THE IEEE NORTH JERSEY SECTION NEWSLETTER

Vol. 62, No. 4

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Calendar of Events

- Meeting Announcements
- Project Risk Management in Seven Saturdays
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The <u>DEADLINE</u> to get your articles, advertisements, flyers in the newsletter is the <u>15th</u> OF THE MONTH. Events <u>MUST</u> be on vTools. Word limit for Abstracts is 100 and speaker biography is 250. Remember to provide the sponsoring society/chapter/committee names, contact person information, and location with link for directions. E-mail Anisha Apte at anisha_apte@ieee.org only if required, for inclusion in the next month's newsletter....

A Note from the Chair

The April issue of the Newsletter introduces the IEEE North Jersey Section's five newly elected IEEE Fellows, three IEEE Award recipients, one IEEE MGA Award recipient, four IEEE Region 1 Award recipients and two IEEE Section Award recipients.

Several events are being organized, including a major event for students – IEEE Region 1 Student Conference, which will be held at the University of Vermont, Burlington, Vermont, on April 10-11, 2015. For more information, please check

http://sites.ieee.org/r1/committee/sac/2015-R1-SC

I encourage everyone to reach out to both non-members and former IEEE members who have not been member for a



APRIL 2015

number of years to join (again). Currently, one can become a member and pay half-year dues, which provide IEEE membership for the remainder of the calendar year (8 months). The same holds for societies and this is thus also a good opportunity for members to check out new societies. New members should go to the site http://www.ieee.org/join, which also gives a good overview of the benefits of IEEE membership. Additional advantages of IEEE membership include: a unique IEEE e-mail address, which gives, at no additional cost, access to (ad-free) Gmail, Google Drive, Google+ and Picasa, with 30 GB of shared storage. Another useful site can be found at http://www.ieee.org/discounts, which provides an overview of discounts on insurance, travel, electronic equipment and several other categories.

Please become or stay involved in the Section and do e-mail your suggestions and comments to me at: avw@ieee.org or alw@research.bell-labs.com.

Sincerely,

Adriaan J. van Wijngaarden,

Chair, IEEE North Jersey Section

2015 EXCOM Meeting Schedule

The new 2015 EXCOM meeting schedule is now in vTools. The events start at 6 pm with a buffet, and the EXCOM meeting starts at 7 pm. The meeting locations are:

| Wed | 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 |

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



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 Adriaan van Wijngaarden (avw@ieee.org) and Naresh Chand, the Section's Nominations Committee Chair (chandnaresh@gmail.com) and/or any other volunteer (see the last page of this Newsletter for a list of the current volunteers, their contact information and positions. The Section's Executive Committee meeting is generally held the first Wednesday of every month (see the schedule and locations above, as well as more detailed information in the calendar). These meetings are a good opportunity to learn more about the Section's activities, and which volunteer activities require some help. Some committees needing volunteers include the following. Please contact the person indicated for additional information.

IEEE North Jersey Section's Affinity Groups

• Consultants Network

The Consultants Network is very active and holds monthly meetings. Please consider attending the presentations, and contact Robert Walker, Secretary (r.d.walker@ieee.org) if you would like to give a presentation or become a volunteer.

• Professional Activity Committee for Engineers (PACE)

PACE organizes monthly meetings (every second Wednesday of the month). Currently, most meetings are held at the library in Clifton, NJ. PACE is looking for speakers and volunteers to help organize events, also at other locations. For more information, please contact Richard Tax (rtax@verizon.net) and Adriaan J. van Wijngaarden (avw@ieee.org).

• Women in Engineering (WIE)

IEEE Women in Engineering is the largest international professional organization dedicated to promoting women engineers and scientists, and to inspire girls around the world to follow their academic interests to a career in engineering. The IEEE North Jersey Section currently has 36 WIE members, 14 of which are student members. Please consider volunteering and organizing WIE activities. Contact: Jyoti Bali (yoti.bali@alcatel-lucent.com).

• Young Professionals (YP)

Young Professionals is an international community of enthusiastic, dynamic and innovative members and volunteers. Recent graduates automatically become a YP member. The IEEE North Jersey Section currently has 509 YP members. Please consider becoming involved in the organization of social and networking events. For more information, please contact John Taylor (john.taylor1204@gmail.com), Adriaan van Wijngaarden (avw@ieee.org), and/or Daniel Cerone (d.a.c@ieee.org).

IEEE North Jersey Section Society Chapters

• Aerospace and Electronic Systems (AES) The North Jersey Section has 27 AES members. If you are interested in giving a presentation or to volunteer, please contact Goran Djuknic (gd@ieee.org) and/or Adriaan van

Wijngaarden (avw@ieee.org).Engineering in Medicine and Biology (EMBS)

The North Jersey Section has 63 EMBS members. If you are interested in giving a presentation or to volunteer, please contact Russell Pepe (rcpepe@ieee.org) and/or Adriaan van Wijngaarden (avw@ieee.org).

• Computer Society (C)

The IEEE Computer Society has 526 members in North Jersey. If you are interested in giving a presentation or to volunteer, please contact Hanna Zhao (zhao@fdu.edu) and/or Howard Leach (h.leach@ieee.org).

IEEE North Jersey Section Committees

• Awards Committee

The Awards Committee has several important tasks, including the nomination of candidates for IEEE Region 1 and IEEE MGA Awards, and the co-organization of the Annual Awards Banquet. If you are interested in volunteering, or if you would like to nominate a candidate, please contact Ken Oexle (k.oexle@ieee.org) and/or Adriaan van Wijngaarden (avw@ieee.org).

Membership Development Committee

Membership development is very important for the IEEE and for the Section. If you are interested to help, please contact Kai T. Chen (k.t.chen@ieee.org) and/or Adriaan van Wijngaarden (avw@ieee.org).

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

Promote STEM

Russell C. Pepe, Pre-University Co-Chair

Hi all. I hope you still remember me. This is Russell Pepe, your former North Jersey Section Chair for 2013-2014. I am now the Co-Chair of the Pre-University Committee. My focus in this position is to introduce our High School and Elementary School children to the world of technology. I strongly believe that a life steeped in technology is exciting, important and beneficial to the world. I have a great video which was prepared by the IEEE Headquarters. I spice this presentation with anecdotes from my own career. My mission is to first expose our children to the world of technology, educate them about Science, Technology, Engineering and Math (STEM), and then encourage them to consider a STEM education and career.

I am available to speak at a school in your area. If you are interested in having me make a presentation, please contact me at: rcpepe@ieee.org



Working with Montclair State University

I recently had the opportunity to work with Montclair State University (MSU) on a special Science, Technology, Engineering and Mathematics STEM program grant, a fiveyear effort they are sponsoring through MSU's secondary and special education department in their teaching college. Part of the fun is working with old friends there at MSU; while playing a role in designing and teaching new graduate programs about how to bring STEM into the classroom. The initial emphasis of this program was on middle school teachers, and is now branching out to elementary school teachers, all in a demonstration school district in Essex County.

As the resident engineer on the implementation team, I am delighted to see how readily science and math teachers take to the STEM topic. It is not about making more kids want to become engineers, but rather equipping teachers to appreciate and explain the engineering process-how we solve problems from a multi-disciplinary / multi-dimensional basis.

I designed a problem-solving approach for the project I call 360-degree problem solving ... for teachers to challenge their students as they seek answers to important problems or situations. It is all about asking questions, both hard and soft, when discussing potential solutions, and looking for interfaces between topical areas. I urge teachers to impress upon students the importance of integrating their curriculum when solving problems, examining various aspects of the solution like the:

- Economy
- Technology
- Environment
- Society
- Safety
- Regulatory
- Legal
- Cultural...

and developing from this, a mediated solution.

Engineering is about designing within constraints, and that is exactly what this integrated 360-degree approach is all about. Engineers who can do this efficiently end up with robust solutions to problems, often elegant and sophisticated solutions. Often we refer to this as systems engineering; and it takes an experienced project manager and a well-oiled team to drive this whole process to perfection.

I taught evening graduate school at my alma mater (NJIT/NCE) for about 10 years, so I am versed in delivering course content. At MSU, working with colleagues, we spent a year developing a graduate course for teachers, emphasizing the pedagogy to be used, especially in unstructured problem solving. I am delighted to report our graduate students and working teachers loved the classroom activities, warming to it all quite quickly; and working in teams especially. The course ran this past summer; and now we are contemplating a follow-up course as well.

We took the information gained from the course back to middle school teachers in the trenches, using it immediately... much to our satisfaction. Some of our graduate students even went back to their own middle schools and are using what they learned. Others who are not yet teaching are applying it in the demonstration middle school.

I wish more undergraduate and graduate engineering students could work at engineering companies during their educational experience - gaining valuable, practical experience; like teachers do when they practice teach in their senior year. By happenstance, I was fortunate to have done this in my junior and senior years, and it made a big difference in how I solved problems later, when on the job for real. I think the teaching community has a great educational model we engineers should discuss with them.

* * * * * * *

STEM is a powerful message for teachers and students. If you have the opportunity to talk to teachers or lecture in a local school, it is a nice way to introduce the profession of engineering, explaining how it is a tremendous activity for doing good on the planet. Our profession is being highlighted like no other time I can remember, so if given the chance to visit schools ... do it! Play a part in boosting our profession. Maybe we should be doing something at the IEEE section level?

Talk to you again soon...

Harry

Harry T. Roman,

Life Senior Member, North Jersey Section

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, Vaseem Ahmed (vas201@gmail.com).

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!

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

Full Name

Amer Abuassi Parry Aftab Mawuli Stephen Karl Allorbi Arunvenkatesh Aruljothi Gerald N. Aska Mofakharul Bhuiyan Marley A Brackelmanns-Puig Scott Buchanan Raffael Candido Rabelo Nafi Diallo Samuel Jerome Durham Edwin Mauricio Escoto Steve Greig John Havens Gregory Holland Tyler James Huey Rodny Jean-Charles Hanyu Jiang Mihir V Kansagra Mateusz Kalata Daniel Jerome Kamieniecki Muhammad Rizwan Khalid Shahrouz Khalili Luke Kissel Jen-wei Kuo Guogen Liu Robert Joseph Messina Michael Rocco Moschetti Duke Nyangweso Sreenu M Panicker Nishil Parikh **Brijesh Patel** Umeshkumar Gandabhai Patel Stefano Perito Konrad Joseph Petelski Anna Petruczynik Shruthi Prakash Reddy Rekha Raju Xavier Rosario Carl Schneck Ami Shah Svetlana Stoyanchev Peter George Tomasi III Cecilia Tran Jospeh Tricarico Sebastian Florin Tudor Heta Vasoya

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IEEE Current Grade Student Member Associate Member Student Member Student Member Member Student Member Student Member Student Member Student Member Graduate Student Member Student Member Student Member Member Associate Member Student Member Student Member Student Member Graduate Student Member Student Member Student Member Student Member Student Member Graduate Student Member Student Member Graduate Student Member Graduate Student Member Member Student Member Student Member Graduate Student Member Graduate Student Member Student Member Member Student Member Student Member Student Member Graduate Student Member Graduate Student Member Student Member Student Member Student Member Member Member Student Member Member Graduate Student Member

Student Member

| Janki Jivrajbhai Vasoya | | | | |
|-----------------------------|--|--|--|--|
| Viswanadha Soma Sekhar Vegi | | | | |
| Edith Wilson | | | | |
| Nathan Wilk | | | | |
| Fengjia Yao | | | | |
| Alex Han Yuan | | | | |
| Sikander Zaheer | | | | |
| Shaojun Zhu | | | | |
| Fernando de Mesentier Silva | | | | |

Student Member Graduate Student Member Associate Member Student Member Student Member Student Member Student Member Graduate Student Member Student Member

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

If you would like to join the Pre-University forces of the IEEE North Jersey Section, I can provide you with my presentations. Again, please contact me by e-mail.

Taylor's World Conference – Call for Papers

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

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

Please submit proposals for papers or panels by March 1, 2015, by filling out submission proposal form. Paper proposals should be 250-500 words; panel proposals should collect individual paper abstracts of that same length and also include a brief description of the panel's overarching theme. Panel proposals may also suggest possible commentators.

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

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Matthew Andrews 2015 IEEE Fellow

for contributions to network design and wireless resource allocation

Matthew Andrews is a Distinguished Member of Technical Staff at Bell Laboratories, Alcatel-Lucent. His research interests include network optimization,

operations research and data analytics, with applications to resource allocation and revenue management in wireless networks, energy-efficient telecommunications and the analysis of large graphs. He has extensive publications in leading conferences and journals in computer science, networking and operation research, and holds multiple patents. In 2010 he was a recipient of the best paper award at the IEEE Symposium on Foundations of Computer Science (FOCS). Much of his research concerns the optimal way to schedule data in mobile networks when channel conditions are rapidly changed. He also has many results on the computational complexity of minimizing congestion when routing traffic in networks. More recently he has studied pricing strategies for mobile data that can help operators cope with the rapid increase in network demand. He received a BA in Mathematics with first-class honors from the University of Oxford in 1993 and a PhD in the Theory of Computing from MIT in 1997.



Garry Hoffman 2015 IEEE Fellow

for leadership in the advancement of monitoring systems for power transformers and power line protection

Gary Hoffman is Founder, President and CEO of Advanced Power Technologies where he has been for the last 15 years.

Previous to starting APT, Gary was General Manager of ALSTOM T&D Protection and Control Division in the United States where he spent three years. Prior to ALSTOM, he was with RFL Electronics where he held various executive positions including Senior Vice President of Sales and Marketing, Vice President of Operations, and Vice President of Engineering over an 8-year period. Mr. Hoffman holds 9 U.S. and Foreign Patents and is a Fellow Grade Member of IEEE, Member of the IEEE Transformers Committee, and Chair of Working Groups C57.12.10 and C57.116 as well as Vice Chair of PC57.163. He is also a member of the IEEE SA Standards Board, member AudCom and ICCom past member of RevCom ProCom, and PatCom. He is the author of Chapter 24 titled On-Line Monitoring of Liquid-Immersed Power Transformers. This book is edited by James H. Harlow. Mr. Hoffman's chapter deals with economic justification for online monitoring and covers the various techniques used to perform on-line monitoring major power transformer components including Power Transformer Core, Coil, and insulation systems; Power Transformer bushings; Load Tap Changers; Instrument Transformers. He is also a contributor to EPRI's The Copper Book, Chapter 9–Monitoring and Diagnostics. He holds a B.S. Engineering and M.S. Electrical Engineering from the State University of New York at Stony Brook.



Howard Huang 2015 IEEE Fellow

for contributions to multiple antenna techniques in wireless cellular networks

Howard Huang received a B.S. in electrical engineering from Rice University in 1991 and a Ph.D. in

electrical engineering from Princeton University in 1995. He has spent his entire career as a research engineer at Bell Labs, contributing to the fundamental understanding of multiple antenna (also known as multiple-input multiple-output, or MIMO) techniques and their application in cellular network standards including IS-95, UMTS, and LTE. He was a leading proponent of MIMO technologies in 3GPP UMTS standards, representing Bell Labs when MIMO was first proposed in 2000, and was a rapporteur for the MIMO work item. Dr. Huang has served as a guest editor on two issues of the IEEE Journal on Selected Areas of Communications, and he is a coauthor of the book MIMO Communication for Cellular Networks. Since 2013, he has led a group on Wireless Technologies for the Internet of Things which focuses on object tracking and machine-to-machine communications. Dr. Huang has taught as an adjunct professor at Columbia University and holds over twenty patents related to wireless communications.



Robert J. Safranek 2015 IEEE Fellow

for contributions to perceptual image and video compression and quality

Robert J. Safranek received the BSEE degree in 1980, MSEE degree in 1982 and PhD in 1986, all from Purdue University,

West Lafayette, IN.

From 1986 until 2000 he was with the Signal Processing Research department at Bell Laboratories. While at Bell Labs he worked on developing visual models for image and video quality evaluation and compression. He was also a member of the team that helped develop the US HDTV standard.

Since 2001 he has held the position of CTO/founder of Benevue, Inc. where he has led the development of their color formulation and matching products for the paint, dye, and printing industries.

Dr. Safranek holds over two dozen patents has published extensively.

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He was awarded the 1995 IEEE Donald G. Fink prize, was coprogram chair for the 2007 ICIP conference and is a former member of the IEEE Image and Multidimensional Signal Processing Technical Committee.

His current technical interests include visual models for quality assessment and compression and color matching



Unnikrishna Pillai 2015 IEEE Fellow

for contributions to adaptive signal processing and radar systems

Unnikrishna Pillai is currently a Professor of Electrical and Computer Engineering at the Polytechnic School of Engineering, New York University. Dr. Pillai joined the

Electrical Engineering department of Polytechnic Institute of New York (Brooklyn Poly) in 1985 as an Assistant professor after graduating from University of Pennsylvania with a PhD in Systems Engineering (1985), and from IIT, Kanpur, India with an MS in Electrical Engineering in 1982. His research interests include adaptive signal processing and synthetic aperture radar (SAR) imaging. He has co-authored five text books and monographs related to electrical engineering. Within the classroom, he has started using short video sessions to complement his lectures, a system wherein students can review source material or view lectures and work out problems before and after class sessions.

Recipients of Major IEEE Awards



Howard Leach 2014 IEEE MGA Achievement Award

for distinguished section volunteer leadership and outstanding contributions as Section Historian and IEEE Milestone Coordinator, serving IEEE for the benefit of the members and the engineering profession

Howard Leach retired from IBM with experience in product test, Safeguard Missile Defense software development, internal and external application development, system engineering and marketing within the Communications Industry group. He retired as a Lt. Col, USAFR, after active and reserve service within the USAF Minuteman Missile System, and within the Defense Logistics Agency Data Centers, respectively. He retired as an independent Information Technology consultant, specializing in validation of data collection on pharmaceutical study protocols. He served as Councilman, 1975-80, and on the Planning Board of the Borough of Morris Plains, NJ, and as NJ President of the Air Force Association, 2012-15. He is currently serving as a senior member, Lt Col, Civil Air Patrol, Lone Eagle Composite Squadron, NJ Wing.

Howard Leach has been a member of the IEEE North Jersey Section's Executive Committee since the 1980s. He served as Section Chair in 1989 and continues to serve within the Computer Chapter as needed and as the Section Chapter/Group Coordinator and Historian following Al Stolpen. He initiated and worked on Jerry Minter's oral history (Jerry Minter is the IRE North Jersey Sub-Section founder) which was the first within IEEE to be videotaped. He also worked on the Edison Laboratory milestone with Carl Sulzberger, dedicated Oct 18, 2008, and on the First Transistor milestone dedicated on Dec 8th, 2009. Finally, he worked on the Bell Telephone Laboratories, Inc., 1925-83, four milestones which, were dedicated on Dec 18th, 2014. Received an IEEE Region 1 and numerous Section Awards, including the Section's 2013 Distinguished Service Award.



Thomas L. Marzetta 2015 IEEE W.R.G. Baker Award

T.L. Marzetta, "Non-cooperative Cellular Wireless with Unlimited Numbers of Base Station Antennas," *IEEE Trans. Wireless Communications*, vol. 9, no. 11, pp. 3590–3600, Nov. 2010.

Thomas Marzetta is the originator of Massive MIMO. He is Group Leader of Large Scale Antenna Systems at Bell Labs, Alcatel-Lucent and Co-Head of their FutureX Massive MIMO project.

Dr. Marzetta was born in Washington, DC. He received the PhD and SB in Electrical Engineering from Massachusetts Institute of Technology in 1978 and 1972, and the MS in Systems Engineering from University of Pennsylvania in 1973. He worked for Schlumberger-Doll Research in petroleum exploration and for Nichols Research Corporation in defense research before joining Bell Labs in 1995 where he served as the Director of the Communications and Statistical Sciences Department within the former Math Center.

Currently Dr. Marzetta serves as Coordinator of the GreenTouch Consortium's Large Scale Antenna Systems Project, and as Member of the Advisory Board of MAMMOET (Massive MIMO for Efficient Transmission), an EU-sponsored FP7 project. For his achievements in Massive MIMO he has received the 2015 IEEE W. R. G. Baker Award, the 2014 GreenTouch 1000x Award, and the 2013 IEEE Guglielmo Marconi Prize Paper Award, among others. He was elected a Fellow of the IEEE in 2003, and a Bell Labs Fellow in 2014.







Ajay K. Poddar

2015 IFCS W.G. Cady Award

for the analysis, design and development of a host of frequency control products exhibiting state-of-the-art performance, including the development of extremely low noise crystal oscillator circuitry

Dr. Ajay K. Poddar has been selected for the prestigious 2015 IFCS W.G. Cady Award to be presented at the 2015 Joint Conference of the IEEE International Frequency Control Symposium & European Frequency and Time Forum in Denver, Colorado, on April 12-16, 2015.

The citation reads as follows, "

Dr. Ajay K. Poddar graduated from IIT (India Institute of Technology) Delhi, India; Doctorate (Dr.-Ing.) from TUB (Technical University Berlin), Germany; Post Doctorate (Dr.-Ing. habil) from BTU (Brandenburg Technology University Cottbus), Senftenberg, Germany. Dr. Poddar is a *Chief Scientist* at Synergy Microwave, Associate Professor at Oradea University-Romania, Guest lecturer at Technical University Berlin-Germany; Academic Advisory Board Member of Don Bosco Institute of Engineering, Bombay.

At Synergy Microwave, Dr. Poddar is responsible for design and development of a host of frequency generating and signal processing modules for industrial and space communication applications. Previously, he worked as a Senior Scientist from 1991-2001 at Defense Research & Development Organization (DRDO), India where he was program manager for many scientific projects. Dr. Poddar also served as a full professor at Pune University from 1995-2001. Dr. Poddar's scientific career has made a profound effect on the electronics industry notably in the area of high performance microwave systems, which include oscillators, synthesizers, mixers, and microwave circuit design techniques; commercialized and produced in millions for both commercial and space applications.

Dr. Poddar has received several awards for his scientific achievements, technological innovations, and meritorious services; holds several dozen patents and published over 250 scientific papers in international conferences and professional journals, contributed as an author/coauthor of 6-technical books. Dr. Poddar's photo was depicted on the cover page of Microwave Journal (vol. 54, no. 11, Nov. 2011) for his 25 years of scientific contributions, cited as one of "Divine Innovators" in the advancement of microwave technologies based on global voting. Dr. Poddar has been recently selected by the IEEE Ultrasonics, Ferroelectrics, and Frequency Control (IFCS) to receive the prestigious 2015 IFCS W.G. Cady Award in recognition of his outstanding contributions on the analysis, design, and development of a host of frequency control products exhibiting state-of-the-art performance, including the development of extremely low noise crystal oscillator circuitry.



Ulrich L. Rohde 2015 I. I. Rabi award

for intellectual leadership, selection and measurement of resonator structures for implementation in high performance frequency sources essential to the determination of atomic resonance

Prof. Dr.-Ing. habil. Dr. h.c. mult. Ulrich L. Rohde is the Chairman of Synergy Microwave Corp., Paterson, New Jersey; President of Communications Consulting Corporation. He is serving as an honorary member of the Senate of the Department of Defense University Munich, an honorary member of the Senate of the Brandenburg University of Technology Cottbus-Senftenberg, Germany, a past member of the Board of Directors of Ansoft Corporation, Pittsburgh, Pennsylvania; and he is a partner of Rohde & Schwarz, Munich, Germany. Prior to being appointed Honorary Professor of RF and Microwave Technologies at the University of Cottbus, Dr. Rohde was appointed Visiting Professor of RF and Microwave Technologies in November 2001 at the University of Cottbus, Germany, was member of the staff at George Washington University (1982) and as an adjunct professor at the University of Florida, Gainesville, teaching in the Electrical Engineering and Computer Sciences departments gave numerous lectures worldwide regarding communications theory and digital frequency synthesizers. He is also a full professor at the University of Oradea. Dr. Rohde has published more than 300 scientific papers in professional journals and several books and book chapters, and several dozen patents. Dr. Rohde is a an IEEE Fellow and a member of the IEEE Technical Committee for HF, VHF, and UHF Technology MTT-17, Member of the IEEE Signal Generation and Frequency Conversion MTT-22, Member of the Board of Trustees Fraunhofer Gesellchaft (EMFT) for Modular Solid State Technology, Member of the Board of Trustees of the Bavarian Academy of Science, and Honorary Member of the Academy of Science, all in Munich, Eta Kappa Nu Honor Society, Executive Association of the Graduate School of Business-Columbia University, New York, The Armed Forces Communications & Electronics Association, Fellow of the Radio Club of America, former Chairman of the Electrical and Computer Engineering Advisory Board at New Jersey Institute of Technology, IFCS 2014 C. B. Sawyer Award recipient, Honorary Professor at IIT Delhi, India, Chief Judge of IEEE IMS 2014 Student Design Competition, and Ph.D. Defense Committee Member at UCLA and Drexel University.



IEEE Region 1 Award Recipients:



Mani Iyer 2014 IEEE Region 1 Award

for outstanding leadership and service to the IEEE North Jersey Section

Mani Iyer is Radio Frequency (RF) Systems Engineer and Architect in Alcatel-Lucent's Wireless Business Unit. His current focus is on Small cells for

indoor and outdoor deployments, and most recently on 4G LTE technology in unlicensed bands. His specialized expertise is in the area of Base Station RF architecture and Engineering in the Radio Access Network. He has led several cross-functional teams to resolve technical problems in 3G and 4G Base station systems. He holds two U.S. patents in the area of Telecommunications technologies. He has received an M.S. in Electrical and Computer Engineering from the University of Texas at Austin and a Ph.D in Physics from the University of Pittsburgh.

Mani is a Senior Member of the IEEE. Among his technical activities in North Jersey section, Mani has led as Speaker Program Chair in the past two years in the Annual North Jersey Advanced Communications Symposium bringing prominent speakers and Students posters (competing for Best Poster awards) for the benefit of Metro Area Engineering professionals and students. As a combined Professional Development and Membership Development activity, Mani also coordinated eight-week Toastmaster International activity for the benefit of IEEE Section members; the program named "Speech Craft" was conducted with outstanding support from experienced members of two Toastmasters clubs, Cosmopolitan Toastmasters club and Murray Hill Speakers club located in Murray Hill, NJ. The structured program benefitted all the participants in developing their communication and Leadership skills.



Shweta Jain

2014 Region 1 Award

for contributions in engineering education and technical leadership

Shweta Jain is a senior member of IEEE, and an Assistant Professor at the Department of Mathematics and Computer Science at York College of CUNY as well

as Doctoral faculty of Computer Science at the Graduate Center of CUNY. Prior to York, she was a Research Associate at WINLAB, Rutgers University from 2008-2010, where she worked on various aspects of wireless network protocols, and applications in future Internet. She was a Senior Engineer at Staccato Communications, a San Diego based startup that built ultra-wide band chips and products. She has a M.S and Ph.D. in Computer Science from Stony Brook University and a of Bachelor Engineering in Electronics and Telecommunication Engineering from Bengal Engineering and Science University. Her research is in wireless networks and related fields and she teaches Computer Science courses at the Undergraduate and Graduate levels. In her five years long academic career, she has taught eight different courses, developed four new courses and implemented online-hybrid components for two of the courses. She was also the recipient of the Thurgood Marshal College Fund's "2014 Undergraduate Research to Retain and Graduate Students in STEAM" grant funding for her grant proposal "Engaging Undergraduates in Research that Speaks Their Language". This project engaged eight undergraduate students and one graduate student in future Internet Architecture research. Students presented their work at York College and one of them traveled to Princeton to show his design at the IEEE ISEC.



Meta M. Rohde 2014 IEEE Region 1 Award

for outstanding management in the design and production of state-of-the-art RF and Microwave components

Dr. Meta M. Rohde is the President of Synergy Microwave Corp. in Paterson, NJ. She completed her graduate and doctorate

study from Germany. Dr. Meta Rohde's dedication and leadership have made a profound effect on the microwave industry notably in pioneering new ways of making RF and microwave products efficiently. Dr. Meta Rohde has introduced for the first time the concept of surface mounted device (SMD) in electronic industries in 1985, now this technology used by almost all the electronic industries worldwide.



Prof. Ulrich Rohde 2014 IEEE Region 1 Award

for outstanding scientific contributions and leadership in the design and implementation of sophisticated RF technologies

(Prof. Rohde's biography can be found on page 7 of this Newsletter)





Recipient of the 2014 IEEE North Jersey Section Awards



Har Dayal 2014 IEEE North Jersey Section Award

for leadership and service to the IEEE North Jersey Section

Har Dayal received his BS and MS degrees from Agra College, Agra University, Agra, India, in Physics (Applied Electronics). After his MS, he taught undergraduate

students at VSSD College, Kanpur, India, and spent two years at Instrument Research and Development Labs (IRDE), presently called Defence Electronics Automations Labs (DEAL), in Dehradun, India.

In 1966-1968, he spent two years in Somali Republic under a UNDP program and taught at the Technical Institute Borao, Somali Republic. He pursued his Ph.D. degree in electrical Engineering from 1968 to 1972 at the University of Mississippi, Oxford, MI, USA. From 1972-1982, he worked at Lorch Electronics in Englewood, NJ, and at the Frequency Engineering Labs, Farmingdale, NJ. In 1982, he moved to Singer-Kearfott's Research and Development Department, where he developed state-of-the-art RF and Microwave components and sub-systems for communication and electronic warfare equipment. In 1988, Singer-Kearfott was bought and integrated in what is now BAE Systems in Wayne, NJ. Mr. Dayal contributed to the development of advanced receivers and transmitters at the L-band, developed wide-band voltage tuned filters and low loss evanescent mode filters, and wide-band power amplifiers and synthesizers for, among others, joint tactical information distribution systems and lowprobability of intercept altimeters. He is a co-recipient of BAE System's Silver Award as a team member of "receiver on a chip". Har Dayal has served as the IEEE North Jersey Section's 2005-2006 Chair and as its Vice-Chair in 2002-2005, and 2011-2013. He has also served the Section's AP/MTT Chapter as its Chair for many years.



Richard Tax

2014 IEEE North Jersey Section Award for leadership and service to the IEEE North Jersey Section

Richard Tax is a graduate of Fairleigh Dickinson University with a BSEE degree. He is a Senior Member of the IEEE. He is retired and worked for many

years on the design of precision/power electro-mechanical control systems. Richard Tax has been active in the IEEE North Jersey Section since 1974. He served the Section as a Member-at-Large (1982-1983), Vice-Chairman (1983-1985), and member of the Education Committee. He was Chairman of the North Jersey Section from 1985 through 1986. In 1987-1988, he chaired IEEE's Metropolitan Sections Activities

Council (METSAC). He also served as the Vice-Chair of the IEEE USA Manpower Committee (1985, 1988). In 1985, he chaired the North Jersey Ad hoc Committee that critiqued and condemned a Northeastern University report that claimed EE's were obsolete at age 35. Later in an Electronic Engineering Times interview the authors admitted they could not validate their accusations. He was appointed Chair of the Section's Professional Activities Committee for Engineers (PACE) in 1976. As PACE Chairman he organized more than 100 meetings and advised other IEEE Sections about PACE activities. He originated and managed Project EGO, a program to stimulate member interest by adding a PACE NEWS column to the Section's Newsletter. This column continued for 9 years. He wrote more than 80 articles dedicated to professional activities. In 1977, he started the USAB Task Force for the BLS, Occupational Outlook Department. With Congressional assistance this Task Force made significant corrections to their Occupational Outlook Handbook. He directed the efforts of this operation for 6 This project is now supported by the IEEE-USA vears. Manpower Committee.

In 1989-1990, he served as IEEE Region 1, Area B's PACE Chair. In 1989 he organized the Region 1 Careers Conference with 110 registered attendees. Richard again served as PACE Chairman of the North Jersey Section, and was appointed as PACE Chairman of METSAC and Area B of Region I. He was active at the national level on the IEEE-USA Manpower Committee and the author of the IEEE-USA's Entity Position Statement "Enhancing U.S. Productivity through Improved Utilization of Engineers." In 1990, he joined the American Engineering Association, Inc. (AEA), and in 1991, he founded their publication "American Engineer." Since 2005, he is the President of AEA. From 2001-2008, he served as PACE Chair of IEEE METSAC. Richard Tax continues to serve as the Section's PACE Chair.

Richard Tax is the recipient of several IEEE awards and recognitions, including the 1979 IEEE North Jersey Section Award for Leadership, the IEEE Region 1 United States Activities Board (USAB) Regional Professional Activities Award (1981), the IEEE Centennial Medal (1984), the IEEE USAB Citation of Honor (1984), the IEEE USAB Professional Achievement Award (1988), the 1989 IEEE Region 1 Award for outstanding contributions to engineering professionalism, and the 2000 Third Millenium Medal. Under his leadership, IEEE North Jersey Section's PACE affinity group received the Region 1 Alex Gruenwald PACE Award in 1990, 1992-1995, 1997, 2003-2005, 2007-2008, and 2010-2012.



Calendar of Events

- April 01, 3:00 PM to 4:00 PM: IEEE VTS/Stevens– Significant Gains in Coverage and Downlink Capacity from Optimal Antenna Down Tilt for Closely-spaced Cells in Wireless Networks - Dr. Asif D. Gandhi, Distinguished Member of the Technical Staff, Alcatel-Lucent Location: Babbio Center, Room 119, Stevens Institute of Technology, Hoboken, NJ 07030, Contact: Adriaan J. van Wijngaarden, avw@ieee.org (avw@ieee.org), Getting to Stevens Institute of Technology Read More...
- April 01, 6:00 PM to 9:00 PM: IEEE North Jersey Section EXCOM Meeting Murray Hill NJ Location: Bell Laboratories, Alcatel-Lucent, Main Building, Room: 6A-106, 600 Mountain Avenue, Murray Hill, NJ 07974, Contact: Adriaan J. van Wijngaarden, avw@ieee.org (avw@ieee.org), Getting to Bell Labs Read More...
- April 03, 1:00 PM to 2:00 PM: IEEE CS and FDU 2015 Hardware in Cybersecurity: From the Weakest Link to Great Promises Dr. Qu, Director, Maryland Embedded Systems and Hardware Security (MeshSec) Lab and the Wireless Sensors Laboratory Location: Fairleigh Dickinson University, Auditorium, M105, Muscarelle Center, Teaneck, NJ 07666 Getting to FDU, Contact: Hong Zhao (201)-692-2350, zhao@fdu.edu; Howard Leach h.leach@ieee.org, Read More...
- April 08, 6:30 PM to 9:00 PM: IEEE North Jersey Section PACE- Engineers Meet– Russell Harrison, IEEE-USA's Director of Government Relations Location: Clifton Memorial Library, 292 Piaget Ave., Clifton, NJ 07011 Getting to Clifton Memorial Library (Tel. 973 772-5500)
 Contact: Richard F. Tax, (201- 664-6954) rtax@verizon.net (PACE Meeting - Second Wednesday of every month) Read More...
- April 8, 10:45 AM to 12:00 PM: IEEE COMSOC, CS QoS Throttling to Elicit User Cooperation in Computer Systems Kevin A. Kwiat
 U.S. Air Force Research Laboratory in Rome, NY
- Location: NJIT ECE 202, 161 Warren Street, Newark, NJ 07102 Getting to NJIT Contact: Hong Zhao (201)-8894677, zhao@fdu.edu; or Nirwan Ansari, nirwan.ansari@njit.edu, Read More...
- April 09, 6:30 PM to 8:30 PM: IEEE CNNNJ Internet of Things Dr. Kevin Lu, Consultant on connected devices and services Location: Morris County Library, 30 East Hanover Avenue, Whippany, NJ 07981 Getting to Morris County Library Contact: Robert Walker, 973-728-0344, or visit our website, www.TechnologyOnTap.org Read More...
- April 10, 12:00 PM to 1:00 PM: IEEE SP, CS and FDU Sensors and Sampling: A Homological Approach Promises Dr. Don Sheehy, Assistant Professor of Computer Science at The University of Connecticut Location: Fairleigh Dickinson University, Auditorium, M105, Muscarelle Center, Teaneck, NJ 07666 Contact: Hong Zhao (201)-692-2350, zhao@fdu.edu; Howard Leach h.leach@ieee.org, Getting to FDU, Read More...
- April 13, 11:00 AM to 12:00 PM: IEEE SMC, CS Petri-net Controller Synthesis for Discrete Event Systems JiLiang Luo, Ph.D.& Associate Professor, Department of Control Science and Engineering, Huaqiao University, Xiameng, China Location: NJIT - ECE 202, 161 Warren Street, Newark, NJ 07102 Getting to NJIT Contact: Prof. Mengchu Zhou (zhou@njit.edu), Read More...
- April 22, 6:00 PM to 8:30 PM: IEEE IMS Measuring Crest for LTE and WiFi signals using Peak Power Meters Vitali Penso Location: Bell Laboratories, Alcatel-Lucent, Main Building, Room: 6A-106, 600 Mountain Avenue, Murray Hill, NJ 07974, Contact: Emad Farag (enfarag@ieee.org), Getting to Bell Labs
- April 24, 9:00 AM to 2:00 PM: IEEE PES/IAS- Trustworthy Critical infrastructures: Threats, Vulnerabilities and Protection through NERC CIP Compliance - Saman Zonouz of Rutgers University 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...
- April 27, 12:00 PM to 1:00 PM: IEEE SP, CS and FDU Nonlinear Dynamics, High Dimensional Data, and Persistent Homology Dr. Konstantin Mischaikow, Distinguished Professor at Rutgers University, Mathematics Department and the BioMaPS Institute Location: Fairleigh Dickinson University, Auditorium, M105, Muscarelle Center, Teaneck, NJ 07666 Contact: Hong Zhao (201)-692-2350, zhao@fdu.edu; Alfredo Tan, tan@fdu.edu, Howard Leach h.leach@ieee.org, Getting to FDU, Read More...
- May 03, 3:00 PM to 6:00 PM: IEEE North Jersey Section Awards Banquet
 Location: Birchwood Manor, 111 North Jefferson Road, Whippany, NJ 07981 Getting to Birchwood Manor
 Contact: Adriaan J. van Wijngaarden (avw@ieee.org) Read More...
- May 04, 5:30 PM to 7:00 PM: IEEE AP/MTT, ED?CAS SoC Design Trends, Challenges and First Pass Success Dr. Nagi Naganathan, Avago Technologies

Location: NJIT - ECE 202, 161 Warren Street, Newark, NJ 07102 Getting to NJIT Contact: Dr. Ajay K. Poddar, Ph.: 201-560-3806, email:akpoddar@ieee.org, Prof. D. Misra,(973-596-5739), dmisra@njit.edu, Prof. Edip Niver, (973-596-3542), edip.niver@njit.edu, 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
- IEEE North Jersey Section IT and Columbia University -Mini-Symposium on 'The Internet of Things': April 1st 2015, 1:00 pm 7:00 pm, Davis Auditorium, Room 412 CEPSR, Columbia University, Schapiro Center, 530 West 120 St, New York, NY 10027, Getting to Schapiro Center, Columbia Univ. NY
- 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

April 1, 2015 IEEE IT and Columbia University present: Mini-Symposium on the Internet of Things

This Mini-Symposium on the Internet of Things is hosted by Columbia University's Data Science Institute's working group "Sense, Collect and Move Data" with an aim to bring together researchers from academia, industry and the government with a shared interest in the Internet of Things and related topics.

Registration for all 'Data on a Mission' events is required for admission. Seating is limited and registration for the events will proceed on a first-come basis.

Registration for the Mini-Symposium on the "Internet of Things" ONLY is FREE for everyone, however, registration is still required: [Click Here, select fifth option down].

Additional Information: http://roam.me.columbia.edu/iotsymposium

AGENDA

TIME

SPEAKER

- 1:00 PM Registration and Check-In 2:00 PM
- 2:00 PM Opening Remarks 2:30 PM Debasis Mitra | Professor of Electrical Engineering Keynote Presentation Flavio Bonomi | Chief Executive Officer, Nebbiolo Technologies

- "IoT: The Convergence of Information Technologies and Operations Technologies"

2:30 PM - Presentation Session I

3:30 PM Session Chair: Matei Ciocarlie | Assistant Professor of Mechanical Engineering Wonsuk Lee | Vice President, Cloud Platform

Team, Software R&D Center, Samsung Electronics - "Cloud Platform for IoT" Aussie Schnore / Principal Engineer, GE Global Research - "Industrial Internet: Bridging the Physical, Digital and Business Divide"

3:30 PM - Panel Session: Human-Machine and Wearable 4:15 PM Systems Moderator: Sunil Agrawal | Professor of Mechanical Engineering

> Panelists: Daniel M. Baechle | United States Army Research Laboratory James M. Noble | Assistant Professor of Neurology, Columbia University Medical Center Damiano Zanotto | Associate Research Scientist,

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Department of Mechanical Engineering,
Columbia University
Kilsu Eo / Executive Vice President, Samsung
Electronics
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4:15 PM - Poster Session and Break

4:45 PM

- 4:45 PM Presentation Session II
- 5:45 PM Session Chair: Peter Kinget | Professor of Electrical Engineering

Dan Steingart | Assistant Professor, Andlinger Center for Energy and the Environment, Princeton University

- "Energy Scavenging, Energy Harvesting and Energy Storage and the IoT: Limitations and Opportunities"

Ajith Amerasekara | TI Fellow, Texas Instruments, Inc.

- "Internet of Things: Key Technologies and Opportunities for the Semiconductor Industry" Frank Lane | Vice President of Technology, Qualcomm New Jersey Research Center - "The Role of Cellular in the Internet of Things"

5:45 PM - Panel Session: IoT Systems

6:30 PM Moderator: Zoran Kostic | Associate Professor of Professional Practice in Electrical Engineering Panelists: Alicia Abella | Assistant Vice President, Cloud Technologies and Services Research Organization, AT&T Harish Viswanathan | CTO Partner, Alcatel-Lucent Bell Labs Michael Wang | Founder, NYC IoT Startup Scence Xiaoxin Qiu | Vice President, Systems Design Engineering, Broadcom

6:30 PM - Reception 7:00 PM

Location: Davis Auditorium, Room 412 CEPSR, Columbia University, Schapiro Center, 530 West 120 St, New York, NY 10027, Getting to Schapiro Center, Columbia Univ. NY

Time: 1:00PM to 7:00PM (No Admission Charge)

Contact: Adriaan van Wijngaarden, IEEE New York/North Jersey Information Theory Society Chapter Chair, (avw@ieee.org), Debasis Mitra, Columbia University, (http://datascience.columbia.edu/debasis-mitra-1)

For Updates and Registration: Click Here

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April 1, 2015 IEEE VTS/Stevens present: Significant Gains in Coverage and Downlink Capacity from Optimal Antenna Down-Tilt for Closely-spaced Cells in Wireless Networks

Speaker: Dr. Asif D. Gandhi, Distinguished Member of the Technical Staff, Alcatel-Lucent

Abstract: This talk focuses on the impact of antenna down tilt for closely placed cells. The results show the need for small to no down tilt in coverage-limited scenarios, otherwise (for the case of close placement of cells), down tilt improves performance significantly. The most important conclusion of this study is that there is a large gain in downlink coverage and capacity due to down-tilting to the correct range of values; in fact, without the correct down tilt, all the gain in coverage due to the close placement of cells is lost. The simulations demonstrate that all in-building penetration advantage (up to 40 dB for the examples simulated in this paper) and up to 60% of the capacity can be lost if the tilts are off by 4° to 5° from the optimal for closely placed cells. In-building coverage is one of the challenges for current cellular systems, and it is shown that the same range of down tilt is optimal whether the users are in-building or on-street; hence the concern that down tilt will reduce in-building coverage is demonstrated as inaccurate for closely placed cells.

Another question that this presentation addresses is: Are the down tilts which have been optimized for 3G systems also optimal for the 4G system? It is shown that the tilts that are optimal for 3G and voice systems are very good (if not optimal, at least near optimal) for the 4G LTE system. The simulations show that optimal down tilts can substantially reduce the number of basestations (and hence capital investment) needed from the point of view of capacity. Given the capacity constraints in 4G LTE systems, the study suggests that antenna design and down tilts must receive much more than nominal focus for urban areas.

Biography: Asif D. Gandhi is a distinguished member of technical staff in Alcatel-Lucent's Wireless Business Unit. His current focus is on CDMA/EVDO and OFDMA technologies, and he has been the customer technical prime for a Tier 1 customer since the last 2 years. He has led several crossfunctional teams to solve complex technical problems in CDMA systems. He specialized expertise is in the area of RF performance, capacity, and coverage of wireless systems. He holds more than 15 U.S. patents and has several other patents pending, all in the area of wireless technologies. Several of these innovations have found their way into Alcatel-Lucent CDMA and UMTS products. Dr. Gandhi has published several journal and conference papers and numerous technical memorandums on the above topics, and is the author of a chapter in the book, "Handbook of CDMA System Design, Engineering and Optimization." He received his bachelor of technology (B. Tech.) degree in electrical engineering from the Indian Institute of Technology (IIT), Mumbai, India, and

an M.S. and Ph.D. in electrical and computer engineering from the University of Massachusetts, Amherst.

Location: Babbio Center, Room 319, Stevens Institute of Technology, Hoboken, NJ 07030, Getting to Stevens Institute of Technology (*Room subject to change*)

Time: 3:00 PM to 4:00 PM

Contact: Mani Iyer (mani.iyer@ieee.org), Yu-Dong Yao (yyao@stevens.edu)

For Updates and Registration: Click Here

April 1, 2015 IEEE North Jersey Section EXCOM Meeting – Murray Hill, NJ

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

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

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

Everyone is welcome to attend this meeting.

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

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

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

Time: 06:00 PM to 08:45 PM

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

For Updates and Registration: Click Here

April 3, 2015 IEEE CS, FDU present: 2015 Hardware in Cybersecurity: from the Weakest Link to Great Promises

Speaker: Dr. Qu, Director of Maryland Embedded Systems and Hardware Security (MeshSec) Lab and the Wireless Sensors Laboratory.

Abstract: It is well-known that hardware implementation can outperform the software implementation of most applications, including security primitives such as encryption, by up to several order of magnitudes. However, hardware implementation may also make these mathematically sound security primitives vulnerable. In this talk, we will discuss the





role of hardware in cybersecurity. First, we will use the finite state machine (FSM) model to demonstrate that systems built with today's design flow and tools are vulnerable against a simple random walk attack. We further show that a malicious designer can embed Hardware Trojan Horse (HTH) into the system to gain unauthorized control of the system. We then describe a practical circuit level technique to guarantee the trustworthiness of the circuit implementation of a given FSM. Second, we describe our recent work on physical unclonable function (PUF), a unique feature embedded in the chip during fabrication process. PUF has many promising applications in security and trust such as device authentication and secret key generation and storage. We will focus on the usability problems of PUF: how to push the amount of PUF information we can extract to the theoretical upper bound; how to ensure that the PUF information is random (and thus secure against attacks); how to improve the hardware efficiency when implementing a PUF. Finally, we will show very briefly a couple of our projects on hardware-software co-design in building security and trust to demonstrate the great promise that hardware can bring to cybersecurity.

Biography: Gang Qu received his Ph.D. degree in computer science from the University of California, Los Angeles, in 2000. He is currently a professor in the Department of Electrical and Computer Engineering and Institute for Systems Research, University of Maryland at College Park. He is also a member of the Maryland Cybersecurity Center and the Maryland Energy Research Center. Dr. Qu is the director of Maryland Embedded Systems and Hardware Security (MeshSec) Lab and the Wireless Sensors Laboratory. His primary research interests are in the area of embedded systems and VLSI CAD with focus on low power system design and hardware related security and trust. He studies optimization and combinatorial problems and applies his theoretical discovery to applications in VLSI CAD, wireless sensor network, bioinformatics, and cybersecurity. He has published more than 150 journal articles and conference papers in these areas. Dr. Qu is an enthusiastic teacher; he has taught and cotaught various security courses including VLSI Design Intellectual Property Protection, Cybersecurity for Smart Grid, Reverse Engineering and Hardware Security Lab, and a popular MOOC on Hardware Security through Coursera.

Location: Fairleigh Dickinson University, Auditorium, M105, Muscarelle Center, Teaneck, NJ 07666 Getting to FDU

Everyone is welcome to attend this meeting.

Time: 1:00PM-2:00PM

Contact: Hong Zhao (201)-692-2350, (zhao@fdu.edu); Howard Leach (h.leach@ieee.org)

For Updates and Registration: Click Here

April 8, 2015

IEEE North Jersey Section PACE – Engineers Meet – Russell Harrison to Meet North Jersey PACE

Speaker: Russell Harrison, IEEE-USA, Director of Government Relations

Abstract: On Wednesday, April 8, 2015 the North Jersey Section Professional Activities Committee will meet with IEEE-USA Lobbyist, Russell Harrison for a discussion about the real world of Engineering, Politics and IEEE-USA. Bring your Members and friends and discuss the Profession and your thoughts about Engineering.

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

Join the IEEE North New Jersey Section for an evening discussing the new Congress, what we can expect, and what we can do about it

A mid-meeting break will provide pizza and refreshments.

Biography: Russell Harrison is IEEE-USA's Director of Government Relations. He provides insights, predictions and opportunities for engineers in 2015.

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

Time: 6:30 PM to 8:45 PM, (second Wednesday of every month).

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

PACE HELP! To All: We need guest speakers and subjects for meetings.

Call (201 664-6954 or send to rtax@AEA.org)

For Updates and Registration: Click Here

Back to Calendar of Events

April 8, 2015

IEEE COMSOC, CS and NJIT Helen & John C. Hartmann Dept. of ECE present: QoS Throttling to Elicit User Cooperation in Computer Systems

Speaker: Kevin A. Kwiat

U.S. Air Force Research Laboratory in Rome, NY

Abstract: While there exist strong security concepts and mechanisms, implementation and enforcement of these security measures is a critical concern in the security domain. Normal users, un-aware of the implications of their actions, often attempt to bypass or relax the security mechanisms in place, seeking instead increased performance or ease of use.





Thus, the human in the loop becomes the weakest link. This shortcoming adds a level of uncertainty unacceptable in highly critical information systems. Merely educating the user to adopt safe security practices is limited in its effectiveness; there is a need to implement a technically sound measure to address the weak human factor across a broad spectrum of systems. In this talk, we present a game theoretic model to elicit user cooperation with the security mechanisms in a system. We argue for a change in the design methodology, where users are persuaded to cooperate with the security mechanisms after suitable feedback. Users are offered incentives in the form of increased Quality of Service (QoS) in terms of application and system level performance increase. Users' motives and their actions are modeled in a game framework using the class of generalized pursuit-evasion differential games.

Approved for Public Release; Distribution Unlimited: 88ABW-2008-1165

Biography: Kevin A. Kwiat is a Principal Computer Engineer with the U.S. Air Force Research Laboratory (AFRL) in Rome, New York where he has worked for over 31 years. He is currently assigned to the Cyber Assurance Branch. He received the BS in Computer Science and the BA in Mathematics from Utica College of Syracuse University, and the MS in Computer Engineering and the Ph.D. in Computer Engineering from Syracuse University. He holds 4 patents. In addition to his duties with the Air Force, he is an adjunct professor of Computer Science at the State University of New York at Utica/Rome, an adjunct instructor of Computer Engineering at Syracuse University, and a Research Associate Professor with the University at Buffalo. He is an advisor for the National Research Council. He has been recognized by the AFRL Information Directorate with awards for best paper, excellence in technology teaming, and for outstanding individual basic research. His main research interest is dependable computer design.

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

Time: 10:45 AM to 12:00 PM

Contact: Hong Zhao (201)-8894677, (zhao@fdu.edu); or Nirwan Ansari, (nirwan.ansari@njit.edu)

For Updates and Registration: Click Here

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April 9, 2015

IEEE Consultants' Network of Northern NJ presents: Internet of Things

Speaker: Dr. Kevin Lu, Consultant on connected devices and services

Abstract: The Internet of Things (IoT) promises far reaching changes to how we work, play, and live. Many of the electronic items in your house will be connected, addressable, and controllable via the Internet. It is a technology growth area with considerable commercial possibilities.

It is certain that the evolution of the IoT will play out in our lifetimes. Companies exploring the IoT right now could possibly become peers with Microsoft and Google.

This presentation provides an overview of the Internet of Things (IoT). It describes use cases and building blocks such as sensor networks, communication protocols, application programming interfaces (APIs), systems design and management, data analytics, and tools.

Biography: Dr. Kevin Lu is a consultant on connected devices and services, who teaches a graduate course on the Internet of Things at Stevens and serves as Advisor to the Standards Development Board of the IEEE Communications Society. He was with Applied Research at Bellcore/Telcordia/Ericsson through March 2012, and with Broadcom Mobile and Wireless Group from April 2012 to December 2013. Kevin can be reached at klu@ieee.org.

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! No fees or registration required.

Location: Morris County Library, 30 East Hanover Avenue, Whippany, NJ, Getting to Morris County Library

Time: 6:30PM to 8:30PM

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

Contact: Robert Walker (973-728-0344), (r.d.walker@ieee.org) or visit, www.TechnologyOnTap.org. For updates and Registration: Click Here

April 10, 2015

IEEE SP, CS, and FDU present: 2015 Sensors and Sampling: A Homological Approach Promises -

Speaker Dr. Don Sheehy, Assistant Professor of Computer Science, at the University of Connecticut.

Abstract In their seminal work on homological sensor networks, de Silva and Ghrist showed the surprising fact that its possible to certify the coverage of a coordinate free sensor network even with very minimal knowledge of the space to be covered. We give a new, simpler proof of the de Silva-Ghrist Topological Coverage Criterion that eliminates any assumptions about the smoothness of the boundary of the underlying space, allowing the results to be applied to much more general problems. The new proof factors the geometric, topological, and combinatorial aspects of this approach. This factoring reveals an interesting new connection between the topological coverage condition and the notion of weak feature

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size in geometric sampling theory. We then apply this connection to the problem of showing that for a given scale, if one knows the number of connected components and the distance to the boundary, one can also infer the higher betti numbers or provide strong evidence that more samples are needed. This is in contrast to previous work which merely assumed a good sample and gives no guarantees if the sampling condition is not met.

Biography: Don Sheehy received his B.S.E. from Princeton University and his Ph.D. in Computer Science from Carnegie Mellon University under Gary Miller. He spent two years as a postdoc with the Geometrica group at Inria Saclay in France. He is now Assistant Professor of Computer Science at The University of Connecticut. His research is in algorithms and data structures in computational geometry and topological data analysis.

Location: Fairleigh Dickinson University, Auditorium, M105, Muscarelle Center, Teaneck, NJ 07666 Getting to FDU

Everyone is welcome to attend this meeting.

Time: 12:00PM-1:00PM

Contact: Hong Zhao (201)-692-2350, (zhao@fdu.edu); Howard Leach (h.leach@ieee.org) For Updates and Registration: Click Here

April 13, 2015

IEEE SMC and CS present: Petri-net Controller Synthesis for Discrete Event Systems

Speaker JiLiang Luo, Ph.D.& Associate Professor, Department of Control Science and Engineering, Huaqiao University, Xiameng, China.

Abstract Due to "state-space explosion" of discrete-event systems, to quickly design reliable control software is very difficult although it is required in some applications such as smart manufacturing. As is well known, the theory and tools about analysis and synthesis of Petri nets have been well developed. Therefore, this problem may be well addressed if a controller can be designed as a Petri net. In this talk, the methods are introduced to design Petri-net controllers for partially controllable and/or observable discrete-event systems, to convert a Petri net controller to a ladder diagram (a program of programmable logical controller), and to design a ladder diagram for collision avoidance in an automatic guided vehicle system.

Biography: JiLiang Luo (S'00-M'03-SM'06) received his B.S. and M.S. degree in Thermal Power Engineering from Northeast Dianli University of China in 2000 and 2003, respectively, and Ph. D. degree in Control Science and Engineering from Zhejiang University of China in 2006. He joined Huaqiao University, Xiamen, China in 2006, and is now an Associate Professor and Associate Chair of Department of Control Science and Engineering. He visited Chiba University of Japan from 2009 to 2010 and New Jersey Institute of Technology of USA from 2014 to 2015, respectively. He was awarded as an Asian Journal of Control's Outstanding Reviewer of 2011, and won Ho Pan Qing Qi Best Paper Award in the area of Discrete Event Dynamic Systems in 2012. His research interests are in Petri nets, discrete event systems, and program verifications. He has over 30 publications including papers in Automatica and IEEE Transactions on Automatic Control. He is a member of the Council of Chinese Association of Petri nets, and that of Association of Automation in Fujian province of China.

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

Everyone is welcome to attend this meeting.

Time: 11:00AM-12:00PM

Contact: Prof. Mengchu Zhou (zhou@njit.edu) For Updates and Registration: Click Here

April 22, 2015

IEEE IMS presents: Measuring Crest for LTE and WiFi signals using Peak Power Meters

Speaker: Vitali Penso,

Abstract: While the increasing bandwidths of the multi carrier LTE and 802.11ac WiFi present no significant challenges for the average power meter, average power measurement may not be adequate to understand the operation of LTE equipment, particularly the Power Amplifier, especially for making crest factor measurements. In contrast Peak Power Meters have the unique capability to measure peak as well as average power hence the crest factor of a signal using statistical analysis (CCDF). Triggered time domain power capability of the peak power meter is ideal for pulsed WiFi signals used in 802.11ac where time markers allows the user to measure and analyze peak and average power of each frame. In this talk and presentation we will review power meter technologies and measurement challenges. The presentation will include live demonstration using a USB peak power meter.

Biography: Vitali Penso is an Application Engineer for Boonton & Noisecom (Wireless Telecom Group) supporting customers in the USA for the power meter and noise generator products. He earned his BSEE and MSEE at Washington University in St.Louis and spent majority of his career working on cellular wireless telecommunication equipment & system design (Transceiver, PA linearization and RRH) before joining Wireless Telecom Group as an application engineer. He has written application notes and recorded short videos on a number of subjects on testing WiFi, LTE & Radar signals, performing EMI/EMC testing as well as high speed serial communications for 802.3 jitter testing, all of which can be accessed on www.boonton.com and www.noisecom.com.

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

Time: 06:00 PM to 08:30 PM







Contact: Emad Farag (enfarag@ieee.org) For Updates and Registration: Click Here

April 24, 2015

IEEE PES and IAS present - Trustworthy Critical Infrastructures: Threats, Vulnerabilities and Protection through NERC CIP Compliance

Speaker: Saman Zonouz of Rutgers University

Abstract: The PES and IAS Chapters will sponsor a technical seminar on the topic of Trustworthy Power-Grid Critical infrastructures: Threats, Vulnerabilities and Countermeasures through NERC CIP (North American Electric Reliability Corporation - Critical Infrastructure Protection). The session will be held on Friday, April 24, 2015 at PSE&G's Hadley Road Facility.

Topic: Critical cyber-physical infrastructures, such as the power grid, integrate networks of computational and physical processes to provide the people across the globe with essential functionalities and services. Protecting these critical infrastructures is a vital necessity because the failure of these systems would have a debilitating impact on economic security and public health and safety. In this talk, I will i) focus on real past and potential future threats against critical infrastructures; ii) discuss the challenges in design, implementation, and analysis of security solutions to protect cyber-physical platforms; iii) introduce novel classes of working systems that we have developed to overcome these challenges in practice; and iv) present NERC CIP (North American Electric Reliability Corporation - Critical Infrastructure Protection) requirements and their regulations in current real-world platforms.

Biography: Saman Zonouz is an Assistant Professor in the Electrical and Computer Engineering Department at Rutgers University since September 2014 and the Director of the 4N6 Cyber Security and Forensics Laboratory. Before, he held a tenure-track position at the University of Miami for three years. He has been awarded NSF CAREER Award in 2015, the Best Student Paper Award at IEEE SmartGridComm 2013, Google Security Award, the University EARLY CAREER Research Award in 2012 as well as the Provost Research Award in 2011. The 4N6 research has been funded by over \$5.5M in grants from National Science Foundation (NSF), Office of Naval Research (ONR), Department of Energy -Advanced Research Projects Agency Energy (DOE ARPA-E), WinRiver, Google, and Fortinet Corporation. Saman's current research focuses on systems security and privacy, trustworthy cyber-physical critical infrastructures, binary and malware analysis and reverse engineering, as well as adaptive intrusion tolerance architectures. Saman has served as the chair, program committee member, and a reviewer for international conferences and journals. He obtained his Ph.D. in Computer Science, specifically, intrusion tolerance architectures for the cyber-physical infrastructures, from the University of Illinois at Urbana-Champaign in 2011.

Email: saman.zonouz@rutgers.edu Address:Rutgers University, 94 Brett Road, Piscataway, New Jersey, United States, 08854-8058

Location: PSE&G - Hadley Road Facility, Auditorium, 4000 Hadley Road, South Plainfield, NJ 07080-1192.

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

April 27, 2015

IEEE SP, and FDU present: Nonlinear Dynamics, High Dimensional Data, and Persistent Homology

Speaker: Dr. Konstantin Mischaikow, Distinguished Professor at Rutgers University, Mathematics Department and the BioMaPS Institute.

Abstract It is almost cliche at this point to note that high dimensional data is being collected from experiments or generated through numerical simulation at an unprecedented rate and that this rate will continue rising extremely rapidly for the foreseeable future. Our interest is in data associated with nonlinear dynamics. The focus of this talk is on our efforts to use topological tools to characterize and classify high dimensional nonlinear time series associated with processes that exhibit complex spatiotemporal patterns. The long term goal is to develop robust efficient techniques for comparing experimental work against numerical simulation. I will introduce the necessary mathematical theory and provide examples arising from fluid flow and dense granular media.

Biography: Dr. Konstantin Mischaikow received a B.A. in mathematics from Reed College in 1979, and an M.A and Ph.D. in mathematics from the University of Wisconsin, Madison in 1983 and 1985, respectively. He was a Visiting Assistant Professor (Research) in the Division of Applied Mathematics at Brown University from 1985-1987. He spent 1987-1989 at Michigan State University and then moved to Georgia Tech from 1989 – 2006, and is currently a Distinguished Professor at Rutgers University with a joint appointment in the Mathematics Department and the BioMaPS Institute. His research interests include nonlinear dynamics, computational topology, and topological data analysis.

Dr. Mischaikow is a Fellow of the American Mathematical Society. He has served on the editorial or advisory boards of a variety of journals including the Journal of Differential

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Equations, SIAM Dynamical Systems, SIAM Numerical Analysis, and Foundations of Computational Mathematics.

Location: Fairleigh Dickinson University, Auditorium, M105, Muscarelle Center, Teaneck, NJ 07666 Getting to FDU

Everyone is welcome to attend this meeting.

Time: 12:00PM-1:00PM

Contact: Hong Zhao (201)-692-2350, (zhao@fdu.edu); Alfredo Tan, (tan@fdu.edu), Howard Leach (h.leach@ieee.org)

For Updates and Registration: Click Here

May 3, 2015 IEEE North Jersey Section Awards Banquet

The annual IEEE North Jersey Section Awards Banquet will be held on Sunday, May 3, 2015 at the Birchwood Manor, in Whippany, New Jersey.

A time to relax, unwind and enjoy --

A time to pay tribute to our new Fellows --

A time to honor our Award Winners --

The Annual Section IEEE Awards Reception will be held at the Birchwood Manor, 111 North Jefferson Road, Whippany, this year. The affair is scheduled for Sunday, May 3, 2015 from 3 pm to 6 pm. Spouses and guests are welcome. Tickets are \$35 per person. The capacity of the location is 90 persons, so please make your reservations early. Please use the vTools link to make the reservation. Please register all persons by completing the name, address, and e-mail entries on the form. Payments can be made through vTools, or by sending a check, payable to the IEEE North Jersey Section, with your name(s), address and e-mail to Adriaan J. van Wijngaarden, Bell Labs, Alcatel-Lucent, Room 2A-425, 600 Mountain Ave, Murray Hill, NJ 07974, by Monday April 27, 2015. We will send you a confirmation e-mail upon request.

For more information, please contact Adriaan J. van Wijngaarden (<u>avw@ieee.org</u>). Ken Oexle, Awards Committee Chair, Adriaan J. van Wijngaarden, North Jersey Section Chair

Location: Birchwood Manor, 111 North Jefferson Road Whippany, NJ 07981 Getting to Birchwood Manor

Time: 03:00PM to 06:00PM

Contact: Adriaan J. van Wijngaarden, (avw@ieee.org) For Updates and Registration: Click Here

May 4, 2015

IEEE AP/MTT and ED/CAS present: SoC Design – Trends, Challenges and First Pass Success

Speaker Dr. Nagi Naganathan of Avago Technologies

Abstract Moore's law scaling of sub-nanometer design process has enabled the integration of several million transistors with a variety of functionality as a System-On-Chip (SoC). The first generation of SoCs were designed with a single processor, DSP and a large number of reusable IP (Intellectual Property), memory software. The current generation of SoCs have multiple processors, multiple buses, analog components and a large amount of software.

I'll present the trends and challenges in SoC Design. Will present some thoughts on complexity and provide some ideas for managing the complexity. Will provide a motivation for first pass success and will present some practical approaches for verification. Will also present the Zen and Art of Debugging. We will conclude with the practical ideas with a holistic view for getting it right.

Biography: Nagi Naganathan is currently a Principal Engineer with Avago Technologies, Allentown. He has 20+ years of experience with the design of chips for video, networking and storage products. He is currently involved with the design of SoCs for storage products. His areas of interests are SoC Design and Architecture, Low Power and ARM Based designs. He served as an adjunct professor in Rutgers University. He is the Secretary of IEEE Princeton/Central Jersey Section and also the Chair of SSCS Chapter. He received his Phd from Southern Methodist University, Dallas, M.ScE from University of New Brunswick and B.E from University of Madras all in Electrical Engineering.

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

Everyone is welcome to attend this meeting.

Time: 5:30PM-7:00PM

Contact: Prof. D. Misra (973-596-5739), dmisra@njit.edu, Dr. Ajay K. Poddar, (201-560-3806), akpoddar@ieee.org, Prof. Edip Niver, (973-596-3542), edip.niver@njit.edu

For Updates and Registration: Click Here Back to Calendar of Events



IEEE North Jersey Section Course

Project Risk Management in Seven Saturdays

Saturdays, March 7 through April1 25, 2014 Seven weekly classes (March 7, 14, 28, April 4, 11, 18, 25, 2015)

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

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

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

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

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

TOPICS

1. Explain the need for a project risk manager

2. Define SOW, PERT, GANTT, CPM, and Scope of the project

3. Identify the team members, resources and plan for the strategy

4. Calculate schedule, budget variances, and monitor project progress

5. Manage risks, changes, estimates, and communications

6. Set a baseline, import tasks from MS Excel, export MS Project files to MS Word

7. Approve updates and conclude a project plan

8. Analyze Cloud Computing, Service Level Agreements, IT Security

9. Present student Projects

WHERE: New Jersey Institute Technology, Newark, New Jersey

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

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

CONTACT: Donald Hsu, yanyou@hotmail.com,

REGISTRATION: Project Risk Management in Seven Saturdays

Please mail the completed registration form with a check (Checks payable to "North Jersey Section IEEE") to

Dr. Donald Hsu, Chair Education Committee, IEEE North Jersey Section, P. O. Box 2093, Fort Lee, New Jersey 07024.

| Name: | Email address | S | | | | | | |
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| □ Non-member | | | | | | | | |
| IEEE Member Member #: | Member of | | technical society | | | | | |
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| 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 Addres | s: | | | |
| Home address: | | | | |
| Business (day) telephone #: | | | Home telephone #: | |
| Please enclose rec | quired fee payable to: | North Jersey S | ection IEEE | |
| □ I wish to receiv | e the IEEE Completi | on Certificate | Signature: | |
| | | | | |





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