

THE IEEE NORTH JERSEY SECTION NEWSLETTER

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JANUARY 2015

In this Issue -

- A Note from the Chair
- Schedule of 2015 EXCOM Meetings
- 2015 EXCOM Elected Officers
- 2014 New IEEE Senior Members
- Obituary - Joseph Geusic
- Article by Harry Roman
- Dedication of IEEE Milestones for Bell Labs Innovations
- Taylor's World Conference - Call for Papers
- IEEE North Jersey Section Year-end Meeting
- [Calendar of Events](#)
- Buyer's Edge Shopping service – announcement
- Meeting Announcements
- North Jersey Section Employment Network Announcement
- IEEE North Jersey Section Seeks Committee Members and Section Volunteers
- How to subscribe to this Newsletter if you are not an IEEE North Jersey Member?
- North Jersey Section Member Interest Survey
- New Members of the IEEE North Jersey Section
- Project Risk Management in Seven Saturdays
- Big Data Research Market in Seven Saturdays
- 2015 IEEE North Jersey Section Volunteers

organize well over 100 events per year. The section was recognized with the 2012 Outstanding Large Section Award. New Jersey has a long tradition as a breeding ground for technology, with foundational work by Alexander Graham Bell, Thomas Edison and others, and renowned research and industrial facilities. It is also an integral part of the New York metropolitan area, and it is also conveniently close to IEEE Headquarters in Piscataway, NJ. During the last several years, the Section has strengthened and expanded our successful AP/MTT Symposium and Mini-Show, which attracted more than 200 participants. We have also started an annual symposium on Advanced Communications, with about 80 participants per year. Some very recent highlights, the details of which can be found in this Newsletter, include the year-end EXCOM meeting at the Hanover Manor on December 8, 2014 and the milestone dedication event at Bell Labs, Alcatel-Lucent in Murray Hill on Dec. 18. The IEEE North Jersey Section dedicated four IEEE milestone plaques with 54 major innovations in Electrical Engineering and Computing. The event was attended by about 150 people, including two former IEEE Presidents and many current and former Bell Labs researchers.

I would like to thank Russell Pepe for his exceptional service to the Section as its 2013-2014 Chair and for being a vital member of the Section's Executive Committee since 2005, having previously served as the Section's Secretary, Treasurer, and Vice-Chair. Fortunately for me and for the Section, he will remain involved as Junior Past-Chair and later on as Senior Past-Chair. I would also like to thank outgoing Senior Past-Chair Amit Patel for his outstanding contributions to the Section. He has been a Section Officer since 2007, and has been a member of the Executive Committee since 1998. I would like to express my sincere gratitude to our outgoing 2011-2014 Treasurer, Kalyan Mondal, for managing our Section's finances and for being always very attentive and precise, and for his meticulous record keeping. I would also like to thank Michael Newell for stepping in as the Section's Secretary, Anisha Apte for editing our monthly Newsletters, Ken Oexle for providing a lot of support as the Section's Award Chair, Howard Leach for his work as the Section's Historian and for organizing the Milestone events, and Har Dayal for organizing the 60-year anniversary events. I look forward to working with the 2015 Section Officers: Senior Past-Chair Naresh Chand, Junior Past-Chair Russell Pepe, First Vice-Chair Ajay Poddar, Second Vice-Chair Kalyan Mondal, Secretary Kai Chen, Treasurer Mani Iyer, Members-at-Large Mengchu Zhou, Yu-Dong Yao and John Taylor, and the other members of the Executive Committee, including all Chapter Chairs, Committee and Technical Council Chairs, the Consultants Network, and of course all other volunteers.

A Note from the Chair

On behalf of the IEEE North Jersey Section, I wish all its members and the readers of this Newsletter a Happy New Year! We plan, as a Section, to offer a lot of exciting activities in 2015! We also continue the celebration of our 60th anniversary of the Section's foundation on May 5, 1954, which we will conclude at our annual Awards Banquet on Sunday, May 3, 2015. Here we will also honor our five recently announced 2015 IEEE Fellows: Matthew Andrews (Bell Labs, Alcatel-Lucent), Gary Hoffman (Advanced Power Technologies), Howard Huang (Bell Labs, Alcatel-Lucent), Unnikrishna Pillai (NYU Poly), and Robert Safranek (Benevue, Inc.). This is also the opportunity to recognize our Section's volunteers. Howard Leach will be recognized with the MGA Achievement Award, and we have four IEEE Region 1 Awards this year for Mani Iyer, Shweta Jain, Meta Rohde and Ulrich Rohde.

It is an honor and privilege to write my first column as the IEEE North Jersey Section's incoming Chair. The IEEE North Jersey Section is a vibrant section with 17 chapters and affinity groups, and about 3,000 IEEE members. Its volunteers

Vol. 62, No. 1



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This year, we plan to organize many technical and social events. Please mark your calendars for the Awards Banquet on Sunday, May 3, the 3rd Advanced Communications Symposium, tentatively on Saturday Sep. 19, and our 30th AP/MTT Symposium on Thursday Oct. 1. The Section's Chapters plan to organize many technical presentations, and the Section will also offer several courses. More details will be provided throughout the year.

In the coming months, I plan to use this column to provide an overview of the section's activities and new initiatives, and membership and benefit information.

Among the challenges facing us in the year ahead will be expanding our membership, maintaining our technological excellence and reaching out to our communities and schools to foster and advance interest in engineering as a career among students. I am asking for your assistance in these endeavors. There are many ways for members and non-members to contribute to the Section's activities, e.g., by stepping up as a volunteer, as a co-organizer of technical or social events, or simply by attending our technical and social meetings.

It is an honor and a privilege to serve as the Chair of the North Jersey Section. Please become or stay involved in the Section and do e-mail your suggestions and comments to me at: avw@ieee.org or alw@research.bell-labs.com.

Sincerely,

Adriaan J. van Wijngaarden

Chair, IEEE North Jersey Section

2015 EXCOM Meeting Schedule

The new 2015 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	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

The Tellers Committee of the IEEE North Jersey Section Announces the Election of its 2015 Executive Committee Officers

The following officers will begin their terms in January 2015.

Chair:	Adriaan J. van Wijngaarden
First Vice-Chair:	Ajay K. Poddar
Second Vice-Chair:	Kalyan Mondal
Secretary:	Kai T. Chen
Treasurer:	Mani Iyer
Members-at-large:	John Taylor
	Yu-Dong Yao
	Mengchu Zhou

Congratulations to North Jersey Section's "2014 IEEE Senior Members"

IEEE North Jersey Section is honored to recognize the excellence of its valued members, especially when they have performed for a long time at a particularly high-quality level.

Congratulations to the following newly elevated IEEE Senior Members in North Jersey Section in 2014:

Name	Society Affiliations
Zeba Ahmad	—
Liang Hung	Communications Society
Gregory Lowe	—
Apratim Rajendra	Computer Society
Anisha Apte	MTT Society
James Boyd	—
Osvaldo Simeone	Communications, Information Theory, And Signal Processing Societies
Robert Murphy	Communications Society
Vaseem Ahmed	Signal Processing Society
Soon Chun	Computer Society
Shweta Jain	—
James Baroni	Communications Society

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 IEEE North Jersey Section Executive Committee members including the Membership Development Chair or Society Chapter Chairs at the local level or attend an IEEE North Jersey Section meeting or upcoming Senior Member Drive, where qualified attendees will be happy to actively support you in the nomination process.

Obituary – Joseph Edward Geusic



Joseph Edward Geusic, an IEEE Fellow, passed away on Saturday, December 13, 2014, at the age of 83. Joseph Geusic was born on November 21, 1931 in Nesquehoning, PA. He received a Bachelor's in Engineering Physics degree in 1953 from Lehigh University, and an MSc degree and PhD from Ohio State University, in 1955 and 1958 respectively. In

1958, he began his distinguished 37-year career at AT&T Bell Laboratories in Murray Hill, NJ. Early in his career, Joseph worked on the traveling wave maser for the Echo and Telstar projects. He then supervised the Laser Group development of Solid State Lasers and Electro-Optic Modulators. He invented the ND/YAG Laser in 1964, with L.G. Van Uitert. He became the head of the Solid Optical Device Department and later the Semiconductor Laser Development Department, and contributed to the development of high frequency reliable Fabry-Perot (FP) and Distributed feedback (DFB) lasers for undersea cable communications that spawned the birth of the fiber optics industry.

While at AT&T Bell laboratories, Dr. Geusic was granted 27 patents and he published more than 62 scientific papers. He retired in 1994 and joined Micron's Advanced Research Institute, where he was involved in approximately 200 additional patents. Mr. Geusic was elevated to IEEE Fellow in 1989 for his contributions to masers, lasers, nonlinear optics and magnetic bubbles. He was awarded the IEEE Quantum Electronics Award for Laser and Electro-Optical Inventions in 1992, the R.W. Wood Prize for the invention of the ND/ YAG Laser in 1990 and the AT&T Patent C.J. Davis Trophy for AT&T Patents Attaining Significant Commercial Value.

A 56-year resident of Berkeley Heights, New Jersey, Joseph Geusic is survived by his devoted wife of 60 years Irene J. Geusic (nee Hosak) and his six children: Patricia, Mark (Luann), Michael (Victoria), Mary Ellen Taylor (Matthew), Robert and Joseph (Lisa). He is also survived by his five grandchildren Gregory, Aaron, Minh, and Jennifer Geusic, and Kaitlin Taylor. He was predeceased by his parents Mary (nee Koch) Geusic and Joseph Geusic. Joe will be missed by his family, friends and colleagues. The family wishes that donations be made in Joseph Geusic's memory to the Ohio State University Physics Department to provide scholarship funding to aspiring young scientists.

The Transistors are Here!

By - Harry Roman

At the October Life Members luncheon, our speaker, Dr. Robert Kerwin, formerly of AT&T Bell Labs, and the inventor of the silicon gate, had an interesting statistic he quoted, "There are more transistors made every year than grains of rice grown."

I really love those kinds of statistics, so off I went to the Internet to gain some insight; and according to the Semiconductor Industry Association (in 2005), indeed, there were more transistors produced, and at a lower cost, than grains of rice.

More Internet searching disclosed the following humbling statistics – little nuggets to throw away at cocktail parties – or to impress colleagues at work. The statistics quoted here were published in articles appearing approximately in the 2005-2010 time period:

Items Compared	Order of Magnitude [powers of ten]
Transistors in a laptop; or the number of human brain neurons	9th
Stars in the Milky Way	11th
Cells in the human body	14th
Grains of rice grown annually; or BTU of energy consumed by U.S. (annually)	15th
Ants on earth	17th
Length of Milky Way Galaxy [kilometers]	18th
Transistors manufactured [annually]	19th
Stars in the Universe; or grains of sand on the Earth's beaches	22nd

All such calculations may contain approximations and margins of error; and could be off a bit either way, but this certainly puts the world in perspective- showing the ubiquitous application of transistors....and you probably "ain't seen 'nutin yet", so hang on and enjoy the ride into the future.

Talk to you again soon.....

Harry T. Roman

Life Senior Member, IEEE North Jersey Section

Dedication of Four IEEE Milestones for 54 Bell Labs Innovations

Four Bell Labs Milestones, 1925-83, were dedicated on December 18, 2014. The dedication, held at Bell Labs, Alcatel-Lucent, Murray Hill, NJ, on December 18, included eight technical presentations highlighting many of the 54 innovations listed on the four plaques as well as ongoing research in the areas of research for each of the plaques. The dedication was hosted by Dr. Marcus Weldon, Bell Labs President, Alcatel-Lucent, and Russell Pepe, Chair, IEEE North Jersey Section.



From left to right: Russell Pepe, Chair, IEEE North Jersey Section, Dr. Marcus Weldon, Bell Labs President, Alcatel-Lucent, and Dr. Peter Staecker, 2013 IEEE President and CEO, are shown with the first of the four IEEE Milestone plaques.



From left to right: Russell Pepe, Chair, IEEE North Jersey Section, Dr. Peter Staecker, IEEE 2013 President and CEO, Dr. Marcus Weldon, Bell Labs President, Alcatel-Lucent, Dr. Lew Terman, IEEE 2008 President, and Dr. Adriaan van Wijngaarden, First Vice-Chair, shown with the four IEEE Milestone plaques.

The dedication was attended by about 150 including many current and former Bell Labs researchers. The official Milestone Plaque unveiling was done by Dr. Marcus Weldon, Alcatel-Lucent Bell Labs, with help from Dr. Peter Staecker, IEEE 2013 President and CEO, and Russell Pepe, Chair, IEEE North Jersey Section.



From left to right, seated: Dr. Robert Kerwin, Dr. Michael Noll, Dr. Peter Staecker (2013 IEEE President and CEO), and Dr. Lew Terman (2008 IEEE President); standing: Dr. Adriaan van Wijngaarden (First Vice-Chair), Howard Leach (Historian), Ken Oexle (Awards Chair), Russell Pepe (Chair), and Robert Pellegrino (IEEE Region 1 Southern Area Chair).



From left to right: Amit Patel, Senior Past Chair, Russell Pepe, Chair, Dr. Adriaan van Wijngaarden, First Vice-Chair, Ken Oexle, Awards and IAS Chair, and Howard Leach, Historian.

The citations on each of the four Milestone plaques citations are as follows.

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), IESS electronic switch (1965), wide area telephone 800 service (1965), and first U.S. commercial fiber-optic system (1977).

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).

In closing, Dr. Marcus Weldon indicated that the great work of the Bell Labs of the past is continuing at Bell Labs, Alcatel-Lucent. Some exciting areas of innovation that they are working on include soft routers, software defined networking, significant advances in copper-based networks with speeds now reaching 10 Gb/s, long-haul optical transport as well as long-term research into quantum computing.

Taylor's World Conference – Call for Papers

On September 24-25, 2015, Stevens Institute of Technology will be hosting a conference on the life and legacy of Frederick Winslow Taylor, a graduate of Stevens who is widely recognized as the father of scientific management. The event marks the centennial of Taylor's death in 1915, and will explore both Taylor's place in history and his legacy in the 21st century. We welcome proposals for either individual papers or full panels.

For details about the event please visit
<http://www.stevens.edu/library/taylorsworld>

Please submit proposals for papers or panels by March 1, 2015, by filling out submission proposal form. Paper proposals should be 250–500 words; panel proposals should collect individual paper abstracts of that same length and also

include a brief description of the panel's overarching theme. Panel proposals may also suggest possible commentators.

All other inquiries about the conference can be sent to Leah Loscutoff (lloscuto@stevens.edu).

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 the Nominations Committee Chair, Naresh Chand at chandnaresh@gmail.com. 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 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 (zmiao@fdu.edu)

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

Contact: rcpepe@ieee.org, avw@ieee.org

Computer Society Chapter Committee Volunteers –

Contact: zhao@fdu.edu

Technical Management Council Committee Volunteers –

Contact: apratim.rajendra@nomura.com, vas201@gmail.com

North Jersey Section Awards Committee Volunteers –

Contact: k.oexle@ieee.org

Membership Development Committee Volunteers –

Contact: k.t.chen@ieee.org

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](#)

IEEE North Jersey Section – End of the Year Workshop Meeting

On December 8, 2014, at the Hanover Manor, the North Jersey Executive Committee held its year-end workshop. Chairman Russell Pepe thanked everyone for their cooperation over the past two years that he has been Chairman.

As part of the Section's 60th Anniversary, Jerry Minter's Oral History was played. Jerry founded the IRE Northern NJ Sub-Section in 1947. Our first IRE Section was formed in 1954, i.e., 60 years ago, but our history goes back 67 years. Toward the end of the Oral History, Jerry Minter recalled a humorous story about Thomas Edison when talking with Charles Edison during the sale of his business, Measurements Corporation, to the Edison Company in 1953. Charles recalled the time when there was a fire at the West Orange Laboratories and his father got excited, rather than sad, about the fire and told him to go get his mother to watch the fire.

At this point, Harry Roman, who is a docent and former National Park Ranger for the Edison Laboratories, was invited to give some background about this event, which he did. He also indicated he could help arrange a special Section tour of the Edison Laboratories and home in the New Year.



From left to right: Russell Pepe and Naresh Chand

Our incoming chair, Adriaan van Wijngaarden, thanked Russell Pepe for his leadership over the past two years and hoped he would continue to be active within the Section. Russell indicated that he intended to remain active in a number of areas including pre-college.



From left to right: Naresh Chand, Russell Pepe, and Adriaan van Wijngaarden



Seated, from left to right: Durga Misra, Ken Oexle, Russell Pepe, and Harry Roman; Standing, from left to right: Khanh Luu, Joel Miller, Amit Patel, Howard Leach, Kalyan Mondal, Goran Djuknic, Naresh Chand, Emad Farag, Ajay Poddar, Adriaan van Wijngaarden, Daniel Cerone, Edip Niver, Anisha Apte, Suzanne McIntosh, Vaseem Ahmed, and Art Greenberg.



Russell Pepe at the podium, showing the Edison Milestone Dedication at the West Orange Municipal Building in 2008.

Calendar of Events

- **January 8, 6:30 PM to 8:30 PM: IEEE CNNNJ: Organizational and Planning Meeting**
Location: Morris County Library, 30 East Hanover Avenue, Whippany, NJ [Getting to Morris County Library](#)
Contact: Robert Walker, 973-728-0344, r.d.walker@ieee.org [Read More...](#)
- **January 14, 6:00 PM to 9:00 PM: IEEE North Jersey Section EXCOM Meeting – Murray Hill NJ**
Location: Bell Laboratories, Alcatel-Lucent, Main Building, Room: 6A-106, 600 Mountain Avenue, Murray Hill, NJ 07974,
Contact: Adriaan J. van Wijngaarden, avw@ieee.org (avw@ieee.org), [Getting to Bell Labs](#) [Read More...](#)
- **January 14, 6:30 PM to 9:00 PM: IEEE North Jersey Section PACE- Engineers Meet (Second Wednesday of every month)**
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 [Read More...](#)
- **January 23, 9:00 AM to 2:00 PM: IEEE PES/IAS- Generator and Transformer Protection - Murty V.V.S. Yalla of Beckwith Electric Company, Inc**
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...](#)
- **February 4, 6:00 PM to 9:00 PM: IEEE North Jersey Section EXCOM Meeting – Newark NJ**
Location: NJIT, ECE 202, 161 Warren Street, Newark, NJ 07102 [Getting to NJIT](#)
Contact: Adriaan J. van Wijngaarden, avw@ieee.org (avw@ieee.org), [Read More...](#)

IEEE NORTH JERSEY SECTION – Short Courses

- **IEEE North Jersey Section Course: [Project Risk Management in Seven Saturdays](#)** - Seven weekly classes (March 7, 14, 28, April 4, 11, 18, 25, 2015) 9:00 am - 12:00 noon, New Jersey Institute of Technology, Newark, New Jersey
- **IEEE North Jersey Section Course: [Big Data Market Research in Seven Saturdays](#)** - Seven weekly classes (March 7, 14, 28, April 4, 11, 18, 25, 2015) 9:00 am - 12:00 noon, New Jersey Institute of Technology, Newark, New Jersey

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!

- 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

January 8, 2015

IEEE C>NNNJ presents:

Winning Proposals

On Thursday, January 8, 2015, the IEEE Consultants' Network of Northern NJ (www.TechnologyOnTap.org) will present Steven R. Garfinkel, Principal of Ellipsah LLC who will discuss how to write winning proposals.

Abstract: Getting work is a necessary part of every consultant's worklife, and winning jobs through proposals is one of the ways it can be done. Proposals are very competitive (for example, SBIRs) and no matter what people may say, there is no free money being handed out.

This short talk will discuss what you can do to increase your chances for success. The talk will cover aspects of the proposal process and preparation not covered by standard introductory workshops, the product of experience gained by practise. While the SBIR proposal process will be used as a starting point, the discussion will be applicable to all types of proposals. Following the talk will be a question and answer session.

Speaker: Steven Garfinkel received his B.Sc. and M.Eng. in Electrical Engineering from Rensselaer Polytechnic Institute in Troy, New York. He has designed autopilots, flight control actuators, rescue hoists, cargo winches and industrial tools over his career of more the twenty five years. His customers span the sectors of defense, aviation and oilfield services. His company, Ellipsah LLC, provides electronic design and analysis services. Steven can be reached at sgarfinkel@ellipsah.com or at (973) 432-7401.

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

C>NNNJ INVITES YOU TO JOIN THE NETWORK

The IEEE Consultants' Network of Northern NJ invites all engineers engaged in independent practice to join its ranks. For more details on member benefits and on sign-on requirements, please visit our website at (www.TechnologyOnTap.org)

ALL ARE WELCOME! No fees or registration required.

Location: Morris County Library, 30 East Hanover Avenue, Whippany, NJ, [Getting to Morris County Library](#)

Time: 6:30PM to 8:30PM

You don't have to be an IEEE member to attend.

Contact: Robert Walker, 973-728-0344, (r.d.walker@ieee.org) or visit, www.TechnologyOnTap.org.

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

January 14, 2015

IEEE North Jersey Section EXCOM Meeting – Murray Hill, NJ

Meeting Agenda: This executive committee (EXCOM) meeting of the IEEE North Jersey Section will be held at Bell Laboratories, Alcatel-Lucent, in Murray Hill, NJ. The meeting will take place in Room 6A-106, which is located near the main entrance behind the Bell Labs Showcase exhibition area. It is not necessary to sign in to access this area.

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

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

Everyone is welcome to attend this meeting.

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

For more information, please contact Adriaan van Wijngaarden (avw@ieee.org) and Kai Chen (k.t.chen@ieee.org).

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

Time: 06:00 PM to 08:45 PM

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

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

January 14, 2014

IEEE North Jersey Section PACE – Engineers Meet –

Meeting Agenda: 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.

PACE is our Professional Activities Committee for Engineers and meets on the second Wednesday of every month at the Clifton Memorial Library.

As always, ENGINEERS MEET to discuss professional issues and experiences that affect the lives of Engineers.

Join us at the Clifton Memorial Library at 292 Piaget Ave., Clifton, from 6:15 pm to 8:45 pm for interesting, friendly, professional meetings. Pizza and refreshments are always served.

Abstract: On Wednesday, January 14, 2015 the North Jersey Section Professional Activities Committee will meet with IEEE-USA Lobbyist, Russell Harrison for a discussion about the real world of Engineering, Politics and IEEE-USA. Bring your Members and friends and discuss the Profession and your thoughts about Engineering.

We are indeed fortunate to have Russ as our guest speaker.

The 114th Congress will begin in early January. Since 2016 is a Presidential election year, Congress has only six months, give or take, to pass any substantial legislation before Washington becomes consumed by Presidential politics. This means engineers need to get in contact with their legislators early in the session if they want to be heard.

Join the IEEE North New Jersey Section for an evening discussing the new Congress, what we can expect, and what we can do about it. Russell Harrison, IEEE-USA's Director of Government Relations will join us with insights, predictions and opportunities for engineers in 2015.

Speaker: Russell Harrison is a veteran lobbyist with almost 20 years of experience influencing legislation in Washington. He is the Director of Government Relations and Representative for Grassroots Activities for IEEE-USA and has spoken at the PACE workshop, focusing on government affairs and activities that PACE committees can organize. In this position, he is responsible for helping Sections and Members of IEEE-USA interact with, and ultimately influence, elected officials.

He also regularly works with members of Congress and the Executive Branch on behalf of America's technology professionals.

Since joining IEEE-USA in 2003, Russell has addressed over 190 local IEEE groups in the United States. His talks focus on current public policy issues, how they will impact the engineering profession and what individual engineers can do about them.

Prior to IEEE-USA, Russell directed grassroots programs at the Institute of Scrap Recycling Industries and the American Iron and Steel Institute. In these positions he represented the recycling and steel industries on Capitol Hill and in state capitols on issues including transportation, environmental regulations and international tariffs.

Russell has a BA in Political Science, with minors in History and Communications, from Allegheny College and a Masters in Public Policy from the University of Maryland.

Refreshments: will be served during a 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

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

January 23, 2015

IEEE PES and IAS present - Generator and Transformer Protection

The PES and IAS Chapters will sponsor a technical seminar on the topic of Generator and Transformer Protection. The session will be held on Friday, January 23, 2015 at PSE&G's Hadley Road Facility, 4000 Hadley Road, South Plainfield, NJ 07080-1192

Speaker: Murty V.V.S. Yalla of Beckwith Electric Company, Inc.

Abstract: The seminar will cover Generator Protection including:

- Review of Grounding Techniques and Types of Generator Connections
- Generator Protection as per IEEE C37.102, C37.101, C37.106 and NERC PRC standards
- Negative Sequence Protection Down to Continuous Rating
- 100% Stator Ground Fault – Third Harmonic vs. Injection Method
- Field Ground Fault detection with Injection Method
- Overexcitation (V/Hz) protection
- Low Directional Power Sensitivity Requirements for Sequential Tripping
- Distance Element Enhancements - Load Encroachment Blinding, Power Swing Blocking
- Out-of-Step Protection
- Loss of Field - Element Design to Match Machine Capability Curves, MEL and Steady State Stability
- Abnormal Frequency Protection

Biography: Dr. Yalla has been with Beckwith Electric Co. since 1989 and presently holds the position of President. He received a BSEE (JNTU) and MSEE (IIT, Kanpur) from India and a Ph.D. in EE from the University of New Brunswick, Canada in 1987. From 1988 to 1989, Dr. Yalla taught and conducted research on digital power system protection at Memorial University in Newfoundland, Canada. He has published several research papers in international journals on digital protection. He holds five U.S. patents in the areas of digital controls and protective relays.

Dr. Yalla is the Deputy Technical Advisor to the United States National Committee (USNC) of the International Electrotechnical Commission (IEC, Geneva, Switzerland) Technical Committee 95. He is the chairman of the IEC TC 95 MT4 which is developing functional standards for measuring relays and protection equipment including distance protection (IEC 60255-121:2014), overcurrent protection (IEC 60255-151:2009), thermal protection (IEC 60255-149:2013) and differential protection (IEC 60255-187). He was a U.S. delegate to the International Council on Large Electric Systems (CIGRÉ, Paris, France) Working Groups on Modern Techniques for Protecting and Monitoring Generating Plants and Power Transformers. He was also a member of the North American Electric Reliability Corporation (NERC) System Protection and Control Subcommittee (SPCS).

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

In 2006, Dr. Yalla was elected to Fellow grade by the IEEE for his contributions in computer relays for power systems. He serves on the IEEE PES Fellows Committee. He is presently the Chair of the Rotating Machinery Protection Subcommittee of the Power System Relaying Committee. He was the chairman of the working group which developed IEEE Standard C37.102-2006 "Guide for AC Generator Protection." He co-authored an IEEE PES tutorial on the "Protection of Synchronous Generators." He chaired the working group which received the IEEE PES Working Group Recognition Award for an outstanding technical report "Application of Peer-to-Peer Communications for Protective Relaying" at the IEEE PES GM in Denver, Colorado in June 2004. He received the IEEE Florida Council Outstanding Engineer Award in 2005. He received the IEC 1906 Award in 2010 which honors the IEC experts around the world in recognizing their exceptional recent achievements and contributions to the IEC committees. Dr. Yalla also received the businessman of the year award from Indo-US chamber of commerce in 2013.

Email: myalla@beckwithelectric.com

Address: 6190 118th Avenue North, , Largo, Florida, United States, 33773

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](#)

February 4, 2015

IEEE North Jersey Section EXCOM Meeting – Newark, NJ

Meeting Agenda: This executive committee (EXCOM) meeting of the IEEE North Jersey Section will be held at the New Jersey Institute of Technology (NJIT), in Newark, NJ. The meeting will take place in the ECE Building, Room ECE-202, 161 Warren Street, Newark, NJ.

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

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

Everyone is welcome to attend this meeting.

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

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

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

Time: 06:00 PM to 08:45 PM

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

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

Welcome! New Members of the IEEE North Jersey Section

Full Name		Current IEEE Grade
Fredrick	Esposito	Student Member
Joseph	Messner	Student Member
Bryan	Charalambous	Student Member
Mikeal	Stack	Student Member
Roe	Rodrigo	Member
Katherine	Purachev	Student Member
Donald	Dresely	Member
Carlo	Lipizzi	Graduate Student Member
Walter	Church	Student Member
Chun-Nam	Yu	Member
Jhon	Mesa	Student Member
Shreyas	Ramanujam	Student Member
Raphael	Rezkalla	Student Member
Kaitlyn	Sullivan	Student Member
Leonard	Gangi	Member
Andrew	Baydar	Student Member
Matt	Melachrinous	Student Member
Yunfei	Lu	Graduate Student Member
Jeremy	Westbrook	Student Member
Nasir M	Younus	Student Member
Julia	Dale	Student Member
Matthew	Lopez	Student Member
John	Mejia	Student Member
Williams J	Vasquez	Student Member
Kyungran	Kim	Member
Carlos	Matteimontalvo	Student Member

North Jersey Section Member Interest Survey

The IEEE North Jersey section is conducting a member interest survey.

This purpose of the survey is to get feedback from the local membership.

This survey will cover topics related to issues about types of events that participants are interested in seeing produced and also the general content of the events. Questions related to what value events bring to the member and what preferences members have in participating in locally produced events.

Please take a few minutes to visit the site and take the survey now: <http://ieee.fluidsurveys.com/s/NNJEventInterests2014/>

This survey will only take a few minutes and all responses will remain confidential and only be reported on at the aggregate level.

There will even be random drawings for prizes to member survey takers who wish to participate. Please share and encourage your fellow members to take the survey by the end of the month for the drawing.

Thank you for your time.

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](#)

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 e-mail the Employment Network Chair - Vaseem Ahmed, vas201@gmail.com

IEEE North Jersey Section Course

Project Risk Management in Seven Saturdays

Saturdays, March 7 through April 25, 2014

Seven weekly classes (March 7, 14, 28, April 4, 11, 18, 25, 2015)

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

The North Jersey Section IEEE is offering a course entitled "Project Risk Management". Dice.com lists 5000+ Project Risk Manager related jobs in the New York tri-state area daily! This course will help you to break down a master project into manageable tasks, pinpoint possible solutions, and provide information to keep the project under control. Using Microsoft Project 2013 software, you will learn to accomplish various project plans. In addition, it will greatly enhance your business, communications and interpersonal skills.

You will receive the IEEE Certificate of Achievement and earn 2 IEEE Continuing Education Units (CEUs) when you complete the course. You may wish to take the Certification exam in Project Management administered by Project Management Institute from the knowledge that you learned in this course. This is not an exclusive PMP-PMI examination prep course. No PDUs are issued for PMP eligibility. However, past attendees did successfully get the PMP certifications!

Instructor: Marilyn Moux, PMP, ITILv3, Cloud Essentials, CAP and Security+., has been a corporate manager for 20+ years and an IT security professional with experience within the entire Software Development Life Cycle Project Management.

TOPICS

1. Explain the need for a project risk manager
2. Define SOW, PERT, GANTT, CPM, and Scope of the project
3. Identify the team members, resources and plan for the strategy
4. Calculate schedule, budget variances, and monitor project progress
5. Manage risks, changes, estimates, and communications
6. Set a baseline, import tasks from MS Excel, export MS Project files to MS Word
7. Approve updates and conclude a project plan
8. Analyze Cloud Computing, Service Level Agreements, IT Security
9. Present student Projects

WHERE: New Jersey Institute Technology, Newark, New Jersey

WHEN: 7 Saturdays, (March 7, 14, 28, April 4, 11, 18, 25, 2015) 9:00 am to 12:00 pm

COST: IEEE (& affiliate) members \$500; Non-IEEE members \$550.

CONTACT: Donald Hsu, yanyou@hotmail.com,

REGISTRATION: Project Risk Management in Seven Saturdays

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: _____

IEEE North Jersey Section Course

Big Data Market Research in Seven Saturdays

Saturdays, March 7 through April 25, 2015

Seven weekly classes (March 7, 14, 28, April 4, 11, 18, 25, 2015)

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

The North Jersey Section IEEE is offering "Big Data Market Research" 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 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 and get jobs in healthcare, finance, social sciences, and marketing research firms, at private or public sectors, or in government.

You will receive the IEEE completion certificate. You may work as a market researcher in any organization that needs your quantitative skills.

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. He is the top rank 1% all star- most view profile on LinkedIn, with 5300+ partners and clients in 75 countries. Past attendees work at AT&T, Goldman Sachs, IBM, GE, Microsoft, Morgan Stanley, and Verizon.

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 Saturdays, (March 7, 14, 28, April 4, 11, 18, 25, 2015) 9:00 am to 12:00 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: _____

2015 IEEE North Jersey Section Volunteers

Executive Committee

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avw@ieee.org

First Vice-Chair – Ajay K. Poddar
akpoddar@synergymwave.com

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Vice-Chair – Naresh Chand
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