

THE IEEE NORTH JERSEY SECTION NEWSLETTER

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NOVEMBER 2014

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great benefits of IEEE Membership. You probably already know about the technical exchanges. Other major benefits correspond to low cost insurance rates. In my opinion, the greatest reason to become an IEEE Member is the camaraderie and ability to network with your colleagues. Over the years, the IEEE has allowed me to have close discussions with inventors and entrepreneurs from Fortune 5000 companies and start-ups. If you are already a member, you should seriously consider elevating your Membership to Senior Member status. It does not cost you anything, and it provides the status of being at a distinguished level in this prestigious organization. Contact me or attend an IEEE meeting to discuss IEEE Senior Member elevation.

Become one of us. Become a Volunteer with the IEEE North Jersey Section. We have a great time while giving back to our Engineering community. Attend an IEEE meeting or contact me directly, and ask how you can become a Volunteer. We welcome and encourage Volunteers to help with Societies and Committees. This is your chance to make a difference. If you would like to see the IEEE do something more or different, become a Volunteer and make it happen.

I want to hear from our IEEE Members (and anyone else), so keep those calls and e-mail coming. My e-mail is always open.

Sincerely,

Russell C. Pepe

Chair, IEEE North Jersey Section

201-960-6796, rcpepe@ieee.org, atm_pepe@yahoo.com

LinkedIn: www.linkedin.com/pub/russell-c-pepe/0/a85/ba8

A Note from the Chair

I will be attending two exciting events in late October that will have already occurred by the publication date of the November Newsletter.

Saturday, October 25 is the date set for the IEEE North Jersey Section 60th Anniversary Celebration at West Point. We plan to have a tour of the facility and museum, followed by a presentation highlighting the history and achievements over the past 60 years of the North Jersey Section. Colonel Barry Shoop of West Point will next provide a presentation to the group, discussing his activities with the IEEE and at West Point. The day will be punctuated with a boat ride on the Hudson River.

Thursday, October 30 is the date set for the IEEE Life Member Luncheon. I look forward to this event, as it gives me a chance to meet our IEEE seniors. I enjoy hearing the stories about engineering in days past, and discussing their contemporaries who I only know as footnotes in a college text.

In the Newsletter last month, I mentioned our Second Annual Advanced Communications Symposium.

During the Symposium, I was interviewed by IEEE TV. You can view the interview on YouTube, at:

https://www.youtube.com/watch?feature=player_embedded&v=rTwDzy6HIw8.

May I also mention that if you are not currently a member of the IEEE, I strongly encourage you to join. Come to a meeting and speak with an IEEE Volunteer to hear about the

2014-15 EXCOM Meeting Schedule

The new 2014-15 EXCOM meeting schedule is now in vTools. The events start at 6 pm with a buffet, and the EXCOM meeting starts at 7 pm. The meeting locations are:

| | | |
|-----|---------|---------------------------|
| Wed | Nov. 5 | Clifton Library |
| Wed | Jan. 14 | Bell Labs, Murray Hill |
| Wed | Feb. 4 | NJIT, Newark |
| Wed | Mar. 4 | Clifton Library |
| Wed | Apr. 1 | Bell Labs, Murray Hill |
| Sun | May 3 | Awards at Birchwood Manor |
| Wed | Jun. 3 | Clifton Library |
| Wed | Aug. 5 | Bell Labs, Murray Hill |
| Wed | Sep. 2 | Clifton Library |
| Wed | Oct. 7 | NJIT, Newark |
| Wed | Nov. 4 | Bell Labs, Murray Hill |

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Quick Primer on Solar Energy

by Harry T. Roman

There are six general ways to use the sun's energy:

- Conversion of solar energy directly to electricity [photovoltaics]
- Conversion of the kinetic energy of the wind to electricity [wind energy]
- The solar heating and cooling of buildings
- Biomass energy conversion
- Solar electric power conversion using mirrors or concentrating devices
- Ocean thermal energy conversion.

Of these, the first two are the most prominent in application today, and hold the greatest potential for providing an alternate source of clean electricity for the nation, and planet.

The Nature of Solar Energy

The annual amount of incoming solar energy [radiation] from the sun is capable of providing thousands of times more energy than we currently use. The problem is how economically to harvest, distribute, and use it.

This large amount of incoming solar energy to earth is accounted for in the following manner:

- 27% is reflected back into space by the atmosphere and the clouds
- 10% is absorbed by the clouds
- 9% is reflected from the earth's surface
- 9% is absorbed in the atmosphere
- 45% is absorbed by the earth itself

Of the energy penetrating our atmosphere, 45% is visible to us as light; another 45% we perceive as heat; and the remaining 10% is high energy radiation that we cannot detect with our senses, representing ultra-violet and other high energy forms.

The visible energy is further broken into two major components: direct sunlight or beam radiation; and, diffuse or scattered radiation. Diffuse or scattered radiation is that component of sunlight reflected off clouds and other natural objects. Diffuse radiation is what we see on hazy, overcast days--the sun's direct rays being obscured by the clouds.

Direct solar radiation, often associated with the clear and cloudless southwestern part of the country, is best suited for concentrating solar panel installations...where lenses and other light concentration techniques may be used to significantly enhance solar panel performance. Such systems would not function well in cloud-filled skies.

The sun does not shine with equal intensity over the face of the planet. Some places are gifted with greater amounts and more cloudless days, which make it more economical to use the sun than those places where cloud cover is common. For instance, in the United States, the southwestern part of the country receives about 1.5-1.7 times as much solar energy as

the northeast where cloud cover is prevalent about 50% of the daytime period.

The U.S. now has over 6,400 MW of installed photovoltaic capacity, enough to power more than 1 million average American households.

The U.S. wind industry boasts over 60,000 MW of installed capacity.

Currently, the conventional U.S. electric generating capacity of the U.S. is about 1,000,000 MW, so there is a way to go before a significant portion of our electricity comes from solar/wind sources; however, most states have aggressive policies for applying these alternate resources, with some programs specifying 15-30% of a state's electricity to be obtained by these sources by 2030.

"I'd put my money on the sun and solar energy.

What a source of power! I hope we don't have to wait until oil and coal run out before we tackle that.

I wish I had more years left."

– Thomas Edison [ca. early 1900s]

The world's greatest inventor was quite interested in solar energy; and in his last decade, spent great effort to use the biomass resources of earth to make synthetic rubber--eventually settling upon a design that utilized the Goldenrod plant.

Talk to you again soon....

- Harry

Harry T. Roman
Life Member, IEEE
North Jersey Section

Important information – Buyer's Edge Shopping

IEEE - North Jersey Group # 1431

The IEEE North Jersey Section is now a Member of the Buyer's Edge Shopping Service. The Buyer's Edge is a buying service that guarantees the lowest prices on major purchases for its 4 million members in the tri-state area of NY, NJ, CT and greater Philadelphia. They offer a Buy-By-Phone, Buy-Online and, in certain benefit categories and areas, Buy-In-Person. Many member benefits are available nationally, like Cars, Furniture and Kitchens; whereas, some benefits, like Appliances, are for the tri-state area only.

It is easy to use the services of the Buyer's Club. Visit the Web Site at: <http://www.buyersedgeinc.com>

Then, enter the following login information: Username: 1431, Password: member1

Happy shopping!

IEEE North Jersey Section Seeks Committee Chairs and Section Volunteers

The IEEE North Jersey 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. A list of IEEE North Jersey Societies, Chapters, Groups and Committees are published at the end of the newsletter for those interested in participating. 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 Nominations Committee chair, Amit Patel at a.j.patel@ieee.org. You are welcome to attend the Section's executive committee meeting held the first Wednesday of every month to learn more about volunteer activities that require some help. Please check out the website below for published meeting times and locations. Some committees needing volunteers include the following. Please contact the person indicated for additional information.

Young Professionals (formerly Graduates of the Last Decade) Affinity Group Volunteers and Committee members needed

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

WIE (Women in Engineering) Affinity Group Volunteers and Committee members needed –

Contact: Zhiwei Mao (zmao@fd.edu)

EMBS (Engineering in Medicine and Biology Society) is seeking active committee volunteers –

Contact: raquelpc@njit.edu

Computer Society Chapter Committee Volunteers –

Contact zhao@fd.edu

Technical Management Council Committee Volunteers –

Contact: almeida@synergymwave.com

North Jersey Section Awards Committee Volunteers –

Contact k.oexle@ieee.org

Membership Development Committee Volunteers –

Contact miyer108@gmail.com

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://sites.ieee.org/northjersey> or contact anyone listed above.

[Back to Calendar of Events](#)

How to subscribe to this newsletter if you are not an IEEE North Jersey 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](#)

Welcome! New Members of the IEEE North Jersey Section

| Full Name | | Current IEEE Grade |
|----------------|------------|-------------------------|
| Kevin | Abbruzzese | Graduate Student Member |
| Ali H. | Alenezi | Graduate Student Member |
| Ian | Askins | Student Member |
| James | Basuino | Student Member |
| Dana M. | Bergman | Student Member |
| Christopher L. | Corrado | Student Member |
| Taraka | De Silva | Student Member |
| Abdoulaye M. | Diop | Graduate Student Member |
| Matthew A. | Dwyer | Student Member |
| Romana | Fnu | Graduate Student Member |
| Kenneth | Ford | Student Member |
| Sherryhan | Ghanem | Student Member |
| William F. | Griffeth | Associate Member |
| | Keiter | Member |
| Thomas D. | Kelly | Student Member |
| Odner | Lapaix | Student Member |
| Lyndon | Laxina | Student Member |
| Alemnehe J. | Lemma | Student Member |
| Melvin | Mathew | Student Member |
| Peter | Michael | Graduate Student Member |
| Faiyazuddin | Mohammed | Student Member |
| Auston | Moniez | Student Member |
| Harsh | Patel | Student Member |
| Matthew D. | Perkins | Student Member |
| Haroon | Rashid | Student Member |
| Edgar J. | Sanchez | Student Member |
| Marcos | Sant'ana | Student Member |
| Cynthia | Schell | Member |
| Ilesha | Sevak | Student Member |
| Ruiyang | Sun | Graduate Student Member |
| Nicholas A. | Tomaro | Student Member |
| Cody | Travolta | Student Member |
| Francis C. | Uzzolina | Student Member |
| Theresa L. | Wagner | Student Member |
| Chen | Wang | Graduate Student Member |
| Yashaswini | Anumapuram | Student Member |

Calendar of Events

- November 5, 5:30 PM to 6:30 PM: IEEE Senior Member Drive**
Location: Clifton Public Library - Allwood Branch, Activity Room, 44 Lyall Road, Clifton, NJ 07012, [Getting to Clifton Public Library](#)
Contact: Mani Iyer, mani.iyer@ieee.org Kai T. Chen, k.t.chen@ieee.org Ajay K. Poddar, poddar_ajay@yahoo.com Adriaan J. van Wijngaarden, avw@ieee.org (avw@ieee.org), [Read More...](#)
- Nov 5, 6:00 PM to 8:45 PM: IEEE North Jersey Section EXCOM Meeting – Clifton NJ**
Location: Clifton Public Library - Allwood Branch, Activity Room, 44 Lyall Road, Clifton, NJ 07012, [Getting to Clifton Public Library](#)
Contact: Adriaan J. van Wijngaarden, avw@ieee.org (avw@ieee.org), [Read More...](#)
- November 12, 6:30 PM to 9:00 PM: IEEE North Jersey Section PACE- Engineers Meet - Peter Eckstein, IEEE-USA Pres Elect**
Location: Clifton Memorial Library, 292 Piaget Ave., Clifton, NJ 07011 [Getting to Clifton Memorial Library](#) (Tel. 973 772-5500)
Contact: Paul Ward, 973 790-1625, peward@ieee.org Richard F. Tax, (201- 664-6954) rtax@verizon.net
- November 12, 6:30 PM to 8:00 PM: IEEE SMC/MTT- AP- CrowdMi: Scalable and Diagnosable Mobile Voice Quality Assessment Through Wireless Analytics - Dr. Ye Ouyang of Verizon Wireless, Dr. Tan Yan of NEC Labs America, USA**
Location: NJIT, ECE 202, 161 Warren Street, Newark, NJ 07102 [Getting to NJIT](#) [Read More...](#)
Contact: Dr. Ajay Poddar (201)560-3806, (akpoddar@ieee.org), Prof. Meng-Chu Zhou (zhou@njit.edu) or (mengchu@gmail.com)
- November 14, 9:00 AM to 2:00 PM: IEEE PES/IAS - Latest Advances in Battery Charging Technology - Alexis Dennis of Eltek**
Location: PSE&G - Hadley Road Facility, Auditorium, 4000 Hadley Road, South Plainfield, NJ 07080, [Getting to PSE&G - Hadley Road Facility](#)
Contact: Ronald W. Quade (rwquade@ieee.org) [Read More...](#)
- November 19, 6:30 PM to 8:00 PM: IEEE SMC/MTT-AP- Introduction to Directed Energy: RF and Antenna Design Issues - Dr. Yu-Dong Yao of Stevens Institute of Technology**
Location: NJIT, ECE 202, 161 Warren Street, Newark, NJ 07102 [Getting to NJIT](#)
Contact: Dr. Ajay Poddar (201)560-3806, (akpoddar@ieee.org), Prof. Meng-Chu Zhou (zhou@njit.edu) or (mengchu@gmail.com) [Read More...](#)
- Nov 20, 2:00 PM to 3:00 PM: IEEE IT/COMSOC/VTS- Secure Broadcasting of a Common Message with Independent Secret Keys – Rafael Schaefer, Post Doc. Fellow of Princeton University**
Location: Bell Laboratories, Alcatel-Lucent, Main Building, Room: 6A-106, 600 Mountain Avenue, Murray Hill, NJ 07974, [Getting to Bell Labs](#)
Contact: Adriaan J. van Wijngaarden, avw@ieee.org (avw@ieee.org), [Read More...](#)
- Nov 24, 9:00 AM to 2:00 PM: IEEE PES/IAS- Substation Connections and Personal Protection Fault Current Devices - Dick Pelletier of Travis**
Location: PSE&G - Hadley Road Facility, Auditorium, 4000 Hadley Road, South Plainfield, NJ 07080, [Getting to PSE&G - Hadley Road Facility](#)
Contact: Ronald W. Quade (rwquade@ieee.org) [Read More...](#)
- December 02, 4:45 PM to 6:30 PM: IEEE MTT- AP- The blue LED - its history and technology- Alan E. Delahoy of NJIT**
Location: NJIT, ECE 202, 161 Warren Street, Newark, NJ 07102 [Getting to NJIT](#)
Contact: D. Misra, Ph: 973-596-5739, dmisra@njit.edu [Read More...](#)
- December 18, 1:30 PM to 4:00 PM: IEEE North Jersey Section - Bell Telephone Laboratories, Inc. IEEE Milestones to be dedicated**
Location: Alcatel-Lucent, Main Building 6, 600 Mountain Ave, Murray Hill, NJ 07974 [Getting to Bell Labs](#)
Contact: Dr. Adriaan J. van Wijngaarden, avw@ieee.org (avw@ieee.org), Howard Leach (h.leach@ieee.org) [Read More...](#)
- Dec 19, 9:00 AM to 2:00 PM: IEEE PES/IAS- Developing Useful Transformer Health Indices - Tony McGrail of Doble Engineering**
Location: PSE&G - Hadley Road Facility, Auditorium, 4000 Hadley Road, South Plainfield, NJ 07080, [Getting to PSE&G - Hadley Road Facility](#)
Contact: Ronald W. Quade (rwquade@ieee.org) [Read More...](#)

IEEE NORTH JERSEY SECTION – Short Courses

IEEE North Jersey Section MD/YP/WIE/PACE - Art of Speechcraft>Returns to Murray Hill (October 6, 13, 20, 27, November 3, 10, 17, 24, 2014) Bell Laboratories, Alcatel-Lucent, 600 Mountain Avenue in Murray Hill, NJ 07974

IEEE North Jersey Section Course: Big Data Market Research in Seven Wednesdays - Seven weekly classes (October 15, 22, 29, November 5, 12, 19, December 3, 2014) New Jersey Institute of Technology, Newark, New Jersey

- **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](#)**
- **Visit: [vTools Registration](#) to register for a meeting or event**

Meeting Announcements

November 5, 2014

IEEE North Jersey Section - Senior Member Drive

Meeting Agenda: If you have not started your senior membership application yet, start now and have your references completed by Nov. 10, 2014 or sooner to be ready for review by the IEEE senior member selection review panel scheduled for November 22, 2014.

For senior member requirements see:

http://www.ieee.org/membership_services/membership/senior/senior_requirements.html

For the application see:

http://www.ieee.org/membership_services/membership/senior/senior_application.html

If you are having trouble finding that last senior member reference, bring printed out hard copies of your full resume and senior member application portfolio with you to the meeting for review by other senior members and to find that last reference. The registration link is below.

All section members are invited to attend, especially those who are current senior members and are willing to volunteer as references, and any of those interested in becoming more active in general IEEE activities, volunteering, or those seeking senior membership. If you are interested in serving as a reference contact our membership development chair at this address: northjerseymembership@yahoo.com or mani.iyer@ieee.org and register below in VTOOLS.

The event will be held on Wednesday, June 4, 2014, 5:30-6:30 PM. There will be a free buffet dinner and an opportunity to network with section members. Seating is limited and registration is required for all.

The meeting will take place in the Activity Room of the Clifton Public Library (Allwood Branch, 44 Lyall Road, Clifton, NJ 07012, T: (973) 471 0555).

Location: Clifton Public Library - Allwood Branch, Activity Room, 44 Lyall Road, Clifton, NJ 07012,

[Getting to Clifton Public Library](#)

Time: 05:30 PM to 06:30 PM

Contact: Mani Iyer, mani.iyer@ieee.org Kai T. Chen, k.t.chen@ieee.org Ajay K. Poddar, poddar_ajay@yahoo.com Adriaan J. van Wijngaarden, avw@ieee.org (avw@ieee.org),

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

November 5, 2014

IEEE North Jersey Section EXCOM Meeting – Clifton NJ

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

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

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

Everyone is welcome to attend this meeting.

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

For more information, please contact Adriaan van Wijngaarden (avw@ieee.org).

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 North Jersey Section, planning and new initiatives.

Location: Clifton Public Library - Allwood Branch, Activity Room, 44 Lyall Road, Clifton, NJ 07012,

[Getting to Clifton Public Library](#)

Time: 06:00PM to 08:45PM

Contact: Russell Pepe (rcpepe@ieee.org) and/or Adriaan van Wijngaarden (avw@ieee.org).

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

November 12, 2014

IEEE SMC/MTT-AP Present:

CrowdMi: Scalable and Diagnosable Mobile Voice Quality Assessment through Wireless Analytics

Abstract: Scalable and diagnosable are the two most crucial needs for voice call quality assessment in mobile networks. However, while these two requirements are widely accepted by mobile carriers, they do not receive enough attention during the development. Current related research mainly focuses on audio feature analysis, which is costly, sensitive to language and tones, and infeasible to be applied to mobile networks. This work revisits this problem, and for the first time explores wireless network, the causal factor that directly impacts the mobile voice quality but yet lacks of attention for decades. We design CrowdMi, a wireless analytics tool that model the mobile voice quality by crowdsourcing and mining the network indicators of cellphones. CrowdMi mines hundreds of network indicators to build a causal relationship

between voice quality and network conditions, and carefully calibrates the model according to the widely accepted POLQA voice assessment standard. We implement a light-load CrowdMi Client App in Android smartphones, which automatically collects data through user crowdsourcing and outputs to the CrowdMi Server in our data center that runs the mining algorithm. We conduct a pilot trial in VoLTE network in different geographical areas and network coverages. The trial shows that the CrowdMi does not require any additional hardware or human effort, and has very high model accuracy and strong diagnosability.

Speaker 1: Dr. Ye Ouyang of Verizon Wireless

Biography: Dr. Ye Ouyang is a Distinguished Member of Technical Staff-Mobile Network & Device Analytics at Verizon Wireless USA Headquarters. He has over 12 years experience in telecommunications industry, working on the forefront of cutting edge wireless and big data analytics field. Dr. Ouyang's research lies in big data analytics and quantitative modeling for wireless networks, with a focus on 2G/3G/4G LTE network performance, network capacity, traffic patterns, user behaviors, and network and device service quality etc. by leveraging data analytics, network simulation, statistical modeling, machine learning, and data mining techniques. He holds a Bachelor of Engineering from Southeast University in Nanjing, China, a Master of Science from Tufts University in Massachusetts, USA, and a Doctor of Philosophy from Stevens Institute of Technology in New Jersey, USA. In 2012-2013, Dr. Ouyang, as a co-principal, was awarded telecom research funding by the White House, the office of Science and Technology and National Science Foundation (NSF). He authored more than 20 academic papers, three book chapters, and was awarded seven US Patents. Dr. Ouyang is also a columnist of SINA Technology, which is the largest online media portal in China. He serves as Chair for Big Data Analytics Session in IEEE WOCC and WTS Conference, and TPC and reviewer for many leading academic journals and transactions..

Speaker 2: Dr. Tan Yan of NEC Labs America, USA

Biography: Dr. Tan Yan received Ph.D. and Master of Science Degree from Department of Computer Science, NJIT, supervised by Dr. Guiling Wang and Bachelor of Engineering from Southeast University in Nanjing, China. He currently is a Research Staff Member in NEC Labs America. His research focuses on network analytics, mobility data mining and network planning. He has published 10+ research papers in top conferences and journals, and is the first author of three IEEE Transactions.

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

Time: 7:00 to 8:00 PM

All are welcome. You don't have to be IEEE member to attend the talk

Contact: Dr.-Ing. Ajay Kumar Poddar (201)560-3806, (akpoddar@ieee.org), Prof. Meng-Chu Zhou (zhou@njit.edu) or (mengchu@gmail.com)

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

November 12, 2014

IEEE North Jersey Section PACE – Engineers Meet

Meeting Agenda: Engineers Meet NNJ Section PACE (Professional Activities Committee for Engineers) meets on the Second Wednesday of every month.

Our North Jersey Section Professional Activities Committee (PACE) meets for informal discussions about the Engineering Profession. Join us with your thoughts and concerns and meet other Engineers.

Abstract: On Wednesday, November 12, 2014 the North Jersey Section Professional Activities Committee will meet with IEEE-USA President Elect 2015, Peter Eckstein, for a discussion about the real world of Engineering and IEEE-USA. Bring your Members and friends and discuss the Profession and your thoughts about Engineering.

We are indeed fortunate to have Peter as our guest speaker. A mid-meeting break will provide pizza and refreshments.

About the Meeting: Peter Eckstein will discuss “IEEE-USA, Your Elected Officials and YOU”. Peter quote; “People complain about the weather, knowing that there is nothing they can do about it. People complain about what government is doing, assuming that there is nothing they can do about it, but there is something you can do about it. In this talk I will explain how you can influence what our elected officials do.”

Biography: Peter A. Eckstein received the B.S. degree in Electrical Technology from the New York Institute of Technology in 1967. He received an M.S. in Applied Physics from Adelphi University in 1971 and an M.S. in Management Engineering in 1974.

Eckstein is retired from Northrop Grumman Corp., where he held various engineering managerial positions of increasing responsibility. He was primarily been involved in the design and development of support equipment for Navy electronic warfare system weapon avionics.

In addition, Eckstein is an Adjunct Professor of Physics at Suffolk County Community College, where he is responsible for lecture and lab development of calculus and algebra based undergraduate physics courses, at Queensborough Community College, where he teaches physics and astronomy, and at the United States Merchant Marine Academy, where he teaches physics and engineering.

Within the IEEE, Eckstein has served on the Board of Directors of the parent body, the Board of Directors of both IEEE-USA, and IEEE Membership and Geographic Activities. He has served as Vice-President for Government Relation of IEEE-USA and was recently elected President of IEEE-USA. He has extensive experience serving with our Region 1 Board of Directors. Peter is a resident of Long Island, NY.

Pizza & Refreshments: will be served during the mid-meeting break.

CARE is the Congressional Advocacy Recruitment Effort. **CARE** is a voluntary network of IEEE members who are interested in public policy.

To HELP go to: www.ieeeusa.org/policy/care/

Location: Clifton Memorial Library, 292 Piaget Ave., Clifton, NJ 07011 [Getting to Clifton Memorial Library](#)
(Tel. 973 772-5500)

Time: 6:30 PM to 9:00 PM, on the Second Wednesday of every month

Contact: Richard F. Tax, (201- 664-6954) rtax@verizon.net

November 14, 2014

IEEE PES and IAS present - Latest Advances in Battery Charging Technology

Speaker: Alexis Dennis of Eltek

Abstract: The PES and IAS Chapters will sponsor a technical seminar on the topic of the Latest Advances in Battery Charging Technology. The session will be held on Friday, November 14, 2014 at PSE&G's Hadley Road Facility, 4000 Hadley Road, South Plainfield, NJ 07080-1192.

The seminar fee includes lunch, refreshments and handouts. Non-members joining IEEE within 30 days of the seminar will be rebated 50% of the IEEE registration charge. Four hours of instruction will be provided. If desired, IEEE Continuing Education Units (0.4 CEUs) will be offered for this course - a small fee of \$45 will be required for processing. Please pay attention to the "Registration Fee" and choose the appropriate choice either with or without CEUs.

Location: PSE&G - Hadley Road Facility, Auditorium, 4000 Hadley Road, South Plainfield, NJ 07080, [Getting to PSE&G - Hadley Road Facility](#)

Time: 9:00 AM to 2:00 PM

Contact: Ronald W. Quade (rwquade@ieee.org)

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

November 19, 2014

IEEE SMC/MTT-AP Present:

Introduction to Directed Energy: RF and Antenna Design Issues

Speaker: Dr. Yu-Dong Yao of Stevens Institute of Technology

Abstract: Electronic warfare consists of electronic attack, electronic support, and electronic protection. Directed energy plays an important role in electronic attack. This seminar presents an introduction to directed energy, including both high-energy laser and high-power microwave. Specific design issues and parameters in high-power microwave are discussed, including average/peak power, bandwidth, pulse width/repetition, and antenna gains. Issues in both attack and countermeasures are discussed. Finally, directed energy applications in military, law enforcement, and commercial domains are presented.

Biography: Dr. Yu-Dong Yao has been with Stevens Institute of Technology, Hoboken, New Jersey, since 2000 and is currently a professor and department director of electrical and computer engineering. Previously, from 1989 to 2000, he worked for Carleton University, Ottawa, Spar Aerospace Ltd., Montreal, and Qualcomm Inc., San Diego. His research interests include wireless communications and cognitive radio. He also conducts research in electronic warfare and directed energy. Dr. Yao is an IEEE Fellow.

Address: Department of Electrical and Computer Engineering, Stevens Institute of Technology, Hoboken, New Jersey, United States

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

Time: 7:00 to 8:00 PM

All are welcome. You don't have to be IEEE member to attend the talk

Contact: Dr.-Ing. Ajay Kumar Poddar (201)560-3806, (akpoddar@ieee.org), Prof. MengChu Zhou (zhou@njit.edu) or (mengchu@gmail.com)

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

November 20, 2014

IEEE IT/COMSOC/VTS presents - Secure Broadcasting of a Common Message with Independent Secret Keys

Speaker: Rafael Schaefer of Princeton University

Abstract: Rafael Schaefer will be giving a presentation on secure broadcasting of a common message with independent secret keys. This presentation will be held at Bell Laboratories, Alcatel-Lucent, in Murray Hill, NJ, in Room 6A-106, which is located near the main entrance behind the Bell Labs Showcase exhibition area. It is not necessary to register as a visitor to access this area.

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 problem of secure broadcasting with independent secret keys is studied. The particular scenario is analyzed where a common message has to be broadcasted to two legitimate receivers, while keeping an external eavesdropper ignorant of it. The transmitter shares independent secret keys of arbitrary rates with both legitimate receivers, which can be used in different ways: They can be used as one-time pads to encrypt the common message or they can be used as randomization resources for wiretap coding. Both approaches are discussed in this talk. If both legitimate channels are degraded versions of the eavesdropper channel, it is shown that the one-time pad approach is optimal for several cases yielding corresponding capacity expressions. Reversely, the wiretap coding approach is shown to be optimal if the eavesdropper channel is degraded

with respect to both legitimate channels establishing capacity in this case as well.

Biography: Rafael Schaefer is a Postdoctoral Research Fellow in the Department of Electrical Engineering at Princeton University. Before joining Princeton University, he was a research and teaching assistant at Technische Universität Berlin and Technische Universität München. In 2012, he received the Dr.-Ing. degree in electrical engineering from the Technische Universität München under the supervision of Prof. Holger Boche. In 2013, he received the VDE Johann-Philipp-Reis Prize for my work on physical layer security. He is one of the Exemplary Reviewers 2013 for the IEEE Communication Letters. His research interests are in the area of information theory and communication theory; in particular topics related to physical layer security, cyber-physical systems, and wireless communications.

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

Time: 02:00PM to 03:00PM

Contact: Adriaan J. van Wijngaarden, avw@ieee.org (avw@ieee.org),

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

November 24, 2014

IEEE PES and IAS present - Substation Connections and Personal Protection Fault Current Devices

The PES and IAS Chapters will sponsor a technical seminar on the topic of Substation Connections and Personal Protection Fault Current Devices. The session will be held on Friday, November 24, 2014 at PSE&G's Hadley Road Facility, 4000 Hadley Road, South Plainfield, NJ 07080-1192.

Topic: The seminar will cover Substation Connections including:

- Connector Selection & Preparation
- Connection of Dissimilar metals
- Oxide Inhibitors, tin plating, etc.
- Recommended Design Specifications
- Corona considerations
- Bundling, Spacers, Welded Angles, etc.
- Industry standard material

The seminar will also cover Personal Protection Fault Current Devices including:

- Reactive safety process
- Evolution of PPG equipment
- ASTM qualification testing
- Most Common mistakes
- In service testing & maintenance

Speaker 1: Dick Pelletier of Travis

Abstract: Substation Connections: The seminar will cover Substation Connections including:

- Connector Selection & Preparation
- Connection of Dissimilar metals
- Oxide Inhibitors, tin plating, etc.
- Recommended Design Specifications
- Corona considerations
- Bundling, Spacers, Welded Angles, etc.
- Industry standard material

Biography: Dick Pelletier started his career as an electrician with PSNH building substations and performing various maintenance functions in 1971. He moved to distribution standards specializing on connectors. Dick was utility product manager for a connector company again specializing on connectors including substation connectors. He currently serves as National Sales Manager for Travis PDU.

Email: rpelletier@pduinc.com

Speaker 2: Rick Kennerly of Travis

Abstract: Personal Protection Fault Current Devices

The seminar will also cover Personal Protection Fault Current Devices including:

- Reactive safety process
- Evolution of PPG equipment
- ASTM qualification testing
- Most Common mistakes
- In service testing & maintenance

Biography: Rick Kennerly is an engineer graduate from the University of South Carolina. He has worked for Bierer Meters as an engineering and operations manager for 15 years and Travis UGD for 2 years. Rick has been a voting member of ASTM F18 for 10 years.

Email: rickkennerly@gmail.com

Location: PSE&G - Hadley Road Facility, Auditorium, 4000 Hadley Road, South Plainfield, NJ 07080, [Getting to PSE&G - Hadley Road Facility](#)

Time: 9:00 AM to 2:00 PM

Contact: Ronald W. Quade (rwquade@ieee.org)

The seminar fee includes lunch, refreshments and handouts. Non-members joining IEEE within 30 days of the seminar will be rebated 50% of the IEEE registration charge. Four hours of instruction will be provided. If desired, IEEE Continuing Education Units (0.4 CEUs) will be offered for this course - a small fee of \$45 will be required for processing. Please pay attention to the "Registration Fee" and choose the appropriate choice either with or without CEUs.

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

December 02, 2014

IEEE MTT-AP Present:

The blue LED - its history and technology

Speaker: Alan E. Delahoy of NJIT

Abstract: This talk, inspired by the recent Nobel prize in Physics awarded to Akasaki, Amano, and Nakamura, will review the history and technology of the blue light-emitting diode. Despite the early work of Pankove et al. in obtaining violet luminescence from GaN in 1971, it was not until the early 1990's that the p-type doping problem of this wide gap semiconductor was solved. This opened the door to on-going development of efficient blue and UV LEDs. The significance of this can hardly be understated. Almost one fifth of residential and commercial electricity consumption is currently associated with inefficient lighting. Solid state lighting promises to secure major energy savings. This talk will explain why the properties of GaN make it eminently suitable for LED applications and will touch upon other applications of GaN.

Biography: Alan E. Delahoy is currently a Research Professor in the Department of Physics at NJIT and General Manager of the CNBM New Energy Materials Research Center. He received a B.A. in Physics from the University of Oxford and a Ph.D. in Electrical Engineering from Rutgers University. He has extensive experience in semiconductors, thin-film technologies and photovoltaics. He is currently working on thin-film CdTe materials and devices, and is building an advanced deposition system for TCO research. He was previously Vice President, R&D for New Millennium Solar Equipment Corp. and for EPV Solar, Inc., and an Associate Scientist at Brookhaven National Laboratory. He has been Principal Investigator on many contracts and awards from NREL, DOE, NSF, NIST, and NJ BPU. He is the author or co-author of over 130 technical articles and one book chapter, and holds 13 US patents in the areas of device structures, thin-film deposition, a-Si:H, and Cu(In,Ga)Se₂. He has served on numerous technical committees, and also as a conference organizer and proceedings editor, and as a reviewer for multiple journals. He is a member of the American Vacuum Society and the IEEE.

Email: alan.e.delahoy@njit.edu

Address: Room 202/204 Microelectronics Center, NJIT, University Heights, Newark, New Jersey, United States, 07102

Address: Department of Electrical and Computer Engineering, Stevens Institute of Technology, Hoboken, New Jersey, United States

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

Time: 4:45 to 6:30 PM

All are welcome. You don't have to be IEEE member to attend the talk

Contact: D. Misra, Ph: 973-596-5739, dmisra@njit.edu

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

Vol. 61, No. 10



December 11, 2014

IEEE PES presents:

Plain Talk in New Jersey

Plain Talk: About the Electric Power Industry - Power System Basics - Understanding the Electric Utility Operation Inside and Out

The focus of the IEEE PES course "Power System Basics" is to provide a fundamental foundation in electric power systems, from basic formulas to the planning, operations, and equipment involved in generating, transmitting, and distributing electric power. Basic electrical terminology will be explained in simple to understand language with regard to design, construction, operation and maintenance of power plants, substations, and transmission and distribution lines. Anyone who is involved in some way with the electric utility industry can benefit from attendance at this course.

IEEE PES PLAIN TALK courses for the power industry professional will help you to understand technical aspects of the electric power industry, even if you do not have an engineering background. You will gain insights into the concerns of engineers, the demands of regulators and consumer groups, and the factors and trends that impact the operation of today's electric power systems. These courses are also appropriate for new engineers to the industry, or for engineers in other fields who are transitioning to the electric power industry. These courses aim to increase your understanding of the electric power system by providing you with practical knowledge that you can use as you work in or with this important industry.

The day begins at 7:30 am with continental breakfast and registration. The course runs from 8 am to 5 pm. The course is eligible for CEU/PDH continuing education credit.

Location: IEEE Operations Center, Piscataway, NJ (NYC Metro Area)

Time: 7:30 AM to 5:00 PM

[Click Here for Brochure](#)

[Click Here for Flyer](#)

[For Testimonials: Click Here](#)

Contact: Ronald W. Quade (rwquade@ieee.org) or LaToya Gourdine, Administrator Education Services, IEEE Power & Energy Society (l.gourdine@ieee.org) - This email address is being protected from spambots. You need JavaScript enabled to view it, or (732) 981-2876

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

(Early Bird Registration Ends November 13!)

NOVEMBER 2014

December 18, 2014

Milestone Celebration

Dedication of Four IEEE Milestones at Bell Labs:

The IEEE North Jersey Section will be dedicating four IEEE Milestones in Electrical Engineering and Computing on Thursday, December 18, 2014, at Bell Laboratories, Alcatel-Lucent, in Murray Hill, NJ.

Agenda

- 1:30 pm: Welcome Remarks & Unveiling Plaques
Dr. Marcus Weldon, President, Bell Labs
Photo session - Marcus Weldon, Senior Leadership Team, and IEEE Leaders
Refreshments served
- 2:00 pm: Technical Talks (20 mins & 10 mins Q/A)
- Communications Theory & Networks
 - Wireless & Satellite Communications
 - Digital Signal Processing & Computing
 - Solid State & Optical Devices
- 4:00 pm Adjourn

The milestones have the following citations:

BELL LABS – WIRELESS AND SATELLITE COMMUNICATIONS, 1925-1983

Bell Telephone Laboratories, Inc. introduced: the first radio astronomical observations (1933), Smith Chart (1939), early mobile phone service (1946), cellular wireless concept (1947), TDX Microwave Radio System (1947), TD Transcontinental Microwave Radio System (1950), Telstar - first active communications satellite (1962), first observation of the cosmic background radiation (1964), first U.S. cellular wireless system (1978), digital cellular technology (1980), and the AR6A SSB-SC Microwave System (1981).

BELL LABS - DIGITAL SIGNAL PROCESSING AND COMPUTING, 1925-1983

Bell Telephone Laboratories, Inc. introduced: the first electronic speech synthesizer (1936), first binary digital computer (1939), first long-distance computing (1940), digitized and synthesized music (1957), digital computer art (1962), text-to-speech synthesis (1962), UNIX operating system (1969), the C and S languages (1972, 1976), first single-chip digital signal processor (1979), single-chip 32-bit microprocessor (1980), 5ESS Digital Switching System (1982), and C++ language (1983).

BELL LABS - SOLID STATE AND OPTICAL DEVICES, 1925-1983

Bell Telephone Laboratories, Inc. introduced: the point-contact and junction transistors (1947, 1948), zone refining (1951), silicon epitaxy (1951), ion implantation (1952), solar

cell (1954), oxide masking (1955), laser concept (1958), MOSFET (1959), foil electret microphone (1962), CO2 laser (1964), silicon gate (1966), heterostructure semiconductor laser (1968), charge coupled device (1969), theory of disordered states of matter (1977), heterojunction phototransistor (1980), and VLSI CMOS technology and circuits (1981).

BELL LABS - COMMUNICATIONS THEORY AND NETWORKS, 1925-1983

Bell Telephone Laboratories, Inc. introduced: type A facsimile service (1925), first long-distance television transmission (1927), negative feedback amplifier (1927), first stereo sound transmission (1933), Hamming error-correcting codes (1948), information theory (1948), direct distance dialing (1951), TAT-1 transatlantic telephone cable (1956), T1 transmission system (1962), touch-tone dialing (1963), 1ESS electronic switch (1965), wide area telephone 800 service (1965), and first U.S. commercial fiber-optic system (1977).

The dedication ceremony will take place on Thursday, December 18, 2014, at 1:30 pm, at Bell Labs, Alcatel-Lucent, 600 Mountain Ave, Murray Hill, NJ. After introductory comments by Dr. Marcus Weldon, Alcatel-Lucent Bell Labs President, and IEEE representatives, the plaques will be unveiled followed by refreshments. Then at 2:00 PM, there will be four presentations on each of the four scientific areas on the plaques to recognize the past innovative achievements and to review today's ongoing research at Bell Labs.

The IEEE Milestones in Electrical Engineering and Computing program honors significant technical achievements in all areas associated with IEEE. This is a program of the IEEE History Committee, administered through the IEEE History Center. Milestones recognize the technological innovation and excellence for the benefit of humanity found in unique products, services, seminal papers and patents. After recommendation by the IEEE History Committee and approval by the IEEE Board of Directors, a bronze plaque commemorating the achievement is placed at an appropriate site with an accompanying dedication ceremony. IEEE established the Milestones Program in 1983 in conjunction with the 1984 Centennial Celebration to recognize the achievements of the Century of Giants who formed the profession and technologies represented by IEEE. Each milestone recognizes a significant technical achievement that occurred at least twenty-five years ago in an area of technology represented in IEEE and having at least regional impact. To date, more than a hundred Milestones have been approved and dedicated around the world.

It should be noted that the four Bell Labs milestones cover distinct scientific areas that include 54 separate innovations spanning the 59 years. While this is a lot, Dr. A. Michael Noll compiled a list with over 200 significant innovations: 'Bell Telephone Laboratories, Inc., List of Significant Innovations and Discoveries (1925-1983).' So while these four milestone citations list many innovations within four scientific areas, the significance of the work of Bell Telephone Laboratories, Inc. can perhaps be best summarized by Dr. Alfred MacRae's

introductory answer to the proposal question: ‘What is the historical significance of the work.’ His answer started with: ‘Bell Labs transformed the way people communicate at work and home through the invention and development of many technical innovations that were necessary for the modern telecommunication systems and other advanced technologies. From its founding in 1925, Bell Telephone Laboratories made numerous significant contributions to telecommunications and related fields that led to the information age and the digital era.’

The milestone proposal was submitted and updated by Mr. Howard Leach, IEEE North Jersey Section Historian, with technical support from Dr. Alfred MacRae and later on also from Dr. A. Michael Noll, who are both former Bell Labs researchers. Further support was provided by Mr. Edward Eckert, who is in charge of Bell Laboratories’ and Alcatel-Lucent’s Archives. Mr. Leach was also supported by the IEEE History Center Milestone Advocate Prof. David Michelson (University of British Columbia, Vancouver), who was instrumental in the development of the four distinct citations. And finally, the milestone proposal was superbly supported by Mr. Robert D. Colburn, Research Coordinator of the IEEE History Center.

Location: Alcatel-Lucent, Main Building 6, 600 Mountain Ave, Murray Hill, NJ 07974 Getting to Bell Labs

Time: 1:30 PM to 4:00 PM

Contact: Dr: Adriaan J. van Wijngaarden, avw@ieee.org (avw@ieee.org), Howard Leach (h.leach@ieee.org)

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

December 19, 2014

IEEE PES and IAS present - Developing Useful Transformer Health Indices

The PES and IAS Chapters will sponsor a technical seminar on the topic of Developing Useful Transformer Health Indices. The session will be held on Friday, November 24, 2014 at PSE&G’s Hadley Road Facility, 4000 Hadley Road, South Plainfield, NJ 07080-1192.

Topic: Topic:

The seminar will cover transformer health indices including:

- Identifying the aim of the index
- Review of data sources and their role
- Generating component scores
- Integrating scores
- Pros and cons of different systems
- Keys to having a valuable index
- Integrating in tactical/strategic asset management activities

Speaker 1: • **Tony McGrail of Doble Engineering**

Abstract: Developing Useful Transformer Health Indices

The seminar will cover transformer health indices including:

- Identifying the aim of the index
- Review of data sources and their role

- Generating component scores
- Integrating scores
- Pros and cons of different systems
- Keys to having a valuable index
- Integrating in tactical/strategic asset management activities

Biography: Dr. Tony McGrail is the Doble Solutions Director for Asset Management and Monitoring Technology. He has been with Doble for over 10 years, and is leading the introduction of new condition monitoring products, including bushing monitors, PD detection and DGA analyzers. In over 12 years at National Grid US and UK Tony was a substation technical specialist, and took responsibility for T&D substation and distribution line asset strategy. Tony contributes to the industry through IEEE, IET, CIGRE, ISO, ASTM and other standards and educational organizations.

Email: tmcgrail@doble.com

Location: PSE&G - Hadley Road Facility, Auditorium, 4000 Hadley Road, South Plainfield, NJ 07080, Getting to PSE&G - Hadley Road Facility

Time: 9:00 AM to 2:00 PM:

Contact: Ronald W. Quade (rwquade@ieee.org)

The seminar fee includes lunch, refreshments and handouts. Non-members joining IEEE within 30 days of the seminar will be rebated 50% of the IEEE registration charge. Four hours of instruction will be provided. If desired, IEEE Continuing Education Units (0.4 CEUs) will be offered for this course - a small fee of \$45 will be required for processing. Please pay attention to the “Registration Fee” and choose the appropriate choice either with or without CEUs.

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

About Senior Membership

Do you know an outstanding IEEE member who is not yet an IEEE Senior Member? Do you feel that you are qualified for such recognition? If you are interested in becoming a Senior Member or nominating a fellow IEEE member please see http://www.ieee.org/membership_services/membership/senior for an application and for qualification requirements.

Assistance with references is found on the Senior Member Web page and within the application form. You can also contact any of the North Jersey Section Executive Committee members including Membership Development Chair or Society Chapter Chairs at the local level or attend an IEEE North Jersey Section meeting or upcoming Senior Member Drives, where qualified attendees will be happy to actively support you in the nomination process.

SAC Strikes Again!

NNJ SAC's second Social Mixer dubbed "Oktoberfest" is a huge success.

Article by Daniel Cerone, IEEE NNJ SAC Chair

November 2, 2014



The Gang's All Here! Oktoberfest event-goers pose for a photo-op on October 3, 2014.

North New Jersey SAC (NNJ SAC) recently held its second IEEE SAC Social Mixer in Newark, NJ and it was our biggest event yet! Our Social Mixers, held twice per year, bring soon to graduate and recently graduated college students together for food, fun, networking, and of course, socializing. Our second event themed "Oktoberfest" was held at McGovern's Tavern in Newark, NJ on October 3rd from 6PM to 9PM. We had a great turnout of students from all different schools, ages, degrees and backgrounds. Members from IBM, NJIT, DeVry, and Schneider were in attendance. We also

had a couple of potential new IEEE members at the event who tagged along with their friends!

NNJ SAC has been and continues to be the link between IEEE in college and IEEE in professional life. Recently, NNJ SAC has achieved great awareness and school engagement and is moving to retain new members. It is very important that we link the benefits of IEEE to students moving into careers and master's programs for we believe this will keep our members involved. In 2015, we will strive to show support for our young professionals while continuing to grow SAC awareness and engagement. This will give us the member base we need to bringing true professional leaders into our ranks and make our Social Mixers even more memorable!

To learn more about NNJ SAC or to get involved, check out our Facebook page at www.facebook.com/ieeesac or follow us on Instagram at www.instagram.com/ieeesac.

North Jersey Section Employment Network Announcement

Join the North Jersey Employment Network for assistance with your job search. By joining our network, you will have access to our LinkedIn group and to seminars in a variety of emerging technologies such as Hadoop, Big Data, Python, Cloud, Analytics, Java, etc.

For additional information or to join the LinkedIn group, please email the Employment Network Chair, Suzanne McIntosh (mcintosh@cs.nyu.edu).

IEEE North Jersey Section

IEEE North Jersey Section Membership Development (MD), Young Professionals (YP), Women In Engineering (WIE), and Professional Activities Committees for Engineers (PACE) present:

Professional Development Seminar Series: Art of Speechcraft - Returns to Murray Hill

Mondays, October 6 through November 24, 2014

Seven weekly classes (October 6, 13, 20, 27, November 3, 10, 17, 24, 2014)

Bell Laboratories, Alcatel-Lucent, 600 Mountain Avenue in Murray Hill, NJ 07974

Led by: Holly Anderson, ACB*, CL*; Susanne Arney, DTM*; Brian Cort, ACS*, ALB*; Laurie Kaplan, ACB*, ALB*; David La Bruno, CC* and Host - Mani Iyer, ACB*, ALB*

Are you nervous about an upcoming presentation? Want to increase your confidence in communication? The Toastmasters clubs of Murray Hill are once again offering our popular seminar series on the art of Speechcraft. In this 8-week seminar series, you will learn techniques to improve your ability to deliver both written and impromptu speeches through live practice with Toastmasters advisors committed to helping you succeed as a speaker and develop your confidence. Techniques like speech organization, body language, and vocal variety will help you enhance your personal presence.

About the Toastmasters Clubs of Murray Hill:

Cosmopolitan Toastmasters and the Murray Hill Speakers Club have been helping employees as well as members of the community polish their speaking and leadership abilities for over half a century!

Cosmopolitan Toastmasters meets the 2nd and 4th Tuesdays of each month from 12 pm – 1 pm

Murray Hill Speakers Club meets on odd (first, third and fifth, if any) Thursdays from 12:10 pm to 1:10 pm while on even (second and fourth) Thursdays, the club meets from 5:30 pm to 6:30 pm.

All guests are welcome to both clubs. Check the club websites on the web for contact information.

Biographies:

Holly Anderson, ACB, CL, is the immediate past President of the Cosmopolitan Toastmasters Club. She has also served the Cosmopolitan Club in various officer roles. Holly is a Human Resource Business Partner supporting the Wireless organization in North America.

Susanne Arney, DTM is the VP Membership of Cosmopolitan Toastmasters Club, and served as President of Murray Hill Speakers Club and Toastmasters International Area 32 Governor; Susanne is a Bell Labs Fellow and is currently a Senior Director, Enabling Physical Technologies Research in Bell Labs, Alcatel-Lucent.

Brian Cort, ACS, ALB is the VP-Public Relations of the Cosmopolitan Toastmasters Club and VP-Education of the Murray Hill Speakers Club. He has served as Past President of both the Murray Hill Speakers Club and Cosmopolitan Toastmasters Club, and as Toastmasters International Area 32 Governor for 2011 to 2012. He is a Distinguished Member of Technical Staff at Alcatel-Lucent, and currently works on 4G Wireless technology.

Laurie Kaplan, ACB, ALB, is the VP-Education of the Cosmopolitan Toastmasters Club, having previously served other officer roles. During the last 10 plus years, Laurie has worked for Bowker, CSA, Serials Solutions, and ProQuest in the position of Director, Serials Editorial. All of these companies are part of the same parent company, Cambridge Information Group.

David La Bruno, CC, is the President of the Murray Hill Speakers Club (MHSC). He is a Senior Intellectual Property Counsel at Alcatel-Lucent, and currently manages patent prosecution related to the mobile/wireless core network, in particular technology directed to 4G Wireless.

Mani Iyer, ACB, ALB, is the President of Cosmopolitan Toastmasters Club having previously served other officer roles. He has also served as the President of the Holmdel Toastmasters Club. Mani is a certified IEEE Wireless Communications Professional (WCP) and a RF Systems Engineer & Architect in the Wireless Division at Alcatel-Lucent.

Toastmasters Educational Designations, (e.g. CC/CL Competent Communicator/Leader; ACB/ACL Advanced Communicator Bronze/Silver etc.; DTM Distinguished Toastmaster) Please see <http://www.toastmasters.org/> to learn more about these designations. A nominal fee of \$20 to cover the cost of materials is required (yes, only \$20 for all 8 sessions!). Space is very limited.

All are welcome! You do not have to be a member of the IEEE to attend. You don't need to be a member of Toastmasters to participate in this program. Seats are very limited (~10). Registration is required at the IEEE vtools link.

REGISTRATION: <https://meetings.vtools.ieee.org/m/28039>

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

WHEN: 8 Mondays, October 6, 13, 20, 27, November 3, 10, 17, 24, 2014, 5:30 PM to 7:30 PM

COST: \$20.

CONTACT: Mani Iyer mani.iyer@ieee.org

IEEE North Jersey Section Course

Big Data Market Research in Seven Wednesdays

Wednesdays, October 15 through December 3, 2014

Seven weekly classes (October 15, 22, 29, November 5, 12, 19, December 3, 2014)

New Jersey Institute of Technology (Checks should not be mailed to this address)

IEEE North Jersey Section thanks New Jersey Institute Technology for sponsoring this course

Careerbuilder.com lists 7252 Marketing, 4192 Data, and 1736 Analyst positions in the New York tri-state area daily! As an engineer, you never did marketing. Getting the MBA takes two years. This is a better alternative to learn marketing and how you work as Data Analyst or Market Researcher.

This course deals with the collection, evaluation and analysis of the market-related big data. Topics are: market research industry, problem definition, research process, focus group, secondary database, quantitative research, questionnaire design, sampling techniques, statistical testing, bivariate and multivariate correlation, communicating results and management reports. Using IBM SPSS software, you will perform detailed big data analysis.

You will receive the IEEE completion certificate when you complete this course. In addition, you will be qualified to work as big data analyst/market researcher in healthcare, finance, social sciences, at private/public sectors, or in government, that require quantitative skills (quants).

Instructor: Donald Hsu, Ph.D., has been a corporate manager for 20+ years and is an experienced trainer. Since 2009, he has trained 750 people in Big Data, Data Warehouse, Management, Global Marketing, and Marketing Research courses in seven organizations. In addition, he does international business in 75 countries.

TOPICS

1. Describe the big data market research industry, problems and research process
2. Understand the importance of primary data collection, secondary database, and survey
3. Define quantitative research, measurement technique and sampling methods
4. Explain the questionnaire design, data processing and statistical testing
5. Build the knowledge of bivariate regression and multivariate data analysis
6. Communicate results, manage ethical issues, and prepare reports
7. Employ IBM SPSS software for frequency analysis, ANOVA, T-test and others
8. Review real-world marketing research using Harvard Business School cases
9. Present Final Project in Big Data Market Research

WHERE: New Jersey Institute Technology, Newark, New Jersey
WHEN: 7 Wednesdays, (October 15, 22, 29, November 5, 12, 19, December 3, 2014) 6:00 pm to 9:00 pm
COST: IEEE (& affiliate) members \$500; Non-IEEE members \$550.
CONTACT: Donald Hsu, yanyou@hotmail.com

REGISTRATION: **Big Data Market Research in Seven Wednesdays**

Please mail the completed registration form with a check (**Checks payable to “North Jersey Section IEEE”**) to **Dr. 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**

I wish to receive the IEEE Completion Certificate Signature: _____

2014 IEEE North Jersey Section Volunteer

Executive Committee

Chair - Russell Pepe
rcepe@ieee.org

1st Vice-Chair – Adriaan van Wijngaarden
avw@ieee.org

2nd Vice-Chair – Ajay Poddar
akpoddar@synergymwave.com

Secretary - Chris Peckham
cdp@ieee.org

Treasurer - Kalyan Mondal
mondal@fdu.edu

Member-at-Large

Mengchu Zhou – zhou@njit.edu

Goran Djuknic – gd@ieee.org

John C Taylor –
john.taylor1204@gmail.com

Junior Past Chair – Naresh Chand
chandnaresh@gmail.com

Senior Past Chair – Amit Patel
a.j.patel@ieee.org

Society Chapters

Aerospace Electronic Systems Society

Chair – Goran Djuknic
gd@ieee.org

Vice-Chair – Naresh Chand
chandnaresh@gmail.com

Antennas and Propagation / 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

Chair - Amit Patel
a.j.patel@ieee.org

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

Information Theory Society

Chair – Adriaan van Wijngaarden
avw@ieee.org

Instrumentation Measurement Society

Chair – Emad Farag
enfarag@ieee.org

Photonics Society

Chair – Naresh Chand
chandnaresh@gmail.com

Power & Energy Society

Chair - Ronald W. Quade
rwquade@ieee.org

Signal Processing Society

Chair - Alfredo Tan
tan@fdu.edu

Systems, Man, and Cybernetics Society

Co-Chair – Mike Liechenstein
itsmikesju@aol.com

Co-Chair – Mengchu Zhou
zhou@njit.edu

Vehicular Technology Society

Chair - Mani Iyer
mani.iyer@ieee.org

Technical Councils

Technology Management Council

Co-Chair - Apratim Rajendra,
apratim.rajendra@nomura.com

Co-Chair Vaseem Ahmed,
vas201@gmail.com

Affinity Groups

Consultants Network

Chair - Peter Schutz
schutz@compuserve.com

Young Professionals

Co-Chair - Sean Kennedy
sean.kennedy@alcatel-lucent.com

Co-Chair - John C Taylor
john.taylor1204@gmail.com

Women in Engineering

Chair - Zhiwei Mao
zmao@fdu.edu

LIFE Members

Chair - Art Greenberg
a.h.greenberg@ieee.org

Committees

60th Anniversary Committee

Chair – Har Dayal
dayalhar@gmail.com

Awards/Recognition

Chair - Ken Oexle
k.oexle@ieee.org

Audit Committee

Chair - Fred Chichester
fdchichester@gmail.com

Education

Co-Chairs

Donald Hsu – yanyou@hotmail.com

Kalyan Mondal – mondal@fdu.edu

Mengchu Zhou – zhou@njit.edu

Employment Network

Chair - Suzanne McIntosh
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