

# THE IEEE NORTH JERSEY SECTION NEWSLETTER

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## 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!**

## A Note from the Chair

I want to thank all my IEEE North Jersey Section Volunteers for their great support and hard work during 2013. Inordinate effort goes into the Newsletter, Technical Talks, Seminars,

Conferences, and all the other IEEE activities we generate. Our hard working volunteers deserve a raucous round of applause. This year, we established several goals and have made significant progress. I am very proud of the achievements we made in 2013. I further want to thank all the IEEE Members in the North Jersey Section for their continued support of our great organization. Many of you might not be aware that the IEEE is the largest Technical Professional Organization in the world, with over 400,000 Members. Throughout the year, I have received many e-mails and phone calls from Members of the IEEE North Jersey Section. Please continue to contact me with your questions, comments and suggestions. I might carry the baton, but I rely on many musicians to create a harmonic symphony. Keep the music playing. For your edification, I wanted to share the Mission Statement and Vision of the IEEE. *Mission:* IEEE's core purpose is to foster technological innovation and excellence for the benefit of humanity. *Vision:* The IEEE will be essential to the global technical community and to technical professionals everywhere, and be universally recognized for the contributions of technology and of technical professionals in improving global conditions. Now, it is time to think about 2014. My focus for 2014 will be on students. Of course, we plan to continue our work with the government, trying to bring technical jobs back to NJ. We will never stop the fight to help our unemployed and under-employed Engineers. We will also continue to offer more of the most informative and beneficial technical and professional talks available. Additionally, in 2014, we will work more closely with the various Universities, and Community and County Colleges in Northern NJ, to provide leadership, guidance and mentoring to college students. Furthermore, we also plan to convey the IEEE message to the High Schools in Northern NJ to attract and encourage young minds to become the technical leaders of the future. I recently assigned new Vice Chairs for the Student Activities Committee (SAC) and Pre-University Committee, namely Daniel Cerone and Jesse Colby, respectively. Both Vice Chairs have the energy and dedication needed to make our new programs a great success.

We still have much work to do and great achievements to accomplish in 2013. I look forward to the new horizons mapped out for 2014. Join us as we strive to achieve greatness in the North Jersey Section. Also, join us as we celebrate the 60th Anniversary of the IEEE North Jersey Section on 2014.

Please feel free to contact me. My e-mail is always open.

Sincerely,

**Russell C. Pepe**

**Chair, IEEE North Jersey Section**

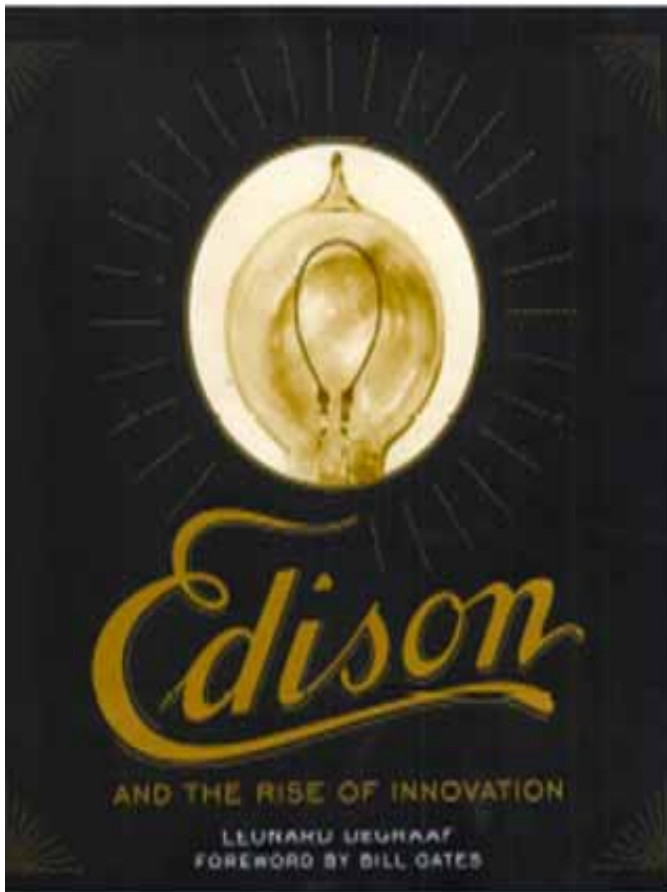
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## New Book about Thomas Edison is a Keeper!

By Harry T. Roman, Senior Member, IEEE (North Jersey Section)



In October of this year, I celebrate a very interesting 55-year anniversary ... when I became a Thomas Edison groupie. I was 10 years old when a school project exposed me to the great inventor. My boyhood hero propelled me toward a career as an engineer/inventor. Today, in retirement, I am a docent at the legendary Thomas Edison National Historic Park (TENHP) in West Orange, NJ; and also serve as an advisor and education author for the Edison Innovation Foundation.

I have read all the major books on Edison, so believe me when I tell you the new book “Edison and the Rise of Innovation” is a real keeper. Lenny DeGraaf, an archivist at TENHP, and author of this new volume, does a wonderful job weaving together an interesting new perspective on the world’s greatest inventor...and the crisp photos are a real treat for the eye. As an added treat, the foreword to the book was penned by Bill Gates, himself an ardent Edison aficionado.

The public recognizes Thomas Edison as one of history’s most influential inventors, but his work as an entrepreneur, manufacturer, and business manager are less appreciated. He did more than solve technical problems in the lab. From the 1870s to the late 1920s he created and managed dozens of companies to produce and market his inventions. To promote his innovations, Edison raised capital to support research and business operations, created manufacturing facilities, pursued

patent and legal protection, and implemented marketing and advertising strategies. In this book, Mr. DeGraaf considers all of these activities, tracing the development of Edison’s inventions, and providing readers with a more complete, coherent and balanced narrative of the great inventor’s accomplishments—showing also how Edison’s approach to innovation changed with time.

Edison is important because he allows us to address broader questions about how inventors and business leaders approached innovation in the late 19th and early 20th centuries. He was part of a community of inventors who shifted innovation away from lone tinkers and mechanics to business managers, professionally-educated engineers and scientists working within formal research organizations and corporations...what would transform into the modern day, and ubiquitous, new product development project manager.

These mythic inventors of the late 1800s changed the invention landscape, allowing consumers to re-make the texture of innovation—making decisions about which inventions to adopt. Edison and his competitors and colleagues were influenced by the times: improved transportation and communication networks; the rise of modern business corporations; national consumer markets; new advertising techniques; and, the increasing economic and social importance of cities. Mr. DeGraaf captures this in an intricate weave of the times, its concerns, and a public enamored for the first time with technological choice.

As you work your way through this lovely book, remember, Thomas Edison is a very hard act to follow—not just because of the large number of patents (1093), but the magnitude and significance of his work. Edison is responsible for our modern society. Life magazine in 1996 proclaimed him the Man of the Millennium. His 2010 cover feature on TIME magazine echoes this theme, and documents his continuing relevance to the world. Recently the Voice of America proclaimed that Edison’s accomplishments are the basis for one-fourth of the jobs on the planet.

Schools are once again studying Mr. Edison and his work, allowing students to have a much better grasp of technological innovation, and the socio-institutional forces that shape it. The great inventor is a prime argument for why our academic curricula should be more integrated. Recently the educational community has come to realize the importance of infusing the schools with a STEM-based education (Science, Technology, Engineering and Math), an integrated curriculum philosophy that encourages students to solve problems from a multi-dimensional, multi-disciplinary perspective. This is exactly the kind of analyses that Edison employed in his inventive and entrepreneurial pursuits at West Orange almost 125 years ago. Edison remains ever-relevant, and a role model for the legions of inventive minds that continue to be inspired by this most inventive man.

Enjoy this book and explore how Edison’s work so many years ago, continues to echo down through the decades, much to our continued benefit and inspiration.

## Selling Secrets of Phone Users to Advertisers

Practically everyone has a mobile phone nowadays. I remember when I was younger that cell phones were only for teenagers and adults. Now, kids in elementary schools carry phones. In recent years society has seen the proliferation of smart phones, the market picked up with the debut of the iPhone which was followed by all its competitors. At this point, every 12 months yields a new super-duper smart phone that makes the one prior look, well, prehistoric, leaving consumers asking themselves, ‘how did I live without this’. While reading the New York Times today, I came across the article, “Selling Secrets of Phone Users to Advertisers,” that talked about the exploitation of those using smart phones, which inspired me to write this article.

As more and more people start to fully exploit their cell phones, the need for apps and faster data increases. Big companies are harnessing this data and selling it to third party advertisers who then tailor ads to be more specific for the user. I heard an expression once, “People live for money, but kill for data.”

Tech companies and others have teamed up with start-ups like Drawbridge, Flurry, Velti and SessionM, who have developed ways to track users without cookies and determine how multiple devices can belong to the same user based upon their habits. The mobile explosion and cookie blockers have rendered cookies ineffective. So, now advertisers are relying on more complex methods such as statistical modeling to deduce that certain devices belong to certain users. According to the founder of Drawbridge, their statistical modeling is so accurate that it can determine the tendencies of different users that share a common device such as a tablet.

My initial thoughts after reading this article were “Wow!” that such a thing exists. Partially, because technology has grown and transcended into the mobile advertising space, making trite topics like statistical modeling became relevant. Also, because no user actually knows the amount of data these companies are harvesting and selling. This is of concern because these third parties’ primary purpose is to make money, and user privacy likely falls to the wayside. The sobering truth of the matter is, this isn’t going away. Big data isn’t going anywhere, and will only continue to proliferate. So where does that leave the consumer?

Claire Cain Miller, Somini Sengupta, “*Selling Secrets of Phone Users to Advertisers*”, *New York Times*, Wed., Oct. 6, 2013.

## H-1B Increase on Congress’ Agenda

Legislation has passed the U.S. Senate and is pending in the U.S. House of Representatives that would roughly double the size of the H-1B temporary visa program. If an immigration reform bill passes this year, the H-1B increase will almost certainly be part of the bill unless legislators hear from their voters soon.

The bills are part of Congress’ ongoing efforts to pass comprehensive immigration reform. While most media attention has focused on issues like amnesty and border

security, the legislation would also profoundly change high-skill immigration into the United States.

At the moment, both the House and Senate are supporting legislation that will increase the H-1B visa cap from its current 65,000 visas to around 180,000 visas annually. Along with new and existing exemptions from this cap, the total number of H-1B visas available each year would likely be around 250,000, up from 130,000 now.

The Senate bill (S. 744, which is the big comprehensive immigration bill) also includes a number of useful reforms to the H-1B program. While these don’t undo the damage done by a cap increase, they will help. The reforms include:

- Improving the formula for calculating the prevailing wage, so that H-1B wages will be closer, although still less than, American wages
- Requiring most companies to hire American workers before turning to the H-1B visas
- A ban on most companies using the H-1B visas to outsource jobs
- Limiting companies to having only 50% of their total U.S. workforce on an H-1B visa

The House bill (H.R. 2131) includes none of these protections.

Between 2001 and 2012, the United States created, on average, 58,000 new STEM jobs each year. A recent analysis by IEEE Spectrum estimated that there are a total of 277,000 new STEM job vacancies each year, which includes retirees and individuals leaving the STEM workforce.

IEEE-USA opposes any attempt to raise the H-1B visa cap, and supports efforts to protect American and foreign workers from the unintended consequences of this visa program. At the same time, IEEE-USA recognizes that there are many highly skilled and innovative people around the world who were not born in the United States. It is in our country’s interest to let some of these people live and work here – but they must be allowed to live and work here as American citizens, not merely temporary workers.

The Senate bill includes a large expansion of the EB green card program, which IEEE-USA supports. The bill would create a new green card for every international student who earns a Masters or PhD in a STEM field in the United States. The House bill includes a more limited, but still very useful, version of this provision.

Problems with the H-1B program have been well documented. The most damning problem with the program is that more than half of the visas last year were used to replace American workers with lower-cost foreign workers. Outsourcing companies received around 55% of the visas. These companies employ tens of thousands of workers in the United States, almost none of whom are Americans.

IEEE-USA encourages everyone who is concerned about expanding the H-1B visa program to send an e-mail to their legislators as soon as possible. This can be done at IEEE-USA’s Legislative Action Center ([www.ieeeusa.org/policy](http://www.ieeeusa.org/policy), look in the upper right.) or at [www.house.gov](http://www.house.gov) and [www.senate.gov](http://www.senate.gov).

## Calendar of Events

- November 1, 12:00-** The Art of Speechcraft Returns to Murray Hill  
**Location:** 600 Mountain Avenue, Room 6A-106, Murray Hill, New Jersey, United States  
**Contact:** Mani Iyer ([mani.iyer@ieee.org](mailto:mani.iyer@ieee.org)); Adriaan van Wijngaarden ([avw@ieee.org](mailto:avw@ieee.org))  
[Read More...](#)
- November 6, 6:00 PM to 8:45 PM: IEEE North Jersey Section EXCOM meeting**  
**Location:** Clifton Public Library - Allwood Branch, Activity Room, 44 Lyall Road, Clifton N J 07012  
**Contact:** Russell Pepe ([rpepe@ieee.org](mailto:rpepe@ieee.org)) and/or Adriaan van Wijngaarden ([avw@ieee.org](mailto:avw@ieee.org))  
[Read More...](#)
- November 11, 6:00 PM to 8:00 PM: MTT/AP-S, TMC, ED/CAS, Photonics - Starting a small business high-tech Electronics company** - Abhay Joshi, President & CEO of Discovery Semiconductors, Inc.  
**Location:** NJIT - ECE 202, 161 Warren Street, Newark, NJ 07102 [Getting to NJIT](#)  
**Contact:** Dr.-Ing. Ajay Kumar Poddar, Phone: (201)560-3806 ([akpoddar@ieee.org](mailto:akpoddar@ieee.org)), Prof. Edip Niver (973)596-3542 ([edip.niver@njit.edu](mailto:edip.niver@njit.edu)), Prof. Durgamadhav Misra ([dmisra@njit.edu](mailto:dmisra@njit.edu)), Dr. Naresh Chand ([Naresh.Chand@huawei.com](mailto:Naresh.Chand@huawei.com))  
[Read More...](#)
- November 13, 6:30 PM to 8:45 PM: IEEE PACE presents: Engineers meet- Labor and Employment Laws and the Engineer** - Marc W. Garbar, Esq., of Bertone Piccini, LLP  
**Location:** Clifton Memorial Library, 292 Piaget Ave., Clifton, NJ 07011 (973-772-5500)  
[Getting to Clifton Library](#)  
**Contact:** Paul Ward, 973 790-1625. [pward1130@aol.com](mailto:pward1130@aol.com), Richard F. Tax, 201- 664-6954, [rtax@aea.org](mailto:rtax@aea.org)  
[Read More...](#)

- **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 6, 2013**

### IEEE North Jersey Section EXCOM meeting – at Clifton, NJ

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

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

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

Everyone is welcome to attend this meeting.

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

For more information, please contact Russell Pepe (rcpepe@ieee.org) and/or Adriaan van Wijngaarden (avw@ieee.org).

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

[Getting to Clifton Public Library](#)

**Time:** 06:00 PM to 08:45 PM:

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

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

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**November 11, 2013**

### MTT/AP-S, TMC, ED/CAS, Photonics - Starting a small business high-tech Electronics company

**Speaker:** Abhay Joshi, President and CEO of Discovery Semiconductors, Inc.

**Abstract:** The speaker will share his experience of starting a high tech company (Discovery Semiconductors) in 1993, and running it successfully for the past 20 years. Discovery Semiconductors is a world leader in 10 Gb, 40 Gb, and 100 Gb Optical Receivers and has brought to market several new products spanning almost two decades.

The core technology for its products was developed through the Small Business Innovation Research (SBIR) program, and in 2001 the company was awarded the Roland Tibbitt's award by the US Small Business Administration (SBA) for successful commercialization of the SBIR technology. Today, the company exports to over 30 countries, but has to adapt constantly to an ever changing international competitive landscape.

The talk will end by urging new graduate students and especially NJIT students to pursue the path of entrepreneurs, start their own ventures, and make their own dreams come

true, including opening new job opportunities for the growth of stable economy and financial stability.

**Biography:** Mr. Joshi has extensive experience in high speed semiconductor device design and testing, specializing in the technology of InGaAs photodiodes (PIN), avalanche photodiodes (APD), balanced photodiodes, and ultra-fast read-out circuits for imagers. He was the Project Leader at EPITAXX for the European Space Agency's (ESA), "Project SCIAMACHY," an ambitious satellite project to study global warming. It was launched in 2002 on ESA's ENVISAT. As a project leader, he designed and developed unique 1024 element linear InGaAs detector arrays for 1-3  $\mu\text{m}$  wavelengths to detect green house gases such as CO, CO<sub>2</sub>, and CH<sub>4</sub>. He co-invented the Dual Depletion Region (DDR) photodiode structure in year 1994 which laid the foundations of Discovery Semiconductors.

As the president and CEO of Discovery Semiconductors, he has developed DDR photodiodes and photoreceivers for 10 Gb/s and 40 Gb/s digital systems as well as highly linear photodiodes (HLPD®) for analog applications. These photodetectors include balanced push-pull pairs, dual photodiodes, as well as monolithically integrated quad photodiodes.

From 2006 to 2008, Mr. Joshi designed and delivered space-qualified, 10 GHz, ultra-fast InGaAs photodiodes to Tesat Spacecom of Germany. The photodiodes are part of the ALADIN instrument for the ESA's AEOLUS mission to measure global wind profiles.

Mr. Joshi has been the Principal Investigator of several SBIR and STTR contracts granted by various agencies including DARPA, U.S. Air Force, U.S. Army, and NASA.

Mr. Joshi holds several patents in the United States, European Union, Japan, Canada, and India.

He has authored several technical publications and one book chapter.

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

**Time:** 06:00 PM to 08:00 PM

**Contacts:**

Dr.-Ing. Ajay Kumar Poddar, (201)560-3806 ([akpoddar@ieee.org](mailto:akpoddar@ieee.org)),

Prof. Edip Niver (973) 596-3542 ([edip.niver@njit.edu](mailto:edip.niver@njit.edu)),

Prof. Durgamadhav Misra ([dmisra@njit.edu](mailto:dmisra@njit.edu)),

Dr. Naresh Chand ([Naresh.Chand@huawei.com](mailto:Naresh.Chand@huawei.com))

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

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**November 13, 2013**

## **IEEE PACE presents: Engineers meet- Labor and Employment Laws and the Engineer**

**Speaker:** Marc W. Garbar, Esq., of Bertone Piccini, LLP.

**Abstract:** PACE North Jersey will dedicate this meeting to the subject of Labor and Employment Laws and Engineers. Many of us are employees of companies; some of us work independently; and others own businesses. We can all learn the “what we need to know” about the labor and employment laws in New York and New Jersey.

This meeting will bring you face to face with Marc W. Garbar, Esq., of Bertone Piccini, LLP. Marc has been practicing in the area of labor and employment law for 18 years and plans to entertain and educate all of us on what we need to know about labor and employment laws.

Our goal, shared over a question and answer discussion, will help members better understand labor and employment laws in New York and New Jersey.

You are encouraged to attend and bring your spouse, friends and associates to this discussion. Come join us! And enjoy great company with Pizza and refreshments.

**Biography:** Marc W. Garbar, Esq., is licensed to practice law in New York, New Jersey, and Florida. Marc received his Bachelor of Science degree in Accounting, cum laude, from Long Island University. He then received his Juris Doctorate from Nova Southeastern University School of Law.

Marc engages in litigation in the State and Federal courts in New Jersey and New York. His practice focuses on employment discrimination, sexual harassment, wrongful termination, restrictive covenant litigation, business law matters, commercial litigation, securities violations and contract negotiation. In addition to assisting and litigating on behalf of employees in their pursuit of resolution of their employment related claims, Mr. Garbar counsels corporations in the prevention of adverse employment issues, defends corporations against futile claims, assists in the formulation and implementation of employment policies as well as in the preparation of employee handbooks. Mr. Garbar served as lead attorney as Special Counsel representing the State of New Jersey for Labor Negotiations matters. He was also recently designated by the New Jersey Courts as a Court-approved mediator.

Marc maintained his own law practice, as a sole practitioner and as a partner, and defended the City of New York in labor and employment matters including, but not limited to, alleged unlawful arrests concerning mass litigation which stemmed from the 2004 Republican National Convention in New York City. Mr. Garbar continues to provide seminars to many business groups, as well as to various private organizations, including the National Organization for Women, on multiple employment law related topics including discrimination, sexual harassment and wrongful termination. Mr. Garbar speaks weekly on various legal topics at Business Networking International in Paramus, New Jersey; contributes as an author, and appears as a legal commentator on local television news broadcasts.

**Welcome:** This is an invitation and open meeting. Guests, members and students from other professional societies and engineering disciplines are always welcome.

**Refreshments:** Pizza and 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.

For information go to: [www.ieeeusa.org/policy/care/](http://www.ieeeusa.org/policy/care/)

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

**Time:** 06:15PM to 08:45PM (No Admission Charge)

**Contact:** Paul Ward, 973 790-1625. [pward1130@aol.com](mailto:pward1130@aol.com), Richard F. Tax, 201- 664-6954, [rtax@aea.org](mailto:rtax@aea.org)

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## **IEEE Pre-College activities present:**

### **Pre-College Cyber Defense Competition**

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

The “Shooting Star” Chapter 195 of the Air Force Association will be sponsoring up to four Open Division high school CyberPatriot VI teams. CyberPatriot was created to help motivate students to pursue science, technology, engineering, and mathematics (STEM) through a high school cyber defense competition. The CyberPatriot VI is patterned after the National Collegiate Cyber Defense Competition. Each high school team consists of a teacher/coach, two to five students, and up to five alternates.

The All Service Division (Jr ROTC units) and the Open Division (regular high school) team enrollment deadline is Oct 1st with competition dates scheduled for Nov 15th, Dec 6th, and Jan 17th. The final in-person all paid competition will be held at the AFA's CyberFutures Conference, at the Gaylord National Hotel and Convention Center, National Harbor, Md. March 26-30, 2014.

The Open Division enrollment fee per team is \$385.00. However, for the first four high schools within Morris or Union Counties to fully enroll, the “Shooting Star” Chapter 195 will pay the enrollment fee. For more details and to enroll, see: <http://www.uscyberpatriot.org/> . For AFA Chapter 195 info, contact Howard Leach, at [h.leach@ieee.org](mailto:h.leach@ieee.org), or 973-540-1283.

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

For schools outside of Morris and Union Counties, please contact the Section's Pre-College coordinator, Steve Majkowski, for potential support.

## Welcome! New Members of the IEEE North Jersey Section

Full Name	IEEE Current Grade
Abdulla Alruwaished	Student Member
Evens Arretus	Student Member
Zachary Bier	Member
Guangxian Chen	Member
Kyle Daruwalla	Student Member
Kyle DeMarco	Student Member
Thomas DiDomizio	Student Member
Nicholas Diaz	Student Member
Michael Dobrowolski	Student Member
Lyle Filonuk	Student Member
Xin Gao	Graduate Student Member
Steve Gordon	Member
Edward Gray	Member
Steve Guberman	Associate Member
Daniyal Ibrar	Student Member
Taimoor Karim	Student Member
John Kelly	Graduate Student Member
Nasrin Khansari	Graduate Student Member
Raymond Kholodovsky	Student Member
Joanna Knurek	Student Member
Theresa Lau	Student Member
Christian Lazo	Student Member
Eon Soo Lee	Member
Stephen Lestrangle	Graduate Student Member
Kuldeep Mahaveerchand	Graduate Student Member
Luke May	Student Member
Pierre AntoineMbe Fokam	Student Member
Connor McGee	Student Member
Ryan McGuigan	Student Member
Christopher Meyerhoffer	Student Member
Zachary Miletta	Student Member
Sage Mitchell	Graduate Student Member
Rehan NAqvi	Student Member
Tyler Nelson	Student Member
Adolph Noel-Jeune	Member
Karim Ouse	Student Member
Chirag Patel	Member
Daniel Perez	Member
Aleksandra Petelski	Student Member
Mohammad Rahbar	Graduate Student Member
Tomasz Rutkiewicz	Graduate Student Member
Elbert Salcedo	Student Member
Stephen Senophat	Student Member
Wenchong Shu	Graduate Student Member
Heinz Teutsch	Member
Cristian Torres Chauca	Student Member
Jason Vieira	Member
Wendy Hui Wang	Member
Harry Wong	Graduate Student Member
Stephanie Wu	Student Member
Hannah Yoo	Associate Member
Nnaemeka Nwosu	Graduate Student Member

## 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](mailto: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.

**GOLD** (Graduates of the Last Decade) Affinity Group Volunteers and Committee members needed

**Contact:** Sean Kennedy ([sean.kennedy@alcatel-lucent.com](mailto:sean.kennedy@alcatel-lucent.com))

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

**Contact:** Zhiwei Mao ([zmao@fd.edu](mailto:zmao@fd.edu))

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

**Contact:** [raquelpc@njit.edu](mailto:raquelpc@njit.edu)

**Computer Society Chapter** Committee Volunteers –

**Contact** [zhao@fd.edu](mailto:zhao@fd.edu)

**Technical Management Council** Committee Volunteers –

**Contact:** [almeida@synergymwave.com](mailto:almeida@synergymwave.com)

**North Jersey Section Awards Committee** Volunteers –

**Contact** [k.oexle@ieee.org](mailto:k.oexle@ieee.org)

**Membership Development Committee** Volunteers –

**Contact** [miyer108@gmail.com](mailto: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.

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### 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](mailto:listserv@listserv.ieee.org), with the body containing "subscribe northjerseypublic"

To unsubscribe, send an email to: [listserv@listserv.ieee.org](mailto: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](http://www.facebook.com/pages/IEEE-North-Jersey-Section)

Follow us on Twitter at: [twitter.com/ieeenorthjersey](https://twitter.com/ieeenorthjersey)

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

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### 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 where we exchange job leads and discuss emerging technologies. You will also have access to low-cost educational opportunities in a variety of topics areas, e.g. Hadoop, Big Data, Python, Cloud, Analytics, and Java. Educational opportunities are flexible and can be expanded to address additional topics of interest.

Please email the chair, Suzanne McIntosh ([SKranjacMcIntosh@yahoo.com](mailto:SKranjacMcIntosh@yahoo.com)) for additional information or to join the LinkedIn group.

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### Report of MTT/AP & ED/CAS-Local Chapter Events

It gave an immense pleasure to host the talk by Antenna Society President and Past IEEE President and also MTT-S President at NJIT and Synergy Microwave Corp.

Prof. Magdalena Salazar Palma (Past IEEE AP-S President) and Prof. Tapan Sarkar (2014 IEEE AP-S President) gave a talk at NJIT on Sept. 5, 2013



From left to right: Tapan Sarkar, Edip Niver, Magdalena Salazar Palma, Ulrich Rohde, Ajay Poddar, Durga Misra, Richard Snyder, Naresh Chand, and Har Dayal.

John Vig (2009 IEEE-President) gave talk at NJIT on Sept 24, 2013.



From left to right: Kirit Dixit, Durga Misra, Edip Niver, John Vig, Ulrich Rohde, Ajay Poddar, Adriaan van Wijngaarden, Tony Almeida, and Anisha Apte.

Dr. Edward Niehenke gave a talk at NJIT on Feb 6, 2013.



From left to right: Michael Driscoll, Edward Niehenke, Ulrich Rohde, Edip Niver, Ajay Poddar and Dick Snyder.



## A Report of the 2013 AP/MTT-S 28<sup>th</sup> Annual Symposium/ Mini-Show

By Kirit Dixit – General Chair – Symposium/Exhibition

The AP/MTT societies' joint chapter held its 28<sup>th</sup> Annual Symposium/Minishow on 3<sup>rd</sup> October, 2013. This was held at the Hanover Manor in East Hanover where we have had this event for the last 3-4 years now. The Symposium is free to all attendees and the food (Breakfast, Lunch, Afternoon tea) is also provided free of charge as in the past. The expenses for the symposium and show come from the Table rentals paid by Exhibitors at about \$350 per table. This year there was tremendous interest in the participation that we were forced to increase the tables from the usual 34 to 38.



From left to right: Kirit Dixit, Har Dayal, Ken Oexle, Fred Chichester, Adriaan van Wijngaarden and Howard Leach.



Exhibitions and coffee

This year the technical program was divided into roughly six presentations, each being about an hour long, by the speakers in lieu of the 30 minutes lectures in the past. We also had a number of "Distinguished Lecturers". The topics included Microwave Photonics, Medical Devices, High power Amplifiers, Oscillators, GaAn Devices and Antenna Propagation Theory.

The event was well attended and overall attendance was around 210.



Symposium participants, listening to one of the presentations



George Kannell explains the program

I have been privileged to chair this symposium and Exhibition for the past 13 years now and have been fortunate to have a constant and dedicated support from our volunteers. I would like to thank George Kannell, Ken Oexle, Har Dayal, Edip Niver, Russell Pepe, Ajay Poddar, Art Greenberg and Fred Chichester for their support. I can also not forget the role played by Howard Leach as our "Symposium Photographer". Some of his photos are here and the rest can be viewed on the web site.



### The 23<sup>rd</sup> Wireless and Optical Communication Conference (WOCC 2014)

May 9-10 2014, NJIT, Newark, New Jersey, U.S.A.

<http://www.wocc.org>



<p><b>Conference Organizer:</b> Russell Sun, Alcatel-Lucent</p> <p><b>Conference Coordinator:</b> Grace Wang, NJIT</p> <p><b>Program Co-Chairs:</b> <b>Wireless Symposium:</b> Alexander Haimovich, NJIT Meilong Jiang, InterDigital</p> <p><b>Optical Symposium:</b> Benyuan Zhu, OFS Labs Xin Jiang, CUNY</p> <p><b>Networks Symposium:</b> R. (Mouli) Chandramouli, Stevens Inst. Tech. Hong Zhao, FDU</p> <p><b>Big Data:</b> Ching-Yung Lin, IBM USA Hong Man, Stevens Inst. Tech.</p> <p><b>Advisory Committee:</b> Xiang Liu, Alcatel-Lucent Chonggang Wang, InterDigital Yudong Yao, Stevens Inst. Tech. Sigen Ye, Alcatel-Lucent Qinqing Zhang, John Hopkins Univ. Mengchu Zhou, NJIT</p>	<p>The 23rd Annual Wireless and Optical Communications Conference (WOCC 2014) will provide a unique opportunity to explore the leading areas of wireless and optical communications technologies, future network and big data. Original technical papers are solicited on the topics including, but not limited to, the following:</p> <p style="text-align: center;"><b>Wireless Symposium</b></p> <ul style="list-style-type: none"> <li>• PHY/MAC technologies for 3G/4G and future wireless communication systems</li> <li>• Cross-layer design and radio resource management</li> <li>• Multi-cell cooperation and interference management</li> <li>• Mobile Ad-hoc and wireless sensor networks</li> <li>• Small cell and heterogeneous networks</li> <li>• Convergence of fixed and mobile communication systems</li> <li>• Cognitive radios and networks</li> <li>• Green communications and networking</li> <li>• Ubiquitous mobile computing, mobile cloud</li> <li>• Vehicular communication networks</li> <li>• Wireless body area networks</li> <li>• Emerging mobile applications and services</li> </ul> <p style="text-align: center;"><b>Optical Symposium</b></p> <ul style="list-style-type: none"> <li>• Optical interconnection</li> <li>• Optical network applications and services</li> <li>• High-speed optical transmission</li> <li>• Advanced optical modulation and detection schemes</li> <li>• Optical fiber subsystems and access networks</li> <li>• Optical fiber sensor devices and networks</li> <li>• Advanced optical components and modules</li> <li>• Fibers and fiber devices/amplifiers/lasers</li> <li>• Microwave photonics, silicon photonics</li> <li>• Waveguide devices and planar lightwave circuits</li> <li>• Nano-photonics and Micro/Nano Optics</li> <li>• Quantum and nonlinear optics</li> <li>• Visible light communication</li> </ul> <p style="text-align: center;"><b>Big Data Symposium</b></p> <ul style="list-style-type: none"> <li>• Big data models and algorithms</li> <li>• Big data and multimedia search and mining</li> <li>• Big data visualization and representation</li> <li>• Semantic/context aware multimedia representation and processing</li> <li>• Multimodal and soft/hard data fusion</li> <li>• Big data and multimedia service architectures</li> <li>• Interactive platforms for data access and understanding</li> <li>• Cloud based big data and multimedia computing and communications</li> <li>• Big data analytics in social media</li> <li>• Big data and the Internet of Things</li> <li>• Bioinformatics</li> <li>• Big data applications in healthcare, finance, business, education etc.</li> <li>• Big data security and privacy</li> <li>• Business opportunities and models for big data</li> </ul> <p style="text-align: center;"><b>Networks Symposium</b></p> <ul style="list-style-type: none"> <li>• Future Internet and next-generation network</li> <li>• Internet of Things</li> <li>• Network virtualization and services</li> <li>• Convergent network architectures</li> <li>• Migration to NGN and mobile broadband</li> <li>• Hybrid wireless-optical networks</li> <li>• Network planning and optimization</li> <li>• Provisioning, monitoring, and management of IP services</li> <li>• Routing issues and technologies</li> <li>• Network coding and application</li> <li>• Overlay networks and P2P networking</li> <li>• Social networking and computing</li> <li>• Network Security</li> <li>• Network Steganography and Steganalysis</li> <li>• Cloud computing</li> <li>• Software-defined networks</li> <li>• Data center networks</li> <li>• Information-centric networks</li> </ul> <p>There will also be a parallel poster session soliciting the poster submissions.</p> <p><b>Important dates</b>  <b>Full Paper Submission: December 15, 2013</b>  <b>Acceptance Notification: February 15, 2014</b>  <b>Paper submission website: <a href="https://edas.info">https://edas.info</a></b></p>
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**IEEE North Jersey Section Membership Development, PACE, WIE, and GOLD Seminar Series:  
Professional Development Seminar Series (8 Weeks):**

**The Art of “Speechcraft” Returns to Murray Hill**

*Fridays, October 4 through November 22, 2013*

*Eight weekly classes (October 4, 11, 18, 25, November 1, 8, 15, 22, 2013)*

*Bell Laboratories, Alcatel-Lucent Room: 6A-106, 600 Mountain Ave, Murray Hill, NJ 07974*

**Led by: Brian Cort, ACS\*, ALB\*; Susanne Arney, ACB\*, ALB\*, Rebecca George, ACB\*, ALB\*; Holly Anderson, CC\*, CL\*;  
Host: Mani Iyer, ACB\***

**Abstract:** 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.

The seminar series will be held on Fridays, beginning at 12 Noon from October 4th to November 22nd. A nominal fee of \$10 to cover the cost of materials is required (yes, only \$10 for all 8 sessions!). Space is very limited (~10). Registration and acceptance is required.

**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 12pm – 1pm

Murray Hill Speakers Club meets on odd (first, third and fifth, if any) Thursdays from 12:10p m 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:**

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

**Susanne Arney**, ACS, ALB is the President of Murray Hill Speakers club, VP Membership of Cosmopolitan Toastmasters club, and Toastmasters Area 32 Governor; Susanne is a Bell Labs Fellow and is currently a Senior Director, Enabling Physical Technologies Research in Bell Labs, Alcatel-Lucent

**Rebecca George**, ACB, ALB is the immediate past President of Cosmopolitan Toastmasters and current Treasurer of the Cosmopolitan Toastmasters. She works as a Global Human Resources Manager for the Wireless Division at Alcatel-Lucent. Rebecca has been a Toastmaster for 5 years and enjoys helping people realize that honing the skill of public speaking is a gateway to improving all of a person’s communication and leadership skills, creating a platform for career growth.

**Holly Anderson**, CC, CL, is the current 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.

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

Toastmasters Educational Designations: (e.g. CC/CL Competent Communicator/Leader; ACB/ACL Advanced Communicator Bronze/Silver etc.)

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

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

**Time:** 12:00PM-1:30PM (Fridays October 4 – November 22, 2013)

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 this IEEE vtools link. [For Registration and Updates – Click Here](#)**

Refreshments will be provided

**Contact:** Mani Iyer ([mani.iyer@ieee.org](mailto:mani.iyer@ieee.org)); Adriaan van Wijngaarden ([avw@ieee.org](mailto:avw@ieee.org))

## 2013 IEEE North Jersey Section Volunteers

### *Executive Committee*

**Chair** - Russell Pepe  
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**2<sup>nd</sup> Vice-Chair** – Ajay Poddar  
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**Junior Past Chair** – Naresh Chand  
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**Antennas and Propagation Society/  
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**Communications Society**

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**Engineering in Medicine and Biology  
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**Instrumentation Measurement Society**

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**Systems, Man, and Cybernetics Society**

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**Vehicular Technology Society**

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