paper length is of five (5) pages. A sixth page may be accepted after an additional fee. Submission of a regular paper implies that at least one of the authors will have a full registration to the Conference and present the paper upon the acceptance of the submission. Manuscript template available at: [www.sarnoffsymposium.org](http://www.sarnoffsymposium.org).

All accepted papers (after review by experts in the field) will be presented in oral sessions, included in the *33rd IEEE Sarnoff Symposium Proceedings* and published through **IEEE Xplore**. Student papers should be submitted to the Student Papers Chair ([praghuwanshi@devry.edu](mailto:praghuwanshi@devry.edu)). Prospective tutorial presenters should contact the Tutorials Chair ([ekpodzo@msn.com](mailto:ekpodzo@msn.com)).

### IMPORTANT DATES

Papers, Panel and Tutorial Proposals Due:	Nov. 15, 2009
Student Papers Due:	Dec. 5, 2009
Notification of Tutorials Acceptance:	Jan. 7, 2010
Notification of Papers Acceptance:	Jan. 30, 2010
Final Version Due:	Mar. 1, 2010

### CONFERENCE SCHEDULE

Tutorials:	Apr. 12, 2010
Paper Sessions and Panels:	Apr. 13-14, 2010
Exhibits:	Apr. 13, 2010
Poster Presentations:	Apr. 14, 2010

The Symposium is soliciting state-of-the-art research papers, panels and tutorial proposals in the following areas of interest.

### Wireline Communication Systems

- Triple / Quad Play Architectures
- Broadband Access Networks
- IPTV

### Optical Communications & Networking

- WDM Systems and Devices
- Broadband Access Communications
- Radio over Fiber (RoF)

### Wireless Communications Systems

- 4G Cellular and Wireless LAN Systems
- MIMO Transmission Schemes
- Hierarchical Networks (Femto, Pico, Relays)
- Radio Resource and Interference Management
- Self Configuring and/or Optimizing Networks (SON)
- Sensor, Mesh and Ad Hoc Networks
- Free Space Optics (FSO) Wireless Systems
- Ultra Wideband (UWB) Communications
- Power Management for Green Communication
- Satellite Communication Systems
- Military Communication Systems
- Disruption Tolerant Networks

### Communications and Information Theory

- Network Information Theory
- Cross-Layer Optimization Schemes

### Applications

- Multimedia Applications for Mobile and Tethered Users
- Mobile Payment Applications
- Trust, Security, and Privacy
- Business Models for Mobile Applications

### Wireless Communications Components

- Power Amplifiers
- Microwave Devices
- Antennas Design
- RF Repeaters
- Transceivers



# Life Grade Luncheon

The PES Chapter and the Section will sponsor a luncheon for North Jersey IEEE Life Grades (Members, Senior Members and Fellows) on Thursday, October 29, at

Hamilton Park Conference Center  
175 Park Avenue  
Florham Park, NJ 07932

The luncheon will begin at 11:30 AM in the Terrace area. Cost is \$ 5.00 per person

Advance registration is required prior to October 19. We can accommodate only 30 people. Registrations will be processed in the order of receipt and will be confirmed by return mail. Please complete the following registration form and include a check payable to the North Jersey Section IEEE in the amount of \$ 5.00 per person.

Reservations cannot be accepted at the door. For additional information regarding the event contact Ken Oexle 973-386-1156.

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IEEE Life Grade Luncheon Registration NJ - October 29, 2009

Name \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_

IEEE # \_\_\_\_\_ Life Grade \_\_\_\_ Yes

Return to: Ken Oexle  
11 Deerfield Rd  
Whippany, NJ 07981

Prior to October 19 and enclose \$5.00. Make check payable to **NJ Section IEEE**



**THE INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS, INC.**  
**NORTH JERSEY SECTION**  
**MTT-Society & AP-Society Joint Chapter**  
**PRESENTS**



**24<sup>th</sup> ANNUAL SYMPOSIUM AND MINI – SHOW**

**THURSDAY OCTOBER 1, 2009**

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

The conference presents a series of 9 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 4:30PM)**

Time	Topic	Speakers	Title	Affiliation
8:50	Opening Remarks	George Kannell	Tech. Chair IEEE MTT/AP Chapter	LGS Innovations
9:00-9:30	A methodical approach to analyzing and understanding the performance of a LTE system	Mark Saffian	Solution Architect	AWR Corp.
9:30-10:00	Intelligent RF and Microwave Component and Assembly Designs'	C. Gupta, PH.D.	Vice President of Engineering	Aeroflex-KDI
10:00	BREAK - MINI SHOW EXHIBITION			
10:30-11:30	Realizing RF functions in an FPGA	Sean Gallagher	Application Engineer	Xilinx Inc.
11:30-12:00	Millimeterwave InP and SiGe HBT circuits for next generation data transmission systems"	Y. Baeyens, PH.D.	Technical Manager, IEEE Fellow	ALU/Bell Labs
12:00	LUNCH - MINI SHOW EXHIBITION			
1:00-1:30	Measuring Noise for Various Oscillator Families	David Bail	Director of Product Marketing	Vectron
1:30-2:00	Sensitivity and Mitigation of Reverse IMD in High Power Amplifiers	Chris Brinton	Student	TCNJ
2:30	BREAK - MINI SHOW EXHIBITION			
2:45-3:15	The Design & Measurement Data for S-Band T/R Module for a Multil-Beam Electronically Scanned Antenna	Sarjit S Bharj	Vice-President	Princeton Microwave
3:15-3:45	Recent Advances in High-speed Waveform Digitizer Technology	Peter Pupalaiakis	VP & Principal Technologist	LeCroy Corp.
3:45-4:15	Amplifier RFIC design focusing on the travelling wave architecture	Perry King	Regional Manager	Centellax
4:15	Closing remarks	Kirit Dixit	Chair IEEE MTT/APs NJ Section	Microcom Sales

Registration is on-site. Details will be in the October issue of the NORTH JERSEY IEEE NEWSLETTER and at [http://web.njit.edu/~ieeenj/oct09\\_index.html](http://web.njit.edu/~ieeenj/oct09_index.html)

**ALL ARE WELCOME (IEEE Membership not required). REGISTRATION IS ON-SITE**  
**THERE IS NO CHARGE TO ATTEND THE SYMPOSIUM OR SHOW.**  
**FREE BREAKFAST / LUNCH INCLUDED FOR ALL.**

FOR FURTHER INFORMATION

Chair / Exhibition:	Kirit Dixit	201-669-7599	kdixit "AT" microcomsales.com
Chair MTT/APS Symposium	Har Dayal	973-633-4618	har.dayal "AT" baesystems.com
Technical Program Chair:	George Kannell	973-437-9990	gkk "AT" lgsinnovations.com
Publicity:	Arthur Greenberg		a.h.greenberg "AT" ieee.org
Event / Location Coordinator:	Ken Oexle	973-386-1156	
Event Coordinator:	Russell Pepe	201-960-6796	rpepe "AT" att.net
Event Coordinator:	Peter Donegan		
Event Coordinator:	Willie Schmidt		

# IEEE North Jersey Section Course C# .NET Programming

Wednesday, October 14, 2009 through December 9, 2009  
Eight weekly classes (October 14, 21, 28, November 4, 11, 18, December 2, 9, 2009)  
Place: Advanced Technical Marketing, Suite 113, 1719 Route 10, Parsippany, NJ 07054  
(Checks should not be mailed to this address)

IEEE North Jersey Section thanks Advanced Technical Marketing **ATM** for sponsoring this course.

The IEEE North Jersey Section is offering a course entitled "C# .NET Programming". Since 2004, C# .NET has generated significant headway in Fortune 1000 enterprise development systems. Dice.com lists 700+ C# .NET jobs 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 Completion when you finish the course. Microsoft Corp. 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.

Instructor: **Donald Hsu, PhD**, has been a corporate manager for 11 years and is an experienced trainer. Since 2004, he has trained 700+ people in database, Java, WebLogic, XML, and C# .NET courses in 7 organizations.

## TOPICS

1. Compare the enterprise development tools using Java to C# .NET
2. Define Visual Studio .NET Version 2005 to 2008
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:** Advanced Technical Marketing **ATM** Suite 113, 1719 Route 10, Parsippany, NJ 07054  
**WHEN:** Eight Wednesdays, October 14, 21, 28, November 4, 11, 18, December 2, 9, 2009, 6:30 to 9:00 p.m.  
**COST:** IEEE (& affiliate) members \$500; Non-IEEE members \$550.  
**CONTACT:** Donald Hsu, yanyou "AT" hotmail.com

## REGISTRATION: C# .NET Programming

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

# NJ Power & Energy Society/Industry Applications Society Combined Heat & Power Seminar

The PES and IAS Chapters will sponsor a technical seminar on the topic of combined heat and power. The session will be held on Friday, October 30, 2009 at Automatic Switch Co., 50 Hanover Rd, in Florham Park, NJ.

## Topics

The state of New Jersey released the NJ Energy Master Plan (NJ EMP) during the past year which proposes guidelines to steer the state toward a responsible energy future with adequate, reliable energy supplies that are both environmentally responsible and competitively priced. The overall goal of the NJ EMP is to reduce peak demand for electricity by 5,700 MW by 2020. Combined Heating and Power (CHP), which is expected to contribute 1,500 MW to the overall electricity demand reduction. CHP is ideal for large industrial, commercial and institutional facilities with significant electrical, heating and cooling needs. CHP utilizes on-site generation (ex. reciprocating engine fueled by natural gas), whereby electricity is generated and heat byproduct is recovered for use at the facility. Thus, two forms of energy (electric and thermal) are efficiently generated from a single source of fuel. The benefits of CHP include 75-85% energy efficiency, lower energy cost, higher reliability, and reduced carbon footprint.

This seminar will cover the following:

- ✓ CHP Application Basics
- ✓ Paralleling Switchgear and Electrical Distribution Requirements
- ✓ Utility Interconnect Requirements
- ✓ CHP Related Mechanical Engineering Knowledge for Electrical Engineers
- ✓ Public Funding Incentives for CHP

## About the Instructor

This session will be led by several industry professionals intimate with this topic. These presenters include Scott Yappen - Business Development Manager at Foley Power Systems/Caterpillar Electric Power Generation; Don Bachman - Vice President with the Automatic Switch Company; and Gearoid Foley - President of Integrated CHP Systems.

The registration fee for this seminar will be \$150 for non-IEEE members, \$100 for IEEE Members, \$75 for GOLD Graduates (last 1-10 years) and \$25 for students with valid ID. The fee will be waived for IEEE Life Member Grades with verification at the seminar. 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.

If desired, IEEE Continuing Education Units will be offered for this course - a small fee of \$25 will be required for processing. A total of 0.4 CEUs will be offered. Please indicate if desired below.

**Time:** 9:00 AM to 2:00 PM (lunch is included), Friday, October 30, 2009.  
**Place:** Automatic Switch Company, 50 Hanover Road, Florham Park, NJ 07932 (973-966-2000)  
**Directions:** From Route 80 Take I-287 to Exit 37 (NJ 24 East - Springfield). Take NJ 24 East to Exit 2B (Columbia Turnpike). Proceed 2.2 miles to Hanover Road (6th set of traffic lights). Turn left on Hanover Road (AAA Building). Automatic Switch will be on the right (0.4 mile). Enter first driveway-marked shipping/receiving and proceed to visitor parking lot on the left. Follow sidewalk to office entrance door.  
**Information:** Ronald W. Quade, PE, (732) 205-2614 or rwquade "AT" ieee.org

## Registration: CHP Seminar 10/30/2009

Register via US mail to: Ronald W. Quade, PE  
Eaton Electrical  
379 Thornall St, 8<sup>th</sup> Floor  
Edison, NJ 08837

Name \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_

IEEE # \_\_\_\_\_ Student @ \_\_\_\_\_ Non IEEE \_\_\_\_\_ Life Member \_\_\_\_\_

Continuing Education Units: \_\_\_\_\_ Yes \$25 \_\_\_\_\_ No

If CEUs are chosen, please include a \$25 processing fee

Payment Enclosed \$ \_\_\_\_\_

**Make checks payable to North Jersey Section IEEE (Credit Cards cannot be processed at this time).**