

THE IEEE NORTH JERSEY SECTION NEWSLETTER

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DECEMBER 2014

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A Note from the Chair

Well, this is a bitter sweet time for me. My two-year installment as Chair of the IEEE North Jersey Section is coming to a close. It is now time for me to hand the baton onto the next Chair. My official title changes as of January 1, 2015 to Junior Past Chair. I plan to stay active in the Section, and in the future within the Region.

I am proud of all we accomplished during my reign. I believe my "Note from the Chair" column, which I started two years ago, engaged many of our Members. Our Membership increased and our Senior Membership also expanded. We added the IT Society and are in the process of adding an EMC/PS Society. We filled many Society and Committee positions by attracting new Volunteers. Attendance at the MTT Symposium increased; and the newly created NJ Advanced Communications Symposium gained great acceptance. We also had a chance to celebrate our North Jersey Section 60th Anniversary. The Government and Industry Liaison Committee started an initiative to bring more High Tech careers to New Jersey through the engagement of our State and Federal Politicians. I plan to put most of my efforts into this activity next year. We accomplished much, and had a great time doing it.

I want to thank all our Members for their great support. I especially want to thank all my friends in the North Jersey Section and in Region 1 for their generous service. Two years ago, I proposed an arduous set of tasks. My benevolent Volunteers made these accomplishments a reality. Again, thank you all.

Also, if you have not viewed my IEEE TV interview, please visit:

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

Although this will be my final "Note from the Chair", feel free to contact me. I plan to remain in your service as a loyal Volunteer with the IEEE. Thank you all.

Sincerely,

Russell C. Pepe

Chair, IEEE North Jersey Section

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

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

2015 EXCOM Meeting Schedule

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

Wed	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

IEEE North Jersey Section – 60th Anniversary Celebrations:

We celebrated our section's 60th anniversary at West Point NY. 48 persons, members and guests attended the festivities. First we, as a group visited the West Point Museum where everyone enjoyed and learnt the history of our country's armed forces, their leaders, and war material used in the past. After the museum, we gathered in the Thayer Hall, the building which in the past used to be a horse stall but now is a world class Electrical Engineering and Computer Science building where our country's Military leaders get education.

IEEE's newly elected President elect Coln. Barry Shoop, was our chief guest who spoke on the IEEE organization, its activities and its future direction. We had with us 2015 IEEE-USA president, Peter Eckstein, Region-1, METSAC and some

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

Hudson section volunteers besides our section members. Region-1 Director and our section chair Russell Pepe spoke on the activities of the region and our section's achievements. Howard Leach provided the input about the approval of 4 more milestones by the IEEE this year. Our Section's anniversary committee chair Mr. Har Dayal prepared a 40 page booklet describing the history of the section, listing of its past chairs, 2014 North Jersey Section volunteers and some photographs of the past years section's ceremonies which included Life Grade Luncheon, Award ceremonies, Societies symposiums, seminars and one day conferences. After the meeting in the Thayer Hall, we took a ride on the boat provided by the West Point Academy, in the Hudson River and enjoyed 2 hours boat ride, dinner on the boat and beautiful scenery around the river on the sunny day.

A Brief History of the North Jersey Section's formation is described below:

The IEEE anniversary date for the North Jersey Section is May 1954. This does not tell the whole story. When the IRE and AIEE merged in 1963, the anniversary date was determined by whichever society had the oldest established Section. Since North Jersey never had an AIEE Section, their anniversary date was their Section was their Section entry into IRE, which was 1954. Again, this is not all the story, since they supplied executives to the IRE New York Section since its formation and were a New York Subsection by 1948. New York and its Subsections covered our IEEE Area B excepting Connecticut.

North Jersey Section was very active in NY Section activities prior to becoming a Section, Providing four Section Chairs, and three Section Secretaries over the decade before they formed their own Section. North Jersey was also very active in IRE Professional Groups by providing Group Chairs. As an example in 1955, they provided Chairs for the following IRE Professional Groups: Audio; Information Theory; Instrumentation; Telemetry and Remote Control; and Ultrasonic. The name Professional Groups almost seems a misnomer since this appears to be a technical function, and IEEE calls similar organizations Technical Societies.

Although North Jersey never had an A:IEE Section, they were very active in the New York Section and in District 3 of AIEE. District 3 covered our current IEEE Region 1, Area B without Connecticut, but including Mid-Hudson. They were also by far the largest geographic District, including all countries outside of North America. North Jersey also had an AIEE student Branch at Newark College of Engineering, which was formed in 1927. They joined New York as a Subsection in 1947. North Jersey members were active at the Institute and District levels: three members served two terms as Vice-President of AIEE; three members served as District 3 Secretary; and four members served as Chairs of the District 3 Student Activities Committee. Their activities in the New York Section included eight members who served as Chair of the New York Section; and nine members as New York Section Secretary.

North Jersey Section has continued to have an active involvement in Region 1 Committee/Board of Governors

activities. They have the enviable record of winning the prestigious Alex Gruenwald Pace Award for five consecutive years starting in 1991. The North Jersey Section has held many Region 1 Board of Governors meetings since 1978. The first one was held in Newark in 1978. Since 2000, North Jersey Section continued to be very active and its volunteers have received more than 4 Region 1 awards every year, for their Leadership and the Bill Terry award for technical excellence. For many consecutive years section has received the Alex Gruenwald Pace award. Many Section volunteers have been very active in the leadership positions of their respective societies.

At present in 2014 we have 15 chapters representing single or Joint Societies. We are hosting an MTT/AP one day mini-show and symposium, for more than 20 years now, by our MTT/AP chapter and section volunteers and creating revenue for the section. Our IAS/PES Chapter and Education committee volunteers are holding seminars and workshops year after year, to educate IEEE members and non-members. Sections Communication society volunteers hold symposium/conferences and other society chapters hold technical meetings to educate members. Non-members are always welcome in these technical meetings.



Standing L-R: Har Dayal, Naresh Chand, Adriaan van Wijngaarden, Fred Chichester, Emad Farag, Yu-Dong Yao, Kai Chen, Amit Patel, and Aaron St. Leger. Seated, from left to right: Bob Pellegrino, Vince Socci, Pete Eckstein, Barry Shoop and Russell Pepe



Russell Pepe, Marguerite Pepe, Har Dayal and Aaron St. Leger together with West Point students



ENGINEERS MEET: At our November, monthly meeting sponsored by North Jersey Section's PACE. 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. Our guest speaker was Peter Eckstein, third from the right, IEEE-USA President Elect for 2015.

At this meeting Peter discussed "IEEE-USA, Your Elected Officials and YOU". Peter quote; "People complain about the weather, knowing that there is nothing they can do about it. People complain about what government is doing, assuming that there is nothing they can do about it, but there is something you can do about it. In this talk he explained how you can influence what our elected officials do."

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



Photo by Dilip Pandya

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://ieeefluidsveys.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.

29th AP-MTT Annual Symposium and Mini-show

The 29th Annual Symposium and Mini-show by IEEE North Jersey Section AP-S/MTT-S chapters was held on 2nd October, 2014 at Hanover Manor in East Hanover NJ. The event was attended by close to 230 people. The symposium had various topics in microwave measurement and simulation techniques, microwave power amplifier technologies, a tutorial on electrically short antennas, Software Radios, Cell phone location finding techniques and so on. The speakers included at least three Distinguished Lecturers from various parts of the country as well as one from Italy. One interesting topic was presented by UN Telecommunications Technologies on the challenges of peace keeping missions.

As every year, the symposium was supported by Exhibitors who contributed to the table top fees. There were 37 Exhibitors this year, mostly from the local area. There were no fees for attending the event and food was available at no charge to the attendees.

The Annual Symposium has become increasingly popular with the local companies as well as small businesses. The aim of the event and show has always been to offer local area engineers and companies a venue to present their work and various products.

The following members are recognized for their valuable support in administering and managing of this event: George Kannell, Dr. Ajay Poddar, Har Dayal, Arthur Greenberg, Howard Leach, Russell Pepe, Fred Chichester and Kenneth Oexle.

Kirit Dixit – Chair, Symposium/Exhibition

Be an Engineer

By - Harry Roman

Have you seen the TV commercials by Exxon Mobil about being an engineer? These commercials are not only very well done, featuring young folks excited by what they could accomplish, but these thirty second or so vignettes strike a resounding chord about how engineers change the world....it all being "part of the job description".

Check out these exciting commercials at <http://www.youtube.com/user/ExxonMobil>

This is some of the best inspirational stuff about the profession I have seen. Young folks want to make a difference; and these commercials appeal to young minds at a visceral level—showing how engineers are the agents of change in the world. I think it puts engineering right up there with other professions like medicine, law, and business that often eclipse it in appeal. Maybe IEEE and other engineering societies ought to honor Exxon Mobil for the work they have done.

Listen to what Rex Tillerson, Chairman and CEO of Exxon Mobil says about engineering:

We've got to help young people understand how exciting the world of the engineer is to be able to create things that have never been created before. ...

One of the challenges we've had as a profession is that young people don't really know what an engineer does. And it can take on a certain connotation of being nothing more than a technician, when in reality scientists discover things and help us understand why they are. Mathematicians help us calculate and measure. ...

Engineers are the marriage of science and mathematics. We take those two things, we put them together and we create everything around us, from your iPad to this building we're sitting in to the medium that we're broadcasting to people today to the houses we live in to the cars we drive. They are all engineering products.

Can you remember what turned you on to engineering? Often it is a family member or a teacher that lights the flame. What was it for you? For me it was my father, my uncle, and an inspirational high school science teacher. All contributed in their own way to my decision to become an engineer.

About the closest thing today for kids to be inspired about engineering is when they start taking STEM-related courses in school, learning how engineers solve problems from a 360-degree perspective; taking into account the whole picture from the technical, economic, environmental, legal, safety, and regulatory standpoints. Learning and applying the engineering process, hopefully, this will prompt young minds to delve deeper into what engineers do: including creating new inventions and patenting them; saving lives with the application of technology; generating the systems and infrastructures that will create national wealth; increasing our standards of living; and keeping us globally competitive.

Teachers know that relevancy is powerful stuff, driving classroom lessons home, making them stick with a special type of glue. Having engineers visit a classroom to basically

testify how the math and science is used to make some very cool applications or new products/services really tells the story - and can close the deal about young folks wanting to be engineers. There is a rich story to be told about engineering. Exxon Mobil obviously wants to tell the story. We should want to tell it too, with passion.

Talk to you again soon.....

- *Harry*

Harry T. Roman

Life Member, IEEE, North Jersey Section

IEEE North Jersey Section Seeks Committee Chairs and Section Volunteers

The IEEE North Jersey Section is seeking new volunteers to help conduct business for the benefit of its membership. There are a variety of volunteer positions open and available. They range from technical to non-technical, leadership or just participatory. A list of IEEE North Jersey Societies, Chapters, Groups and Committees are published at the end of the newsletter for those interested in participating. If you would like to become involved with volunteering in some of these efforts or positions or just become more informed about what is happening at the North Jersey Section, please contact Nominations Committee chair, Amit Patel at a.j.patel@ieee.org. You are welcome to attend the Section's executive committee meeting held the first Wednesday of every month to learn more about volunteer activities that require some help. Please check out the website below for published meeting times and locations. Some committees needing volunteers include the following. Please contact the person indicated for additional information.

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

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

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

Contact: Zhiwei Mao (zmao@fd.edu)

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

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

Computer Society Chapter Committee Volunteers –

Contact zhao@fd.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 miyer108@gmail.com

Additionally, if interested volunteers would like to get more general information about the section, including a complete listing of all chapters and committees, visit the North Jersey section website <http://sites.ieee.org/northjersey> or contact anyone listed above.

[Back to Calendar of Events](#)

Calendar of Events

- December 02, 4:45 PM to 6:30 PM: IEEE MTT- AP- The blue LED - Its History and Technology-** Alan E. Delahoy of NJIT
Location: NJIT, ECE 202, 161 Warren Street, Newark, NJ 07102 [Getting to NJIT](#)
Contact: D. Misra, Ph: 973-596-5739, dmisra@njit.edu [Read More...](#)
- December 10, 6:30 PM to 9:00 PM: IEEE North Jersey Section PACE- Engineers Meet** (On the 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...](#)
- December 11, 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...](#)
- December 12, 3:30 PM to 4:30 PM: IEEE SMCS, CSS - From Tweets to Optimality in the Smart and Sustainable Factory - Bengt Lennartson,** Ph.D. & Professor, Chalmers University of Technology, Gothenburg, Sweden
Location: NJIT, ECE 202, 161 Warren Street, Newark, NJ 07102 [Getting to NJIT](#)
Contact: MengChu Zhou, (zhou@njit.edu)
- December 18, 1:30 PM to 4:00 PM: IEEE SMCS, CSS - Colored Traveling Salesman Problem and Its Applications to Multi-bridge Machining Systems - Jun Li, Ph.D. & Associate Professor, Southeast University, Nanjing, China**
Location: NJIT, ECE 202, 161 Warren Street, Newark, NJ 07102 [Getting to NJIT](#)
Contact: MengChu Zhou, (zhou@njit.edu)
- December 18, 1:30 PM to 4:00 PM: IEEE SMCS, CSS - Bell Telephone Laboratories, Inc. IEEE Milestones to be dedicated**
Location: NJIT, ECE 202, 161 Warren Street, Newark, NJ 07102 [Getting to NJIT](#)
Contact: MengChu Zhou, (zhou@njit.edu)
- December 18, 1:30 PM to 4:00 PM: IEEE North Jersey Section - Bell Telephone Laboratories, Inc. IEEE Milestones to be dedicated** **Location:** Alcatel-Lucent, Main Building 6, 600 Mountain Ave, Murray Hill, NJ 07974 [Getting to Bell Labs](#)
Contact: Dr. Adriaan J. van Wijngaarden, avw@ieee.org (avw@ieee.org), Howard Leach (h.leach@ieee.org) [Read More...](#)
- December 19, 9:00 AM to 2:00 PM: IEEE PES/IAS- Developing Useful Transformer Health Indices - Tony McGrail of Doble Engineering**
Location: PSE&G - Hadley Road Facility, Auditorium, 4000 Hadley Road, South Plainfield, NJ 07080, [Getting to PSE&G - Hadley Road Facility](#)
Contact: Ronald W. Quade (rwquade@ieee.org) [Read More...](#)
- December 19, 10:30 AM to 12:30 PM: IEEE MTT- AP- Semiconductor Innovation: Looking for new solutions to old problems - Ravi M. Todi of Qualcomm Technologies Inc,**
Location: NJIT, ECE 202, 161 Warren Street, Newark, NJ 07102 [Getting to NJIT](#)
Contact: D. Misra, Ph: 973-596-5739, dmisra@njit.edu [Read More...](#)
- January 14, 6:00 PM to 8:45 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...](#)

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

December 2, 2014

IEEE MTT-AP Present:

The blue LED - its history and technology

Speaker: Alan E. Delahoy of NJIT

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

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

Email: alan.e.delahoy@njit.edu

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

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

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

Time: 4:45 to 6:30 PM (All are welcome. You don't have to be IEEE member to attend the talk)

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

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

December 10, 2014

IEEE North Jersey Section PACE – Engineers Meet – For a Christmas Holiday Special

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

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

About the Meeting: This meeting is about getting members of the Section together for a light evening of discussion and hospitality. Basically we can hold a brainstorming session to discuss future meetings and activities. All are invited. We shall encourage North Jersey Section Ex-Com officers to attend. Our Section members will have an opportunity to meet with them on a first name basis.

Bring your associates, friends and spouses.

Something on your mind?

Everyone will have an opportunity to express their views, ask questions about the profession, jobs, opportunities and perhaps even politics. Boy! Does our country and profession have problems? Think about the Supply/Demand Equation.

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

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

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

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

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

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

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

December 11, 2014

IEEE PES presents:

Plain Talk in New Jersey

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

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

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

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

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

Time: 7:30 AM to 5:00 PM

[Click Here for Brochure](#)

[Click Here for Flyer](#)

[For Testimonials: Click Here](#)

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

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

(Early Bird Registration Ends November 13!)

11 December, 2014

IEEE CNNNJ presents:

Annual Planning Meeting

On Thursday, December 11, 2014, the IEEE Consultants' Network of Northern NJ (www.TechnologyOnTap.org) will continue the annual Planning Meeting.

ABOUT THE TOPIC: The IEEE Consultants' Network activities planning for 2015 commenced during the November gathering of the members. The participants agreed to restore the regular meeting and presentation schedule, proposing tentative talk topics and sponsors. Potential members for 2015 Executive Committee were identified, with the election to take place before the upcoming December event.

The Network will continue a detailed planning session on December 11, discussing ideas and expectations for the various Network functions in the upcoming year. We will review the purpose of our organization and the scope of its activities. The floor will be open to suggestions for improvements, recommendations of Network directions and proposals of new feature topics for the general meetings.

As all Network events, this Working Session is open to all. Non-members, who are interested in our activities or who are considering joining the group, are strongly encouraged to participate.

We are inviting all network members, current and prospective, to voice their opinions and, most of all, to volunteer to guide our group as one of the officers of the Executive Committee or one of the Activities Chairs.

We are planning to provide some refreshments; please RSVP to allow us a head count in advance.

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.

CNNNJ 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!

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](#)

Free event – open to the public

December 12, 2014

IEEE SMCS and CSS present:

Seminar - From Tweets to Optimality in the Smart and Sustainable Factory

Speaker: Bengt Lennartson, Ph.D. & Professor, Chalmers University of Technology, Gothenburg, Sweden

Abstract: The "tweeting factory", a new event-based information system architecture, is presented. Simple messages (tweets) from all kinds of equipment are stored as events, only including identity, time tag and unstructured data. These low level events are combined into high-level knowledge, using formalized transformation patterns, stream-based aggregation, and prototype-oriented information models. Based on this event information architecture, hierarchical discrete event models are generated in terms of self-contained operations and operation sequences. Optimal sequences are then generated for moving devices, especially focusing on novel methods for energy optimization. A set of moving devices, for instance a multi-robot system, can be considered as a hybrid system, including continuous movements and high-level discrete interactions. A generic modeling framework for hybrid systems is therefore introduced based on modular predicate transition models. Efficient energy optimization is then obtained, applying suitable abstractions and a recent integrated constraint and nonlinear programming procedure. Abstractions for pure logical models, such as automata and Petri nets with variables, are also presented based on branching bisimulation. Integrating the tweeting factory with self-contained operations and optimal as well as logically correct sequences of operations results in a smart factory, characterized by flexibility, scalability, efficiency, reusability and sustainability in terms of minimal energy consumption.

Biography: Bengt Lennartson received the Ph.D. degree in automatic control from Chalmers University of Technology, Gothenburg, Sweden, in 1986. Since 1999, he has been a Professor of the Chair of Automation, Department of Signals and Systems. Currently he is Associate Editor for *IEEE Transaction on Automation Science and Engineering*, General Chair of CASE 2015 and Program Chair of ADHS 2015. He received Best Student Paper Award at CASE 2012, and the Best Conference Paper Finalist Award at CASE 2010. Prof. Lennartson is (co)author of two books and more than 230 peer reviewed international papers. His main areas of interest include discrete event and hybrid systems, especially for manufacturing applications, as well as robust feedback control.

Location: NJIT, ECE 202, 161 Warren Street, Newark, NJ 07102 ECE 202 is located at the intersection between Warren St. and Summit St., Newark, NJ 07102. [Getting to NJIT](#)

Time: 3:30PM to 4:30PM,

Contact: MengChu Zhou, (zhou@njit.edu)

December 16, 2014

IEEE SMCS and CSS present:

Design and Analysis of Urban Traffic Light Control Systems Using Petri Nets

Speaker: Yi-Sheng Huang, Ph.D. & Professor, National Ilan University, Taiwan

Abstract: Timed Petri nets (TPNs) have been utilized as a visual formalism for the modeling of complex discrete event dynamic systems. It illuminates the features on describing properties of causality and concurrency. Moreover, it is well known that synchronized timed Petri net (STPN) allows us to present all of the concurrent states in complex TPN. In this talk, we introduce a methodology to design and analyze an urban traffic network control system by using STPN. In addition, the applications of STPN to eight-phase, six-phase and two-phase traffic light control systems are modularized. Besides, this talk will show you how to use them to model parallel railroad level crossing control systems. The advantage of the proposed approach is the clear presentation of traffic lights' behaviors in terms of conditions and events that cause the phases alternations. The analysis of the control models is performed to demonstrate how the models enforce the lights' transitions by a reachability graph method.

Biography: Yi-Sheng Huang received the B.S. degree in Automatic Control Engineering from Feng Chia University, Taiwan the M.S. degree in Electronic Engineering from Chung Yuan Christian University, Taiwan, and the Ph.D. degree in Electrical Engineering from National Taiwan University of Science and Technology (NTUST), Taiwan, in 2001.

He was a Professor in the Department of Electrical and Electronic at Chung Cheng Institute of Technology (CCIT), National Defense University in Taiwan. He is presently a full professor in the Department of Electrical Engineering, National Ilan University in Taiwan, ROC. He was a visiting professor at New Jersey Institute of Technology (NJIT) in 2008 and 2014. His research interests include discrete event systems, Petri nets, computer integrated manufacturing, automation, reactive systems, air traffic control, intelligent transport systems and motor control systems. Prof. Huang has been serving as a Reviewer for the Automatic, IEEE TSMCA, IEEE TSMCC, IEEE TASE, IEEE TIE, IEEE TITS, IET Control Theory and Application, IET Intelligent Transport Systems, International Journal of Production Research, The Computer Journal, IJAMT, AJC, JCIE and JISE..

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

ECE 202 is located at the intersection between Warren St. and Summit St., Newark, NJ 07102.

Time: 10:40AM to 11:40PM,

Contact: MengChu Zhou, (zhou@njit.edu)

December 18, 2014

IEEE SMCS and CSS present: Colored Traveling Salesman Problem and Its Applications to Multi-bridge Machining Systems

Speaker: Jun Li, Ph.D. & Associate Professor, Southeast University, Nanjing, China

Abstract: The multiple traveling salesman problem (MTSP) is a well-known combinatorial optimization problem generalized from the traveling salesman problem (TSP). It has been widely and successfully applied. However, it cannot well represent some new application problems due to its identical cities allowing any salesman to visit. We propose a new MTSP called colored traveling salesman problem (CTSP) in which a city of one to multiple colors can be visited by any salesman of a single same color. The basic CTSP can be subdivided into radial CTSP and serial CTSP with respect to different city coloring topology. We formulate the two CTSP as integrated programming models. After analyzing the limitations of their exact solution, we propose several heuristics and evolutionary algorithms with different coding schemes for approximate. Subsequently, they are applied to the adopted datasets for TSP and their performances are compared. We have investigated the job scheduling problems of multi-bridge machining systems by applying the proposed CTSP and methodology. The seminar concludes with a promising outlook of CTSP solutions and new applications.

Biography: Jun Li received his M.S. degree in Mechanical Engineering from Jiangsu University, Zhenjiang, China, in 2003 and the Ph.D. degree in Control Theory and Control Engineering from Southeast University, Nanjing, China, in 2007. From December 2007 to May 2010, he was a Postdoctoral Researcher at Southeast University, where he is currently an Associate Professor with the School of Automation. He is presently a visiting scholar of Jersey Institute of Technology (NJIT), Newark, NJ. He has published 30+ journal papers. His current research interests include operational research, Petri nets, discrete event systems, and robotics. He is Senior Member of IEEE.

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

ECE 202 is located at the intersection between Warren St. and Summit St., Newark, NJ 07102.

Time: 11:00AM to 12:00PM,

Contact: MengChu Zhou, (zhou@njit.edu)

December 18, 2014

Milestone Celebration Dedication of Four IEEE Milestones at Bell Labs:

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

Agenda

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

The milestones have the following citations:

BELL LABS – WIRELESS AND SATELLITE COMMUNICATIONS, 1925-1983

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

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

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

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

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

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

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

BELL LABS - COMMUNICATIONS THEORY AND NETWORKS, 1925-1983

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

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

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

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

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

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

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

Time: 1:30 PM to 4:00 PM

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

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

December 19, 2014

IEEE PES and IAS present - Developing Useful Transformer Health Indices

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

Topic: Topic:

The seminar will cover transformer health indices including:

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

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

Abstract: Developing Useful Transformer Health Indices

The seminar will cover transformer health indices including:

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

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

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

Email: tmcgrail@doble.com

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

Time: 9:00 AM to 2:00 PM

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

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

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

Dec 19, 2014

IEEE AP/MTT presents: Semiconductor Innovation: Looking for new solutions to old problems

Speaker: Ravi Todi, Qualcomm Technologies Inc

Abstract: Exponential growth in our industry has been achieved by continual improvement and disruptive innovation. Over past 5 decades semiconductor industry has managed to innovate and solve problems to sustain an exponential growth; however the road head is very challenging to say the least. In this talk I would highlight some of the examples from past and look forward to the future. Engineers and scientists would have to be more innovative than every before to stay ahead of the challenges!

Biography: Ravi Todi received his B.S. degree in Electrical Engineering from Mumbai University, India, in 2002 and M.S. degree in Electrical and Mechanical Engineering from University of Central Florida in 2004 and 2005 respectively, and his doctoral degree in Electrical Engineering in 2007. His graduate research work was focused on gate stack engineering, with emphasis on binary metal alloys as gate electrode and on high mobility Ge channel devices. His research interest

includes semiconductor process integration and device technology, non-conventional CMOS scaling and nano and bio devices. In 2007 he started working as Advisory Engineer/Scientist at Semiconductor Research and Development Center at IBM Microelectronics Division, focusing on high performance eDRAM integration on 45nm SOI logic platform. Starting in 2010 Ravi was appointed the lead Engineer for 22nm SOI eDRAM development. For his many contributions to the success of eDRAM program at IBM, Ravi was awarded IBM's Outstanding Technical Achievement Award in 2011. Ravi Joined Qualcomm as a Staff Engineer; responsible for 20nm and 16/14 nm product developments. Ravi had authored or co-authored over 60 publications, has 8 issued US patents and over 20 pending disclosures. He is a Distinguish Lecturer for IEEE Electron Devices Society and serves as an Editor for the IEEE Transactions on Electron Devices.

Email: rmtodi@qti.qualcomm.com

Location: NJIT, ECE 202, 161 Warren Street, Newark, NJ 07102 Getting to NJIT

Time: 10:30AM - 12:30PM

Contact: Edip Niver, Ph: 973-596-3542, edip.niver@njit.edu

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

14 January, 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 (kt.chen@ieee.org).

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

Time: 06:00PM to 08:45PM

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

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

About Senior Membership

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

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

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 email the Employment Network Chair, Suzanne McIntosh (mcintosh@cs.nyu.edu).

Welcome! New Members of the IEEE North Jersey Section

Full Name		Current IEEE Grade
Ralph	Tillinghast	Graduate Student Member
Matthew	Goodstein	Student Member
Daniel	Fletcher	Associate Member
Vicki	Cornell	Student Member
Anthony	Sison	Student Member
Nan	Jiang	Graduate Student Member
Zongru	Shao	Graduate Student Member
Thomas	McCabe	Student Member
James	Stephan	Graduate Student Member
Francis	Bradley	Associate Member
Siddharth	Sachdev	Student Member
Haley	Kim	Graduate Student Member
Ndubisi	Ahukanna	Member
Sinan	Gok	Graduate Student Member
Michael	Agas	Student Member
Joe	Duncan	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
Dakota	Napierkowski	Student Member

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+., as 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: _____

2014 IEEE North Jersey Section Volunteer

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Chair - Russell Pepe
rpepe@ieee.org

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

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

Secretary - Chris Peckham
cdp@ieee.org

Treasurer - Kalyan Mondal
mondal@fdu.edu

Member-at-Large

Mengchu Zhou – zhou@njit.edu

Goran Djuknic – gd@ieee.org

John C Taylor –
john.taylor1204@gmail.com

Junior Past Chair – Naresh Chand
chandnaresh@gmail.com

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

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gd@ieee.org

Vice-Chair – Naresh Chand
chandnaresh@gmail.com

Antennas and Propagation / Microwave Theory and Techniques Society

Chair - Ajay Poddar
akpoddar@synergymwave.com

Vice-Chair – Edip Niver
niver@adm.njit.edu

Circuits and Systems Society / Electron Devices Society

Chair - Durga Misra
dmisra@njit.edu

Communications Society

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

Computer Society

Chair - Hanna (Hong) Zhao
zhao@fdu.edu

Controls Society

Chair - David Haessig
davidhaessig@ieee.org

Engineering in Medicine and Biology Society

Chair - Raquel Perez-Castillejos
raquelpc@njit.edu

Industrial Applications Society

Chair - Ken Oexle
k.oexle@ieee.org

Information Theory Society

Chair – Adriaan van Wijngaarden
avw@ieee.org

Instrumentation Measurement Society

Chair – Emad Farag
enfarag@ieee.org

Photonics Society

Chair – Naresh Chand
chandnaresh@gmail.com

Power & Energy Society

Chair - Ronald W. Quade
rwquade@ieee.org

Signal Processing Society

Chair - Alfredo Tan
tan@fdu.edu

Systems, Man, and Cybernetics Society

Co-Chair – Mike Liechenstein
itsmikesju@aol.com

Co-Chair – Mengchu Zhou
zhou@njit.edu

Vehicular Technology Society

Chair - Mani Iyer
mani.iyer@ieee.org

Technical Councils

Technology Management Council

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

Co-Chair Vaseem Ahmed,
vas201@gmail.com

Affinity Groups

Consultants Network

Chair - Peter Schutz
schutz@compuserve.com

Young Professionals

Chair - john.taylor1204@gmail.com

Women in Engineering

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zmao@fdu.edu

LIFE Members

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a.h.greenberg@ieee.org

Committees

60th Anniversary Committee

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dayalhar@gmail.com

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k.oexle@ieee.org

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fdchichester@gmail.com

Education

Co-Chairs

Donald Hsu – yanyou@hotmail.com

Kalyan Mondal – mondal@fdu.edu

Mengchu Zhou – zhou@njit.edu

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skranjacmcintosh@yahoo.com

Government and Industry Relations Committee

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

Group coordinator / History

Chair - Howard Leach
h.leach@ieee.org

Membership Development

Chair - Mani Iyer
mani.iyer@ieee.org
Vice-Chair - Ajay Poddar
akpoddar@synergymwave.com

MTT/AP Trade Show and Symposium

Chair - Kirit Dixit
kdixit@ieee.org
Vice-Chair – Har Dayal
dayalhar@gmail.com

TPC Co-Chair – George Kennal
gkk@lgsinnovations.com

TPC Co-Chair – Ajay Poddar
akpoddar@synergymwave.com

Newsletter

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anisha_apte@ieee.org

Nominations

Chair – Amit Patel
a.j.patel@ieee.org

PACE

Chair - Richard Tax
rtax@verizon.net
Co-Chair – Paul E. Ward
peward@ieee.org

Pre-University Activities

Chair – Steve Majkowski
steve.majkowski@alcatel-lucent.com
Vice-Chair – Jesse Colby
jjc37@njit.edu

Student Activities

Chair -John C Taylor
john.taylor1204@gmail.com
Vice-Chair - Daniel Cerone
dcer@dcerone.com

Webmaster

Chair – Adriaan van Wijngaarden
avw@ieee.org

Industrial Liaison

Chair-Kirit Dixit
kdixit@ieee.org

Intersection activities

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

Legal Activities

Joel Miller
jm@joelmillerlaw.com