

The



IEEE Newsletter

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

NJ IMS:

Internal Development of Test and Measurement Hardware for Wireless Infrastructure Applications

On Tuesday, April 6, 2010, the IEEE North Jersey Section of the Instrumentation and Measurement Society (IMS) is hosting a talk entitled "Internal Development of Test and Measurement Hardware for Wireless Infrastructure Applications." The presenter will be Charles Jobbers, MTS, Andrew Corporation.

About the Talk

The cost pressures on commercial infrastructure component manufacturers have forced organizations to explore innovative solutions to reduce test costs. For some manufacturers, viable options to address specific test and measurement needs must be developed internally. Andrew Corporation decided to design our own hardware to determine whether cost savings are possible while maintaining the necessary performance criteria needed to test our commercial wireless infrastructure hardware. Utilizing a highly-focused, small development team and a straightforward goal to reduce cost, we decided to develop a line of modular hardware that may be used by R&D, reliability and production test and measurement needs. We have successfully developed an Arbitrary Waveform Generator (ARB), Digital Upconverter, CW Signal Source and Reflectometer that are used in Vector Signal Generators (VSGs) and Vector Network Analyzers (VNA's) which are currently in use throughout the organization. Our work has resulted in a significant reduction in our capital equipment expenditures as well as a new product line which may be marketed as a lower cost alternate to the RF & Microwave Test and Measurement industry.

About the Speaker

Charles D. Jobbers earned his Bachelor's Degree in Electronic

Engineering Technology from DeVry University in North Brunswick, NJ, in June 2001. Later he received his Master's Degree in Software Engineering from Monmouth University in West Long Branch, NJ, in May 2006. He is currently pursuing an MBA in Finance from the same institution. He is currently working as an Engineering Manager at Andrew Corporation for the last 6 years. Previously, he held titles of Test Engineer, Software Engineer, and RF Engineer at Mitec Wireless, Inc., based out of Montreal Canada.

All Welcome!

Free admission. Members and non-members welcome.

Time: 6:30 PM, Tuesday, April 6, 2010. Free buffet will be provided at 5:30 PM.

Place: New Jersey Institute of Technology (NJIT), Room 202, ECE Center (Intersection between Warren & Summit Streets), Newark, NJ. Directions are available at <http://www.njit.edu/about/visit/gettingtonjit.php>.

Information: Russell C. Pepe, 201-960-6796, rcpepe@ieee.org.

Elevate to Senior Member Grade!

To get information and an application to advance to Senior Member Grade, see <http://www.ieee.org/web/membership/senior-members/>. For further information or to find potential references, contact Mario Ogava, Membership Chair, at m.ogava@ieee.org.

Do you want to help make fusion energy a reality?

Do you live within commuting distance of Middlesex, NJ? Are you handy with tools and do careful work? Are you available to work one or two days a week?

If the answers are yes, please contact Eric Lerner at elerner@igc.org <<mailto:elerner@igc.org>> as soon as possible. We are interested in anyone who fits the above requirements, but we would especially like to get help from a retired electrical engineer who enjoys getting electronic equipment to work.

Lawrenceville Plasma Physics, Inc. in Middlesex, NJ is carrying out a project in controlled nuclear fusion using the dense plasma focus device. For more information on our focus fusion approach, please visit www.focusfusion.org <<http://www.focusfusion.org>>. We need help in taking apart and putting back together our machine and switches and in setting up and maintaining our many instruments.

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IEEE NJ SECTION HOME PAGE

<http://web.njit.edu/~ieeenj/>

IEEE NJ SECTION NEWSLETTER HOME PAGE

<http://web.njit.edu/~ieeenj/NEWSLETTER.html>

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The North Jersey Section Executive Committee usually meets the first Wednesday (except holidays and December) of each month at 7:00 PM. Meetings are open to all members. For information on meeting agenda contact Secretary Russell Pepe at (201) 960-6796, rcpepe@ieee.org.

NJ EDS/C&S & MTT-S/AP-S Ch.: Power Handling and Temperature Compensation Design for Passive Microwave Devices

On April 21, 2010, the IEEE NJ Section Electron Devices, Circuits and Systems Chapters together with MTT/S/AP-S and the New Jersey Institute of Technology will host a talk on "Power Handling and Temperature Compensation Design for Passive Microwave Devices." The speaker will be Dr. Ming Yu, IEEE Fellow.

About the Talk

Modern communication and radar transmitter systems require high performance RF/Microwave devices and components to improve communication and detection range. The increase in range is accomplished by increased transmitted power and higher receiver sensitivity. The increased transmitted power requires the engineer to estimate the transmitter's power handling capability as part of the design process. In addition, the engineer has to meet several competing requirements at a specified pressure level, such as containment of transmitted bandwidth (wide or narrow, i.e., reduce adjacent channel spill over), minimize group delay variations, and reduce performance drifts with environmental condition changes (e.g., temperature, pressure, and humidity). When designing devices for these high-power operations, one often has to take into account the following effects: multipactor and ionization breakdown, passive intermodulation interferences and thermal-related issues such as temperature compensation. This talk will elaborate the physics background, technical challenges and design methodologies. It will also cover the clever use of both circuit and electromagnetic modeling techniques. Numerous examples will be presented from those widely used in the industry. The method presented is general and is applicable to all device types.

About the Speaker

Dr. Ming Yu, IEEE Fellow, received the PhD degree in electrical engineering from the University of Victoria, Victoria, BC, Canada, in 1995. In 1993, while working on his doctoral dissertation part time, he joined COM DEV, Cambridge, ON, Canada, as a Member of Technical Staff. He was involved in designing passive microwave/RF hardware from 300 MHz to 60 GHz for both space and ground based applications. He was also

a principal developer of a variety of COM DEV's core design and tuning software for microwave filters and multiplexers, including computer aided tuning software in 1994 and fully automated robotic diplexer tuning system in 1999. His varied experience also includes being the Manager of Filter/Multiplexer Technology (Space Group) and Staff Scientist of Corporate Research and Development (R&D). He is currently the Chief Scientist and Director of R&D. He is responsible for overseeing the development of company R&D roadmap and next generation products and technologies, including high frequency and high power engineering, electromagnetic based CAD and tuning for complex and large problems, novel miniaturization techniques for microwave networks. He is also an Adjunct Professor with the University of Waterloo, ON, Canada. He holds NSERC Discovery Grant from 2004-2013 with Waterloo. He has authored or coauthored over 90 publications and numerous proprietary reports. He holds 8 patents with 6 more pending.

Dr. Yu is an IEEE Distinguished Microwave Lecturer from 2010 to 2012. He serves MTT committees as the Vice Chair of MTT-8 and served as Chair of TPC-11. He is a member of editorial board of many IEEE and IET publications. He was the recipient of the 1995 and 2006 COM DEV Achievement Award for the development a computer-aided tuning algorithms and systems for microwave filters and multiplexers.

Many of his publications are available at Waterloo Web site: <http://ece.uwaterloo.ca/~mingyu/>.

All Welcome!

You do not have to be a member of the IEEE to attend.

Time: 7:00 PM, Wednesday, April 21, 2010. Free buffet will begin at 6:30 PM.

Place: New Jersey Institute of Technology (NJIT), Room 202, ECE Center (Intersection between Warren & Summit Streets), Newark, NJ. Directions are available at <http://www.njit.edu/about/visit/gettingtonjit.php>.

Information: Dr. Edip Niver, (973) 596-3542, Dr. Durga Misra, (973) 596-5739 (dmisra@njit.edu), Har Dayal, (973) 633-4618 (har.dayal@baesystems.com), or Kirit Dixit, (201) 669-7599, kdixit@ieee.org.

IEEE North Jersey Section Activities

April 2010

Apr. 6 – “Internal Development of Test and Measurement Hardware for Wireless Infrastructure Applications” by Charles Jobbers, NJ IMS, 6:30 PM, New Jersey Institute of Technology (NJIT), Room 202, ECE Center (Intersection between Warren & Summit Streets), Newark, NJ. Russell C. Pepe, 201-960-6796, rcpepe@ieee.org.

Apr. 6 - May 25 – “Project Management” by George Sierchio, 6:30 PM to 9:00 PM, Room: ECEC 202 , NJIT, 161 Warren Street, Newark, NJ. Donald Hsu, yanyou@hotmail.com.

Apr. 7 – “NJ Section Meeting”, 6:30 PM, “Executive Committee Meeting” - 7:00 PM, Clifton Public Library - Allwood Branch, 44 Lyall Road, Clifton, NJ 07012. Russell Pepe at rcpepe@ieee.org.

Apr. 14 – “Engineers Meet: The Need to Get Together” by Dr. Stephen H. Unger, NJ PACE, 6:30 PM to 9:00 PM, Clifton Memorial Library, 292 Piaget Ave, Clifton, NJ. Paul Ward, (973) 790-1625, PWARD1130@aol.com, Richard F. Tax, (201) 664-6954, rtax@aea.org.

Apr. 15 – “Secure Data Access in Unattended Sensor Networks” by Dr. Yanchao Zhang, NJ Computer Society, 5:00 PM, Auditorium M105, Muscarelle Center, Fairleigh Dickinson University, 1000 River Rd, Teaneck, NJ. Michael Malm (201) 355-6167, mmalm@ieee.org, Hong Zhao (201) 692-2350, zhao@fdu.edu, Howard Leach (973) 540-1283, hhleach@ieee.org.

Apr. 20 – “Professional Networking Happy Hour”, NJ WIE, GOLD, SAC, 6:00- 8:00 PM, Dorrians’s, 555 Washington Blvd, Jersey City, NJ. Jignasa Ray at jignasa.ray@ieee.org.

Apr. 21 – “Power Handling and Temperature Compensation Design for Passive Microwave Devices” by Dr. Ming Yu, NJ EDS/C&S & MTT-S/AP-S Chapters, 7:00 PM, New Jersey Institute of Technology (NJIT), Room 202, ECE Center (Intersection between Warren & Summit Streets), Newark, NJ. Dr. Edip Niver, (973) 596-3542, Dr. Durga Misra, (973) 596-5739 (dmisra@njit.edu), Har Dayal, (973) 633-4618 (har.dayal@baesystems.com), or Kirit Dixit, (201) 669-7599, kdixit@ieee.org.

Apr. 23 – “2010 IEEE VTS/Stevens Workshop on LTE and 4G Technologies”, NJ VTS, 1:00 PM – 5:00 PM, Stevens Institute of Technology, Hoboken, NJ. Prof. Yu-Dong Yao, yyao@stevens.edu.

Apr. 29 – “More Assistance for Small High-Tech Businesses: Resources and Grants from NJ COS&T” by Dr. Peter Reczek, NJ Consultants' Network, 7:00 PM, Olive Restaurant, Parsippany Hilton, Parsippany, NJ. Robert Walker, (973) 728-0344, or visit www.TechnologyOnTap.org.

Upcoming Meetings

May 2 – “NJ Section Awards Reception” - 3:00 to 6:00 PM at the Birchwood Manor, 111 North Jefferson Rd, Whippany, NJ. Anne Giedlinski (973) 377-3175.

May 4 – “Outdoor ITE-Global Deployment” by Don Gies, NJ IMS, 6:30 PM, Alcatel-Lucent, Building 5, 600 Mountain Avenue, Murray Hill, NJ. Russell C. Pepe, 201-960-6796, rcpepe@ieee.org.

May 5 – “NJ Section Meeting”, 6:30 PM, “Executive Committee Meeting” - 7:00 PM, Clifton Public Library - Allwood Branch, 44 Lyall Road, Clifton, NJ 07012. Russell Pepe at rcpepe@ieee.org.

May 5 – “From Deep Trenches to Skyscrapers: A walk down Memory Lane” by Dr. Subramanian Iyer, NJ EDS/C&S, 7:00 PM, New Jersey Institute of Technology (NJIT), Room 202, ECE Center (Intersection between Warren & Summit Streets), Newark, NJ. Dr. Edip Niver, (973) 596-3542, Dr. Durga Misra, (973) 596-5739 (dmisra@njit.edu), Har Dayal, (973) 633-4618 (har.dayal@baesystems.com), or Kirit Dixit, (201) 669-7599, kdixit@ieee.org.

May 12 – “Engineers Meet: The Upside of Downsizing” by Diane Young, NJ PACE, 6:30 PM to 9:00 PM, Clifton Memorial Library, 292 Piaget Ave, Clifton, NJ. Paul Ward, (973) 790-1625, PWARD1130@aol.com, Richard F. Tax, (201) 664-6954, rtax@aea.org.

Sep. 14 – “Selecting the Appropriate Environmental Test Chamber for Renewable Energy Applications” by Mark R. Chrusciel, NJ IMS, 6:30 PM, New Jersey Institute of Technology (NJIT), Room 202, ECE Center (Intersection between Warren & Summit Streets), Newark, NJ. Russell C. Pepe, 201-960-6796, rcpepe@ieee.org.

Members and Non-Members Welcome

PLEASE POST

2010 IEEE Eric Sumner Award

Dr. Reinaldo A. Valenzuela



Reinaldo A. Valenzuela obtained his BSc at the University of Chile, and his PhD from Imperial College of Sc. and Tech., U. of London, England. At Bell Laboratories, he carried out indoor microwave propagation measurements and developed statistical models. He also worked on packet reservation multiple access for wireless systems and optical WDM networks. He became Manager, Voice Research Department, at Motorola Codex, involved in the implementation integrated voice and data packet systems. On returning to Bell Laboratories he was involved in propagation measurements and ray tracing propagation prediction. He received the Distinguished Member of Technical Staff award and is Director of the Wireless Communications Research Department. He is currently engaged in MIMO / space time systems achieving high capacities using transmit and receive antenna arrays. He is a Fellow of the IEEE. He has been editor for the IEEE Transactions on Communications and the IEEE Transactions on Wireless. He has published over 130 papers and has 12 patents. He has over 7500 Google Scholar citations and he is a "Highly Cited Author" in Thomson ISI and a Fulbright Senior Specialist. He is the 2010 recipient of the IEEE Eric E. Sumner Award.

NJ Section PACE:

Engineers Meet: The Need to Get Together

On Wednesday, April 14, 2010 the North Jersey Section Professional Activities Committee will meet for a discussion about "The Need to Get Together." The speaker will be Dr. Stephen H. Unger.

About the Meeting

Jobs of American engineers remain in jeopardy due to the combination of outsourcing of work to low-pay countries and the H-1B and L1 programs that bring in, as guest workers, engineers from such countries. All this for the benefit of the corporations who control our government, acting thru both major parties. Other professions, including even medicine and law, are also affected. Jobs of Americans in less exalted occupations are evaporating as the US dismantles its factories.

Engineers still employed are in weak positions with respect to management, with little leverage when it comes to disputes over working conditions or concerns over such matters as being required to violate their consciences by signing off on defective or inadequately tested products. Lone individuals simply don't have the firepower to win battles with management in the workplace, or in the political arena.

In order to protect their careers, engineers need to band together to defend their interests. This is not easy, as even organizations that they form themselves might become corrupted or diverted in undesirable directions. Designing organizations resistant to such distortion is a challenging problem. The incentive is that the lone ranger approach is clearly the wrong answer.

Bring your associates, friends and spouses.

About the Speaker

Our speaker will be Dr. Stephen H. Unger. Dr. Unger is a Professor Emeritus of Computer Science and Electrical Engineering at Columbia University. Previously he worked at Bell Labs and, while at Columbia, he worked for various companies including IBM and RCA Labs during summers and sabbaticals. Apart from technical publications, he has written about, and given many talks on, technology policy issues, including engineering ethics, the engineering job situation, energy, and government imposed secrecy. He was a founder, and later President of, the IEEE Society on Social Implications of Technology. A decade ago, he served on the IEEE Board of Directors, and on various IEEE Boards including the US Activities Board

(now called IEEE-USA). He was a member of the IEEE Ethics Committee 1995-98 (as chair 1997-98). His email address is unger@cs.columbia.edu and he has a blog at <http://www1.cs.columbia.edu/~unger/myBlog/endsandmeansblog.html>.

All Welcome!

Members and students from all professional societies and engineering disciplines are welcome. We now have attendees from IEEE, ASME, NSPE, ASCE and AEA. For information about these groups see:

www.aea.org
www.ieeeusa.org/policy/care
www.ieeeusa.org
www.programmersguild.org
<http://web.njit.edu/~ieeenj/>
www.asme.org/sections/northjersey

CARE is the Congressional Advocacy Recruitment Effort CARE is a voluntary network of IEEE members who are interested in public policy. To help and for information go to www.ieeeusa.org/policy/care/.

Time: 6:30 PM to 9:00 PM, Wednesday, April 14, 2010. Refreshments will be served.

Place: Clifton Memorial Library, 292 Piaget Ave, Clifton, NJ, (973) 772-5500.

Information: Paul Ward, (973) 790-1625, PWARD1130@aol.com, Richard F. Tax, (201) 664-6954, rtax@aea.org.

NJ Computer Society:

Secure Data Access in Unattended Sensor Networks

On Thursday, April 15, 2010, the IEEE North Jersey Section Computer Society Chapter will host a presentation entitled "Secure Data Access in Unattended Sensor Networks" by Dr. Yanchao Zhang.

About the Talk

Sensor networks are large-scale multi-hop wireless networks consisting of densely deployed, spatially distributed, and autonomous devices using sensors to cooperatively monitor biological, physical, or environmental phenomena. Many sensor networks are envisioned to be deployed in remote and extreme areas such as oceans, mountains, and deserts, where there is no "always-on" high-speed communication link connecting the sensor network to the outside data center. The sheer amount of data continuously generated, therefore, must be stored inside the network and accessed on demand. Security and privacy issues are

the key factors that determine the proper functioning of an unattended sensor network. This talk will address the latest solutions to two issues which have not received enough attention. The first will discuss how to realize distributed privacy-preserving access control in sensor networks such that only authorized users can access the sensed data, while no one, including the network owner, can tell the identity of any user. The second will illustrate how a data user (e.g., the sink) can verify the authenticity and correctness of any query results by taking multidimensional range queries as an example.

About the Speaker

Yanchao Zhang received a BE Degree in Computer Science and Technology from Nanjing University of Posts & Telecom, Nanjing, China, in 1999, an ME Degree in Computer Science and Technology from Beijing University of Posts & Telecom, Beijing, China, in 2002, and the PhD in Electrical and Computer Engineering from the University of Florida, Gainesville, Florida, in 2006. He has been an Assistant Professor in the Department of Electrical and Computer Engineering at New Jersey Institute of Technology since August 2006. His primary research interests are network and distributed system security, wireless networking, and mobile computing. He is an Associate Editor of IEEE Transactions on Vehicular Technology, a Feature Editor of IEEE Wireless Communications, and a Guest Editor of IEEE Wireless Communications Special Issue on Security and Privacy in Emerging Wireless Networks. He is a TPC Co-Chair of Communication and Information System Security Symposium, IEEE GLOBECOM 2010, and a Workshop Co-Chair of ACM MSWiM'10. He received the NSF CAREER Award in 2009.

All Welcome!

You do not have to be a member of the IEEE to attend. Bring your friends and network during the free pre-meeting pizza starting at 4:30 PM.

Time: 5:00 PM, Thursday, April 15, 2010, pre-meeting pizza starting at 4:30 PM.

Place: Auditorium M105, Muscarelle Center, Fairleigh Dickinson University, 1000 River Rd, Teaneck, NJ 07666, http://www.fdu.edu/visitorcenter/directions/teaneck_map.html.

Information: Michael Malm (201) 355-6167, mmalm@ieee.org, Hong Zhao (201) 692-2350, zhao@fdu.edu, Howard Leach (973) 540-1283, hleach@ieee.org.

NJ Consultants' Network:

More Assistance for Small High-Tech Businesses: Resources and Grants from NJ COS&T

The April 29, 2010 meeting of the IEEE Consultants' Network of Northern NJ will feature a talk on assistance for small high-technology businesses provided by Dr. Peter Reczek of the State of New Jersey Commission on Science and Technology.

About the Talk

Dr. Reczek an extensive background in high-tech start-ups that he founded, as well as in managing technology transfer and industrial-academic partnerships.

Dr. Reczek will highlight many of the state programs that foster growth of small design or manufacturing businesses or benefit engineers in consulting practices.

About the Speaker

Dr. Peter R. Reczek received his PhD in Biophysics at the University at Buffalo and has served in several academic positions at Brandeis University, Harvard Medical School, Dartmouth College and the University at Buffalo.

Peter served as the founding Director of the Tech Transfer office at Roswell Park Cancer Institute. He was instrumental in the establishment of a technology transfer committee that reviewed all new invention disclosures for potential patenting by the Institute and was twice cited by the NIH for "best practices" for federally funded Institutions. In addition, he was the founder of three biotechnology companies, has done extensive consulting for biotech companies in drug discovery and technology transfer.

Dr. Reczek has been actively involved in scientific research management in both the academic and industrial environments. He has developed a major research group at Bristol Myers Squibb Co., and more recently, established a program at Roswell Park to identify novel estradiol analogues for the treatment of breast and cervical cancer.

Currently, Dr. Reczek serves as the Executive Director of the New Jersey Commission on Science and Technology where he has responsibility for New Jersey's science and technology programs including the New Jersey Stem Cell Institute, the Edison Innovation R&D fund and the Edison Clean Energy and Renewable Energy Technologies funds.

About the Consultants' Network

Founded in 1992, the IEEE Consultants Network of Northern NJ encourages and

promotes the use of independent technical consultants by business and industry.

April 2010 Meeting Venue

The C>NNNJ continues to vary venues and formats for its monthly events. This April, we will meet for dinner and a networking session, followed by our feature presentation, in the Olive Restaurant.

Depending on expected number of participants, the restaurant will provide either a dinner buffet for only \$30 per person or menu selections at similar prices. Participation in dinner is not required in order to attend the presentation.

Since seating is limited, we ask that you contact us as soon as possible to reserve a seat.

All Welcome!

Members and non-members are welcome.

Time: Dinner starts at 7:00 PM, Thursday, April 29, 2010, followed by feature presentation.

Place: Olive Restaurant at the Parsippany Hilton, located off Route 10 West in Parsippany, NJ. The restaurant is situated in the south side of main atrium

Registration and More Information: RSVP by Tuesday, April 27, will be appreciated. Contact Robert Walker at r.d.walker@ieee.org or (973) 728-0344. Specify whether you will be attending the dinner portion of the meeting (recommended). Dinner \$30, meeting participation - free. Schedule and arrangements may change due circumstances beyond our control. Always the visit C>NNNJ Web site (TechnologyOnTap.org) or call our information line (973-728-0344) prior to the event.

NJ EDS/C&S:

From Deep Trenches to Skyscrapers: A walk down Memory Lane

On May 5, 2010, the IEEE NJ Section Electron Devices, Circuits and Systems Chapters together with the New Jersey Institute of Technology will host a talk titled "From Deep Trenches to Skyscrapers: A walk down Memory Lane." The speaker will be Distinguished Lecturer, Dr. Subramanian Iyer.

About the Talk

Memory technology and the memory business has for many years been the engine that powered technological innovations in the semiconductors especially in the area of lithography and innovative micro-structural engineering. While stand-alone memory itself has been commoditized, when embedded in high performance logic it provides incredible leverage for high performance processors, network and mobile appliances, and almost every application. In this talk, we will explore the course of memory in systems, especially DRAM, integration of deep trench technology into high performance logic, the value it brings as well as the collateral advantages it has brought about in power management, noise decoupling, autonomic chip repair and its potential evolution into 3-dimensional chip technology.

About the Speaker

Subramanian S. Iyer is a Distinguished Engineer and Chief Technologist for the Semiconductor Research and Development Center, IBM Systems & Technology Group, and is responsible for technology development strategy, embedded memory and 3 Dimensional Integration. Until recently he was Director of 45nm CMOS Development. He obtained his B.Tech in Electrical Engineering at the Indian Institute of Technology, Bombay, and his MS and PhD in Electrical Engineering at the University of California at Los Angeles. He joined the IBM T. J. Watson Research Center in 1981 and was manager of the Exploratory Structures and Devices Group till 1994, when he founded SiBond LLC to develop and manufacture Silicon-on-insulator materials. He has been with the IBM Microelectronics Division since 1997. Dr. Iyer has received two Corporate awards and four Outstanding Technical Achievement awards at IBM for the development of the Titanium Salicide process, the fabrication of the first SiGe Heterojunction Bipolar Transistor, the development of embedded DRAM technology and the development of eFUSE technology. His current technical

interests and work lie in the area of 3-dimensional integration for memory sub-systems and the semiconductor roadmap at 22nm and beyond. He holds over 40 patents and has received 22 Invention Plateau awards at IBM and is a Master Inventor. He received the Distinguished Alumnus award from the Indian Institute of Technology, Bombay in 2004. Dr. Iyer has authored over 150 articles in technical journals and several book chapters and co-edited a book on bonded SOI. He has served as an Adjunct Professor of Electrical Engineering at Columbia University, NY. Dr. Iyer is a Fellow of IEEE and a Distinguished Lecturer of the IEEE and Chair of the mid-Hudson chapter of the Electron Device Society.

All Welcome!

You do not have to be a member of the IEEE to attend.

Time: 7:00 PM, Wednesday, May 5, 2010. Free buffet will begin at 6:15 PM.

Place: New Jersey Institute of Technology (NJIT), Room 202, ECE Center (Intersection between Warren & Summit Streets), Newark, NJ. Directions are available at <http://www.njit.edu/about/visit/gettingtonjit.php>.

Information: Dr. Edip Niver, (973) 596-3542, Dr. Durga Misra, (973) 596-5739 (dmisra@njit.edu), Har Dayal, (973) 633-4618 (har.dayal@baesystems.com), or Kirit Dixit, (201) 669-7599, kdixit@ieee.org.

NJ Section PACE:

Engineers Meet:

The Upside of Downsizing

On Wednesday, May 12, 2010 the North Jersey Section Professional Activities Committee will host a meeting to host a meeting to discuss the "The Upside of Being Downsized." Our speaker will be Diane Young.

About the Meeting

If you have been downsized or fear that you may be, then you will want to attend this informative and thought-provoking seminar.

You will learn: How to turn a challenge into an opportunity by changing your outlook.

Through experiential exercises, how to set and achieve goals. Tips on how to survive and thrive in a down economy.

This is a discussion group that is designed to be fun and interactive. Handouts will be given so you may apply what you have learned long after the seminar has ended.

About the Speaker

Diane Young is a certified professional coach who focuses on both relationship and career transition coaching. She completed her studies at the Institute for Professional Excellence in Coaching (iPEC), a renowned training program accredited by the International Coach Federation (ICF).

The LYF Experience is the name of Diane's coaching practice and LYF stands for Love Yourself First. Diane has learned that success begins with self-love and self-acceptance. She works closely with her clients to help them let go of self-defeating thoughts and behaviors, discover their potential, take action and achieve their personal and career goals.

In response to this challenging economic climate, Diane founded and facilitates a support and networking group called The Unemployed Optimists where participants can connect and feel inspired and motivated during their transition. Feature stories on this group have appeared in The Record, The Star Ledger and Herald News and on News 12 NJ.

Diane's practice includes individual, couples and group coaching. She may be reached at diane@thelyfexperience.com.

All Welcome!

Members and students from all professional societies and engineering disciplines are welcome. We now have attendees from IEEE, ASME, NSPE, ASCE and AEA. For information about these groups see:

www.aea.org
www.ieeeusa.org/policy/care
www.ieeeusa.org
www.programmersguild.org
<http://web.njit.edu/~ieeenj/>
www.asme.org/sections/northjersey

CARE is the Congressional Advocacy Recruitment Effort CARE is a voluntary network of IEEE members who are interested in public policy. To help and for information go to www.ieeeusa.org/policy/care/.

Time: 6:30 PM to 9:00 PM, Wednesday, May 12, 2010. Refreshments will be served.

Place: Clifton Memorial Library, 292 Piaget Ave, Clifton, NJ, (973) 772-5500.

Information: Paul Ward, (973) 790-1625, PWard1130@aol.com, Richard F. Tax, (201) 664-6954, rtax@aea.org.

IEEE Region 1 Southern Area Entrepreneur's Day on May 8th

The IEEE Southern Area Region 1 in collaboration with Monmouth University's 'School of Science' & 'Center for Entrepreneurship' is proud to announce the planning of the event - 'IEEE Entrepreneurs Day' on May 8, 2010, to be held at Monmouth University auditorium. The seating capacity of the hall is about 300 though we are initially targeting a limit of enrollment at 200.

Given major restructuring of the industries we serve and the associated job cuts due to closing down of plants by major employers such as Bell Labs, Avaya, Ft. Monmouth (by 2011) in the Southern Area many engineers employed or otherwise are learning to be entrepreneurs entering into new areas of opportunities. With our federal government's focus on innovations in areas such as renewable energy and Bio Technology to get us out of the current economic conditions the question is how can our engineers plan to get a bit out of some \$200 billion dollars of stimulus money not yet spent.

The IEEE Entrepreneur's day will be of various seminars that will provide attendees to learn as to:

- How to leverage available resources from federal and state level
- What successful CEO/CTO did in making entry in these new areas
- What the government is trying to do from our Government leaders.

Invitations are being extended to Governor's office of NJ for his attendance as well as Congressional Representatives like Dr. Rush Holt who represents this area in Monmouth County.

Initially the event is open only to IEEE members with very nominal and non-refundable cost to cover lunch and coffee breaks, etc. The best way for non-members to assure a seat is to become a member and/or they participate once space is available. This collaboration with the departments of Monmouth University is a unique event bringing together Industry and Academic professionals in sponsoring a very high value activity.

More information will be available shortly. Contact: TK Srinivas at: tksieee@gmail.com.

NJ IMS:

Outdoor ITE-Global Deployment

On Tuesday, May 4, 2010, the IEEE North Jersey Section of the Instrumentation and Measurement Society (IMS) is hosting a talk entitled "Outdoor ITE-Global Deployment." The presenter will be Don Gies, MTS, Alcatel-Lucent Global Product Compliance Laboratory.

About the Talk

This talk explores aspects of IEC 60950-1, enclosure test standards (UL 50, CSA C22.2 No. 94, NEMA 250, IEC 60529, IEC 60950-22), and global electrical codes and wiring methods that impact outdoor ITE, and provides insight on how to juggle, compromise, and reconcile conflicting international requirements.

About the Speaker

Don Gies has been a Product Compliance Engineer for over 23 years. Since 1989, Mr. Gies has worked at AT&T-Bell Laboratories/Lucent Technologies/Alcatel-Lucent as a Product Safety Engineer, responsible for obtaining product safety certifications for his company's telephone and information processing equipment from domestic and international product safety organizations. Mr. Gies has become a leading subject matter expert for his company in the field of global product safety compliance, working primarily with Alcatel-Lucent's wireless base station equipment. Mr. Gies is a member of the Alcatel-Lucent Technical Academy. Prior to working at AT&T, Mr. Gies was a Tempest Engineer for Honeywell-Signal Analysis Center, where he worked on various secure communications projects for the US Army Communications -Electronics Command. Mr. Gies, a lifelong resident of the Jersey Shore, graduated from Rutgers University - College of Engineering as an Electrical Engineer. He is an iNARTE Certified Product Safety Engineer.

All Welcome!

Free admission. Members and non-members welcome.

Time: 6:30 PM, Tuesday, May 4, 2010. Free buffet will be provided at 5:30 PM.

Place: Alcatel-Lucent, Building 5, 600 Mountain Avenue, Murray Hill, NJ 07974.

Information: Russell C. Pepe, 201-960-6796, rcepe@ieee.org.

NJ IMS:

Selecting the Appropriate Environmental Test Chamber for Renewable Energy Applications

On Tuesday, September 14, 2010, the IEEE North Jersey Section of the Instrumentation and Measurement Society (IMS) is hosting a talk entitled, "Selecting the Appropriate Environmental Test Chamber for Renewable Energy Applications." The speaker will be Mark R. Chrusciel.

About the Talk

Properly defining your Environmental Chamber requirements will insure your best return on investment. An emphasis will be placed on the renewable energy markets, including a way to save up to 54% on your operating costs. Discussions on the effect of air flow on product temperature and ensuring all DUT's experience the same temperature gradients will be reviewed. With most solar panels carrying 20 year warranties, short cuts in testing could cost significant warranty dollars or damage to your company's reputation. The importance of safely processing hazardous materials will also be discussed.

About the Speaker

Mark R. Chrusciel has approximately 30 years of experience with environmental chambers and ovens and currently serves as Director for Cincinnati Sub Zero. His many years of experience in the quality, reliability and laboratory markets enables him to design, select and implement the proper thermal processing equipment for the application. Mark has a BS in Natural Sciences from Xavier University; has served on the board for the last 4 years of the ASTR conference (Accelerated Stress Test and Reliability); and is a senior member of the Institute of Environmental Science and Technology (IEST).

All Welcome!

Free admission. Members and non-members welcome.

Time: 6:30 PM, Tuesday, September 14, 2010. Free buffet will be provided at 5:30 PM.

Place: New Jersey Institute of Technology (NJIT), Room 202, ECE Center (Intersection between Warren & Summit Streets), Newark, NJ. Directions are available at <http://www.njit.edu/about/visit/gettingtonjit.php>.

Information: Russell C. Pepe, (201) 960-6796, rcepe@ieee.org.

North Jersey Section Seeks Committee Chairs and Volunteers

The North 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 long-term to short-term, from technical to non-technical, leadership or just participatory. For Society Chapter Chairs, you must be a member of the corresponding IEEE Society. You must be an active IEEE member to hold an elected office at the section level.

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 Dr. Chandra Gupta at c.gupta@ieee.org. You are welcome to attend the Section business meeting held the first Wednesday of every month to find out more and other volunteer activities that require some help.

Some committees needing volunteers include the following. Please contact the person indicated for additional information.

- Power Electronics Society Chapter Chair - contact [c.gupta](mailto:c.gupta@ieee.org) below.
- GOLD (Graduates of the Last Decade) Affinity Group Volunteers and Committee members needed - contact northjerseygold@ieee.org
- WIE (Women in Engineering) Affinity Group Volunteers and Committee members needed - contact kduncan@ieee.org
- EMBS (Engineering in Medicine and Biology Society) is seeking a chair and active committee volunteers - contact c.gupta@ieee.org.
- Membership Development Committee Chair and Volunteers - contact [c.gupta](mailto:c.gupta@ieee.org) below.
- Student Activities Committee volunteers and committee members needed - contact jignasa.ray@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://web.njit.edu/~ieeenj/>, or contact Dr. Chandra Gupta c.gupta@ieee.org.

Region 1 Award Nominations

Nominate a colleague. Region 1 of IEEE offers a variety of awards to recognize the engineering accomplishments of members. Specific award categories include: technological innovation, engineering organization, academic teaching, enhancement of IEEE image in the public or industry and sustained IEEE service. To obtain additional information about these categories visit the Region 1 website www.ieee.org/r1

Once at the site click on Section Information on the far right column. On the Section page click on Region 1 Awards Information. We will assist you. To nominate a qualified individual prepare a 200-word summary (including the individual's name, IEEE number and IEEE US postal mail address) specifying the accomplishment of the candidate.

Send the summary to our Awards Chair *Ken Oexle, 11 Deerfield Road, Whippany, NJ 07981*, prior to May 1. The North Jersey Awards Committee will review the summary; suggest any changes; complete the nomination form; and forward it to the Region 1 Awards committee with a Section endorsement.

Award nominations are evaluated and approved at the Region 1 Summer Meeting and plaques are presented at the following North Jersey Section Annual Awards Reception.

TCF-2010

The 35th Annual Trenton Computer Festival (TCF) will be held Saturday & Sunday, April 24th & 25th, 2010 <http://www.tcf-nj.org>.

The TCF IT Professional Conference is Friday April 23rd.

New this year, the ARRL NJ Amateur Radio Convention is being held coincident with the festival, on Sunday April 25th, all at The College of New Jersey, Ewing, New Jersey.

This year we are focusing on Open Source Software, but we are still interested in covering all topics relating to computers and digital technology. As 2010 is our 35th year, we are also seeking talks that deal with the history of PCs and their impact on society. We are looking for talks (50 minutes) and tutorials/workshop (100 minutes) on all forms of computer, digital electronics, information, communications technology, robotics, home/environmental control, Vid/Podcasting, gaming and digital home entertainment, digital photography, wireless technology, networking.

If you have an idea for a talk or workshop/tutorial for TCF, please fill out a Speaker Application form at http://tcf-nj.org/speaker_registration.html.

If you are interested in more information, or in speaking at the other related events. For the IT Professional Conference contact David Soll at dsoll@Omicron.com. For the Amateur Radio Conference contact Gary Wilson at k2gw@optonline.net. For TCF in general, contact Allen Katz, TCF Program Chairperson, a.katz@ieee.org, telephone: 609-771-2666, fax: 609-631-0177, US Mail: Dr. Allen Katz, School of Engineering, The College of New Jersey, PO Box 7718, Ewing, NJ 08628-0718.

From the North Jersey Section's Education Committee:

Hot courses can enhance your position in the job market

IEEE North Jersey Education Committee ran programming and management courses since 1993. 236 IEEE members and non-members completed these courses. Benefits: Some got jobs at AT&T and Microsoft Corporation.

We need hot courses, instructors and classrooms. If you can teach a hot course (any course that can get people jobs), email your one-page abstract and your resume. If your NJ firm can provide a conference room, evening or Saturday morning, contact Donald Hsu, Chair, yanyou@hotmail.com. Thank-you and act NOW!

2010 IEEE VTS/Stevens Workshop on LTE and 4G Technologies

Friday, April 23, 2010
1:00 PM-5:00 PM

Stevens Institute of Technology, Hoboken, NJ 07030

Organizers: IEEE VTS North New Jersey Chapter and Stevens Institute of Technology
Sponsors: IEEE North New Jersey Section and IEEE MTT North New Jersey Chapter

Presentations by

AT&T Research
Alcatel-Lucent
Qualcomm
Telcordia Technologies
Verizon Wireless
Stevens Institute of Technology

Contact: Prof. Yu-Dong Yao, yyao@stevens.edu
<http://www.stevens.edu/wireless/vts/4G/>

SPONSORS

IEEE North NJ Women in
Engineering (WIE) & Student
Activities (SAC) and
Graduates of the Last Decade
(GOLD)



New Jersey Society of Women
Engineers (SWE)



Professional Networking Happy Hour

TUESDAY, APRIL 20, 2010

6PM TO 8PM

DORRIAN'S
555 WASHINGTON BLVD
JERSEY CITY, NJ 07310
201-626-6660

LOCATED ACROSS FROM THE NEWPORT PAVONIA PATH
STATION, PARKING AVAILABLE NEARBY AT THE NEWPORT
MALL.

DRINK SPECIALS: \$3 -LIGHT BEER, \$4 - HOUSE ALE AND \$5
SOUR APPLE OR COSMO

RSVP BY APRIL 13TH

JIGNASA RAY

JIGNASA.RAY@IEEE.ORG

IEEE WCET Certification Program

Examination to be held from 11 April to 8 May 2010

New Training Programs Launched to Help Candidates Prepare for the Exam &
Provide Comprehensive Knowledge of the Wireless Field

The IEEE Communications Society (IEEE ComSoc), the leading worldwide professional organization dedicated to the advancement of communications technologies, will hold the Spring examination period for the IEEE Wireless Communication Engineering Technologies (IEEE WCET) Certification Program from 11 April to 8 May 2010. The application deadline for this upcoming exam cycle is 26 March 2010. Additional details including program and application information are available at www.ieee-wcet.org.



Farmingdale
State College

LISAT2010

Sixth Annual IEEE Long Island Systems, Applications and Technology Conference
Friday, May 7, 2010

The Institute for Research & Technology Transfer at Farmingdale State College
State University of New York - Farmingdale, NY

CALL FOR PAPERS, PRESENTATIONS, EXHIBITORS ***and STUDENT PAPERS***

The Long Island Systems, Applications and Technology (LISAT) Conference features several parallel professional tracks including topics in Systems, Applications, and Technology, along with an Exhibit Hall. We are currently soliciting submissions for participation in both the Technical Program and the Exhibit Hall, and are interested in papers, presentations, and exhibits that showcase the development and use of technology by local organizations. LISAT 2010 will also provide the opportunity for select student papers to be presented. Undergraduate and graduate students are encouraged to submit papers in an area of their interest or current work.

Preliminary acceptance to the Technical Program will be based on a 300-to-500-word abstract. Authors of accepted abstracts will be required to provide a six (6) page IEEE standard manuscript (in MS Word format) for publication in *IEEE Xplore*, and will be required to make a power point presentation at the conference. Manuscripts are subject to the LISAT Technical Program Committee's peer review and may require revision prior to final acceptance. Important dates for the Technical Program are:

Oct 31, 2009:	Abstracts due (300-to-500 words)
Nov 15, 2009:	Notification of accepted abstracts
Nov 30, 2009:	Biographies of authors and ½-page presentation outlines due
Jan 15, 2010:	Manuscripts for publication (MS Word) and copyright releases due
Jan 30, 2010:	Notification of final acceptance of manuscripts
Feb 15, 2010:	Presenter Registration Fee and two (2) sentence presentation descriptions due
Apr 1, 2010:	Power Point slide presentation due
May 7, 2010:	LISAT2010 Conference

For more information see <http://ewh.ieee.org/conf/lisat/>

IEEE North Jersey Section Course Project Management

*Tuesday Evenings, April 6, through May 25, 2010
Eight weekly classes (April 6, 13, 20, 27, May 4, 11, 18, 25, 2010)
New Jersey Institute Technology, 161 Warren Street,
Newark, New Jersey (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 an evening course entitled "Project Management". Dice.com lists 5800+ Project 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 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 completion when you finish the course. You may wish to take two Certification exams, one 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. CEU credits would be given by IEEE)

Instructor: **George Sierchio**, business owner with 16 years of experience. He did technical consulting, training, and managed over 30 projects. He trained 500+ adult students in the last 10 years.

TOPICS

1. Explain the need for a project 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 changes, estimates, and communications
6. Set a baseline, import tasks from MS Excel, export Project files to MS Word
7. Create and modify custom reports, templates and combination views
8. Share resources and create a master plan loaded to Project Server
9. Approve updates and conclude a project plan
10. Analyze global E-Commerce and present student Projects

WHERE: Room ECEC 202, New Jersey Institute of Technology, 161 Warren Street, Newark, NJ.

WHEN: 8 Tuesdays, April 6, 13, 20, 27, May 4, 11, 18, 25, 2010, 6:30-9:00 PM.

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

CONTACT: Donald Hsu: yanyou@hotmail.com

REGISTRATION: Project Management

Please mail the registration form with the check (**Checks payable to "North Jersey Section IEEE"**) to
Donald Hsu, Chair Education Committee, IEEE North Jersey Section, P. O. Box 2093, Fort Lee, NJ 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**

As soon as a completed registration form and the payment are received, you are officially registered for this course. Registration status will be notified by email.

I wish to receive the IEEE Completion Certificate

Signature: _____

IEEE AWARDS RECEPTION

*North Jersey Section
May 2, 2010
Birchwood Manor, Whippany NJ*

*A time to relax, unwind and enjoy --
A time to pay tribute to our new Fellows --
A time to honor our Award Winners --
YES it's time for the Annual Section Reception*

The Annual Section IEEE Awards Reception will be held at the Birchwood Manor, 111 North Jefferson Road, Whippany again this year. The affair is scheduled for **Sunday, May 2, 2010** from 3 to 6 PM. Tickets are \$35.00 each. Spouses and guests are welcome. We are limited to 90 attendees, so please make your reservations early.

Reservations are required by April 24, 2010. Complete the reservation form and return it with your payment. If you would like tickets mailed back to you, please enclose a self-addressed **stamped** envelope. Otherwise, your tickets will be held at the door for you. If any additional information is required concerning the reception, contact Anne Giedlinski at (973) 377-3175.

Use this form for Reception reservations. **ENCLOSE A SELF-ADDRESSED STAMPED ENVELOPE to receive tickets in advance. Reservations are required by April 24, 2010.** Mail reservation request to:

Anne Giedlinski
299 Brooklake Road
Florham Park, NJ 07932

Enclosed is _____ for _____ ticket(s) at \$35.00 each (make check payable to **North Jersey Section IEEE**) for:

NAME: _____

ADDRESS: _____

Yes, please send me directions to the Birchwood Manor