

The



IEEE Newsletter

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

NJ EDS/C&S Chapters:

Deuterium at the Si-Dielectric Interface in Nanoscale Devices

On February 21, 2007, the IEEE NJ Section Electron Devices, Circuits and Systems Chapters together with the New Jersey Institute of Technology will host a talk on "Deuterium at the Si-Dielectric Interface in Nanoscale Devices." The speaker will be Dr. Durgamadhab (Durga) Misra.

About the Talk

After the discovery of the hydrogen/deuterium (H/D) isotope effect, passivation of interfaces such as Si-SiO₂ and Si-high-k by deuterium instead of hydrogen is getting significant attention for scaled CMOS devices. Deuterium passivation brings significant improvement in hot-carrier lifetime in metal-oxide-semiconductor (MOS) transistors. Annealing in deuterium ambient or deuterium implantation is used to incorporate deuterium at the Si/SiO₂ interface. Various methods of deuterium incorporation (recipes) at the interface for several device applications (CMOS, photodiodes, TFTs) will be discussed. Some device characteristics improvement after deuterium implantation at the Si/SiO₂ interface when a thin oxide is grown on implanted silicon substrate will also be addressed. In case of annealing thermal budget is a limiting factor whereas for implantation, energy and implantation dose significantly influence the interface passivation. The challenges to retain deuterium at the Si/SiO₂ interface until the completion of CMOS fabrication process will be analyzed.

About the Speaker

Dr. Durgamadhab (Durga) Misra is a Professor in the Department of Electrical and Computer Engineering at New Jersey Institute of Technology (NJIT). He served as the Director of Microelectronics Research Center at NJIT for a year in 1996 and in 1997 he was on a research leave at the VLSI Research Department of Bell Laboratories, Lucent Technologies at Murray Hill, New Jersey. His general

interests lie in the areas of nanoelectronic and optoelectronic devices and circuits. His current focus is gate dielectric (both SiO₂ and high-k) reliability on Si and Ge substrates and their interfaces for nanoscale CMOS devices. He has organized many International Symposiums on Solid-State Science and Technology field during the Technical Meetings of the Electrochemical Society and IEEE. He is a Senior Member of IEEE, Distinguish Lecturer in IEEE EDS, and a Fellow of the Electrochemical Society.

All Welcome!

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

Time: 7:00 PM, Wednesday, February 21, 2007. Free buffet will be starting at 6:15 PM.

Place: New Jersey Institute of Technology (NJIT), Room 202, ECE Center, Newark, NJ. Directions are available at <http://www.njit.edu>.

Information: Dr. Richard Snyder (973) 492-1207 (RS Microwave), Dr. Edip Niver (973) 596-3542 (NJIT), or Dr. Durga Misra (973) 596-5739 (dmisra "AT" njit.edu).

Spring 2007 Region 1 GOLD Conference Coming Soon

Attention all members, the upcoming regional student paper conference this year will be held locally in the North Jersey Section. It is planned for the weekend of April 28-29, 2007 at Fairleigh Dickinson University in Teaneck, NJ. This paper contest and micromouse competition is open to undergraduate IEEE students (see <http://ewh.ieee.org/reg/1/sac/> for more details).

This year's Regional GOLD conference will be jointly held with the student conference at the same FDU location and there will be a parallel program of activities, seminars, leadership training, and social events. The details of the program are being finalized, as well as separate registration for GOLD participants. More information about the upcoming Spring GOLD conference will be posted on line at

http://ewh.ieee.org/r1/north_jersey/gold/ and future newsletters and email postings will publish the agenda.

FEBRUARY 2007

February 2007

Volume 53, Number 8

Publication No: USPS 580-500

"The IEEE Newsletter" (North Jersey Section), is published monthly except June and July by The Institute of Electrical and Electronics Engineers, Inc. Headquarters: 3 Park Avenue, 17th Floor, New York, NY 10016-5997. \$1.00 per member per year (included in annual dues) for each member of the North Jersey Section. Periodicals-class postage paid at New York, NY and at additional mailing offices. Postmaster send address changes to: "The IEEE Newsletter", 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331. USPS 580-500 (ISSN 1076-3732).

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Deadline for receipt of material is the 1st of the month preceding the month of publication. All communications concerning editorial and business matters, including advertising, should be sent to the Business Manager via e-mail at k.saracinello@ieee.org or to *The IEEE Newsletter*, c/o Keith Saracinello, 25 Messenger Ln, Ringoes, NJ 08551, (302) 683-7162.

IEEE NJ SECTION HOME PAGE

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

IEEE NJ SECTION NEWSLETTER HOME PAGE

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

REPORT ADDRESS CHANGES TO:

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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) 669-7599, rpepe "AT" att.net.

North Jersey Spring 2007 Student Presentation Contest

The Spring 2007 Student Presentation Contest is coming up! The North Jersey Section will be holding a presentation contest scheduled for March 20, 2007. This contest has been held in years past. Its overwhelming success in generating student participation and interest makes it a fantastic event for up and coming engineers. This year's contest will feature similar prizes (\$\$\$) and have graduate and undergrad categories.

The main focus of the presentation contest is to give students an opportunity to sharpen their communication skills, and help prepare for real life situations as practicing engineers and researchers. Additionally, the North Jersey Section contest provides an excellent chance for students to practice for the Region I Student Paper contest in the spring.

The contest at the North Jersey Section level is also supplemented by awarding cash prizes to the three best presentations in both graduate and undergrad categories. All engineering students are encouraged to participate in submitting team or individual presentations on any project work related to engineering. This local contest does not require students to write a full paper, just a slide-based presentation on technical or non-technical work is sufficient. Senior design projects, lab projects, personal engineering hobbies, engineering policy, etc., are great topics to submit. Moving onto the regional contest requires submitting a short written paper.

The details of contest rules, judging criteria, viable topics for presentations, and abstract form will be same as last year. Also if you would like to get an idea of what topics would be appropriate or how you can prepare your abstract, take a look at winners from past years at the NNJ IEEE SAC homepage

http://ewh.ieee.org/r1/north_jersey/sac/ieee.html

This year's North Jersey Section Contest will be open to graduate and undergraduate students and first/second/third place prizes will be awarded in each category of \$100/\$75/\$50. All participants MUST REGISTER by submitting an abstract by filling in the form available at the SAC website to qualify as a contest participant.

Time: 5:30 PM, Tuesday, March 20, 2007.

Place: Room TBD, FDU, Teaneck, NJ.
Directions available at

http://www.fdu.edu/visitorcenter/directions/teaneck_map.html. Free parking is available.

Information: Email the contest organizer, Russell Pepe, at [northjerseysac "AT" ieee.org](mailto:northjerseysac@ieee.org).

NJ Section PACE, GOLD:

ENGINEERS MEET: For a Members Social

On Wednesday, February 14, 2007 the North Jersey Section Professional Activities Committee and Graduates of the Last Decade will meet for a social, with pizza, soda & refreshments.

About the Meeting

This meeting is about getting members of the Section together for a light evening of discussion and hospitality. Basically we can hold a brainstorming session to discuss future meetings and activities. A continuation of the December meeting's lively discussion. All are invited. We shall encourage North Jersey Section Ex-Com officers to attend. When they do, our Section membership will have an opportunity to meet with them on a first name basis.

Bring your associates, friends and spouses.

About the Speakers

Everyone will have an opportunity to express their views about the profession, jobs and opportunities.

All Welcome

Members and students from other professional societies and engineering disciplines are always welcome. We now include members from IEEE, ASME and AEA. For more information about these groups see:

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

Time: 6:30 to 9:00 PM, Wednesday, February 14, 2007. Refreshments will be served.

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

Information: Paul Ward, (973) 790-1625 (PWard1130 "AT" aol.com) or Richard F. Tax, (201) 664-6954 (rftax "AT" verizon.net).

IEEE North Jersey Section Activities

February 2007

Feb. 7 – “NJ Section Meeting”, 6:30 PM, “Executive Committee Meeting” - 7:00 PM, ITT, 100 Kingsland Rd, Clifton, NJ. Russell Pepe at rpepe “AT” att.net.

Feb. 13 – “IPTV and Beyond” by Anurag Srivastava, NJ Communications Society, 6:00 PM, New Jersey Institute of Technology (NJIT), Room 202, ECE Center, Newark, NJ. Dr. Nirwan Ansari (973) 596-3670 (nirwan.ansari “AT” njit.edu) or check <http://web.njit.edu/~ieeenj/comm.html> for the latest updates.

Feb. 14 – “Engineers Meet: For a Members Social” - NJ PACE & GOLD, 6:30 – 9:00 PM, Clifton Memorial Library, 292 Piaget Ave, Clifton, NJ. Paul Ward, (973) 790-1625 (PWARD1130 “AT” aol.com) or Richard F. Tax, (201) 664-6954 (rftax “AT” verizon.net).

Feb. 17-Apr. 28 – “C# .NET Programming” by Dr. Donald Hsu, North Jersey Section, Saturday Mornings, 10 sessions, 9:00 AM-12:00 PM, Avtech, 130 Clinton Road, Second Floor, Fairfield, NJ. Donald Hsu (yanyou “AT” hotmail.com).

Feb. 20 – “An Overview of IT Security Forensics” by Dr. Manu Malek, NJ Communications Society, 6:00 PM, New Jersey Institute of Technology (NJIT), Room 202, ECE Center, Newark, NJ. Dr. Nirwan Ansari (973) 596-3670 (nirwan.ansari “AT” njit.edu) or check <http://web.njit.edu/~ieeenj/comm.html> for the latest updates.

Feb. 21 – “Deuterium at the Si-Dielectric Interface in Nanoscale Devices” by Dr. Durgamadhab (Durga) Misra, NJ EDS/C&S Chapters, 7:00 PM (buffet at 6:15 PM), New Jersey Institute of Technology (NJIT), Room 202, ECE Center, Newark, NJ. Dr. Richard Snyder (973) 492-1207 (RS Microwave), Dr. Edip Niver (973) 596-3542 (NJIT), or Dr. Durga Misra (973) 596-5739 (dmisra “AT” njit.edu).

Feb. 22 – “Building the Foundation For a Successful Consultant Marketing Plan” by Greg Ratta, NJ Consultants' Network, 7:30 PM, Aeroflex/KDI-Integrated Products, 60 S. Jefferson Rd, Whippany, NJ. Robert Walker (973) 728-0344 or www.TechnologyOnTap.org.

Feb. 23 – “Predictive Diagnostics Seminar” by Gabriel J. Paoletti, PE, NJ PES/IAS, 9:00 AM - 1:00 PM, Location TBA. Ronald W. Quade, PE, (732) 205-2614 or rwquade “AT” ieee.org.

Upcoming Meetings

Mar. 7 – “NJ Section Meeting”, 6:30 PM, “Executive Committee Meeting” - 7:00 PM, ITT, 100 Kingsland Rd, Clifton, NJ. Russell Pepe at rpepe “AT” att.net.

Mar. 14-May 9 – “Project Management” by Dr. Donald Hsu, North Jersey Section, Tuesday Evenings, 8 sessions, 6:30-9:00 PM, NJ International Bulk Mail Center, 80 County Rd, Jersey City, NJ. Donald Hsu (yanyou “AT” hotmail.com).

Mar. 20 – “North Jersey Spring 2007 Student Presentation Contest”, Room TBD, FDU, Teaneck, NJ. Russell Pepe northjerseysac “AT” ieee.org.

Mar. 26-27 – “10th Communications and Networking Simulation Symposium (CNS 2007)”, see <http://www.scs.org/confernc/springsim/springsim07/springsim07.htm>.

Mar. 29 – “Clients First: Identifying and Focusing on Solving their Pain” by Ed McCauley, NJ Consultants' Network, 7:30 PM, Aeroflex/KDI-Integrated Products, 60 S. Jefferson Rd, Whippany, NJ. Robert Walker (973) 728-0344 or www.TechnologyOnTap.org.

Mar. 30 – “Mission Critical Power Technical Series - Uninterruptible Power Supplies Seminar” by Kit Killingsworth, NJ IAS/PES, 9:00 AM - 2:00 PM, PSE&G Training Center, 234 Pierson Avenue, Edison NJ. Ronald W. Quade, PE, (732) 205-2614 or rwquade “AT” ieee.org.

Members and Non-Members Welcome
PLEASE POST

NJ Communications Chapter: **IPTV and Beyond**

On Tuesday, February 13, 2007, the North Jersey Chapter of the IEEE Communications Society will host a presentation titled "IPTV and Beyond" by Anurag Srivastava.

About the Talk

Telecom service providers are relying on IPTV to counter voice, video and data ("Tripleplay") threat of Cable operators by offering these services over their hybrid fiber/DSL access infrastructure. In the first half of this talk, I will provide an overview of the new emerging and exciting area of IPTV, and describe the key components that make up an end-to-end IPTV system.

Today, TV subscription is tied to a household instead of a subscriber and thus, a subscriber typically cannot access his favorite programming outside his home location. In the second half, I will introduce the concept of TV roaming which enables a subscriber to carry his TV subscription to any other place (e.g. Hotel, Friend's house), or any other device (TV, Laptop, handheld). With just a few keystrokes of a remote-control or laptop, a subscriber can watch his favorite channel on any device. I will describe the architecture of the MiViewTV system (an on-going project at Bell Labs) and its key components.

About the Speaker

Anurag Srivastava received his BE (EE) and MS (Comp Sci) from the Indian Institute of Science, Bangalore in 1997 and 1999, respectively. He has been working as Member of Technical Staff at Networking and Network Management Center of Bell Labs, Lucent Technologies since 2000. His research interests are in the area of video delivery over IP networks, location based technologies in wireless networks, MPLS and SONET/SDH networks, and in solving routing and optimization problems in IP and Optical networks. He has published extensively in those areas and has over 15 patents awarded or pending. Mr. Srivastava speaks regularly at major telecom conferences and presents his research work in industry trade shows.

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 buffet starting at 6:00 PM.

Time: 6:00 PM, Tuesday, February 13, 2007. Pre-meeting buffet starts at 5:45 PM.

Place: New Jersey Institute of Technology (NJIT), Room 202, ECE Center, Newark, NJ. Directions are available at <http://www.njit.edu>.

Information: Dr. Nirwan Ansari (973) 596-3670 (nirwan.ansari@njit.edu) or check <http://web.njit.edu/~ieeenj/comm.html> for the latest updates.

NJ Communications Chapter: **An Overview of IT Security Forensics**

On Tuesday, February 20, 2007, the North Jersey Chapter of the IEEE Communications Society will host a presentation titled "An Overview of IT Security Forensics" by Dr. Manu Malek.

About the Talk

Organizations increasingly rely on computing and intelligent networking infrastructures as keystones to their operations. Although the use of this technology provides many advantages, the Internet poses a unique set of vulnerabilities. Security attacks, such as virus, worm and other malware attacks, are examples of threats encountered daily by various institutions.

Against this backdrop, it is clear that security is one of the most important IT concerns today. Security forensics is a discipline to identify the attackers and document their activity with sufficient reliability to justify appropriate technical, business, and legal responses. The discipline involves identification, preservation and analysis of evidence of security attacks. Forensic activity takes place in a complex, legal and social context which must be understood to fully appreciate its power and value.

This talk will provide an overview of security forensics and address some of the methodologies involved. Some simple tools will also be demonstrated as examples.

About the Speaker

Manu Malek is Industry Professor of Computer Science and Director, Certificate in CyberSecurity Program, at Stevens Institute of Technology. Prior to joining Stevens, he was Distinguished Member of Technical Staff at Lucent Technologies Bell Laboratories. He has more than 20 years of experience in teaching, practicing, and research in communication networks design, optimization, operations, and management. He has held various academic positions in the US and overseas, as well as technical management positions with Bellcore (now Telcordia Technologies) and AT&T Bell Laboratories.

He is the author, co-author, or editor of seven books, co-holder of two patents, and the author or co-author of more than fifty published technical papers and

numerous technical reports in the areas of network design, computer communications, and network operations and management.

Dr. Malek is a Fellow of the IEEE, an IEEE Communications Society Distinguished Lecturer, and the founder and Editor-in-Chief of Journal of Network and Systems Management. He earned his PhD in EE/CS from University of California, Berkeley.

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 buffet starting at 6:00 PM.

Time: 6:00 PM, Tuesday, February 20, 2007. Pre-meeting buffet starts at 5:45 PM.

Place: New Jersey Institute of Technology (NJIT), Room 202, ECE Center, Newark, NJ. Directions are available at <http://www.njit.edu>.

Information: Dr. Nirwan Ansari (973) 596-3670 (nirwan.ansari@njit.edu) or check <http://web.njit.edu/~ieeenj/comm.html> for the latest updates.

NJ Consultants' Network:

Building the Foundation for a Successful Consultant Marketing Plan

On Thursday, February 22, 2007, the IEEE Consultants' Network of Northern NJ is pleased to present "Building the Foundation for a Successful Consultant Marketing Plan", by Greg Ratta.

About the Talk

CNNNJ is pleased to offer a non-technical presentation about building a solid foundation for a consultant's marketing plan. Consultants work in a highly competitive and fast moving market where success depends on the consultant's ability to build an effective marketing and delivery program around his or her particular expertise. Without self-analysis of what value one brings to the market, there is no foundation for that program. Does your CV put your mother to sleep? Does it include generic phrases like, "self-starter" or "works effectively alone or in teams"? Are you a telecom engineer listening for the footsteps echoing outside your office that will free you to strike out on your own? Are you unemployed and seeking a full time position? If you answered "yes" to any of these questions, this presentation has been designed for you!

About the Speaker

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Greg Ratta is a Licensed Professional Engineer, knowledgeable about voice and data network communication protocols, technologies and services. He is an experienced systems engineer – a problem solver, who has provided consulting services to manufacturers and service providers in the telecom and cable industries as well as to government agencies within DHS and DoJ. His background in hardware design, software development, systems analysis, network planning and operational methods has allowed him to be an effective facilitator for his clients in the planning and delivery of business systems and networking solutions to satisfy business objectives and ongoing operations. He can be reached by email at greg.ratta "AT" verizon.net or by phone at (732) 530-1874.

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.

All Welcome!

Everyone welcome. No registration needed. Free admission.

Time: 7:30 PM, Thursday, February 22, 2007.

Place: Aeroflex/KDI-Integrated Products, 60 S. Jefferson Rd, Whippany, NJ. (Entrance at rear of building).

Information: For directions and up-to-date meeting status, call Robert Walker (973) 728-0344 or visit our website at www.TechnologyOnTap.org. To download a map to KDI, go to: <http://www.mcekdi-integrated.com/directions.htm>.

NJ Consultants' Network:

Clients First: Identifying and Focusing on Solving their Pain

On Thursday, March 29, 2007, the IEEE Consultants' Network of Northern NJ is pleased to present "Clients First: Identifying and Focusing on Solving their Pain", by Ed McCauley.

About the Talk

Pain & pleasure, in the past, present, and in the future, are fundamental motives that cause people to act.

For 18 years, Bottom Line Technologies Inc has worked with business owners and senior executives:

- Challenged to meet aggressive, sometimes nightmare schedules.

- Struggling with technologies they lack the experience to effectively manage.
- Frustrated by a lack of resources to achieve their goals.
- Risking lost market share, lost contracts, customers, or worse should they fail.

Do these folks sound like they're in pain? You bet they are!

BLT designs chips, boards, and complete systems for commercial, industrial, and military Clients seriously committed to quality product development.

Come hear BLT's president, Ed McCauley, share how they execute on their prime directive: "Acting in the Client's best interest" by understanding and treating their Client's pain.

During the second half of the meeting, Chris Mesibov of the IEEE Consultants' Network of Northern NJ will be presenting a brief overview of his consulting practice, Techgenesis. Chris can be emailed at chris "AT" techgenesis1.com or reached by phone at (914) 584-2659.

About the Speaker

Ed McCauley is President of BLT.

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.

All Welcome!

Everyone welcome. No registration needed. Free admission.

Time: 7:30 PM, Thursday, March 29, 2007.

Place: Aeroflex/KDI-Integrated Products, 60 S. Jefferson Rd, Whippany, NJ. (Entrance at rear of building).

Information: For directions and up-to-date meeting status, call Robert Walker (973) 728-0344 or visit our website at www.TechnologyOnTap.org. To download a map to KDI, go to: <http://www.mcekdi-integrated.com/directions.htm>.

NEWS from IEEE-USA:

Medicare Facing Future Bankruptcy: "IEEE- USA Today's Engineer Online" Cites \$30 Trillion Unfunded Liability

Washington (29 December 2006) - Because of rising healthcare costs, advancing technology, and an aging U.S. population, predicting future Medicare

spending is difficult. In 2005, the unfunded liability for Medicare was projected to be close to \$30 trillion, according to the current issue of IEEE-USA Today's Engineer Online.

"How well we deal with the funding issue will affect the extent to which we push costs forward to future generations," Today's Engineer author George McClure writes in "Fixing Medicare: An Intergenerational Dilemma."

Medicare is a federal health insurance program for people 65 and older, disabled people under 65 and those with end-stage renal disease. Three-quarters of Medicare costs are covered by the program; the remainder by recipients.

With the expected growth in those eligible for benefits and the uncertainty of future healthcare costs, Medicare Part A, which covers hospital services, is expected to run out of money by 2018. The prescription drug program (Medicare Part D) is also unfunded. To prevent the projected shortfall, some combination of cutting benefits, raising premiums or increasing the payroll tax will have to be implemented, according to Today's Engineer.

"The earlier that actions are taken to avert the looming crisis, the easier those actions will be," McClure writes. "But the politics are daunting."

To read the entire article, go to www.todaysengineer.org. To subscribe to Today's Engineer Online, IEEE members can go to <http://ewh.ieee.org/enotice/options.php?LN=IEEEUSA>. Non-members can visit <http://www.todaysengineer.org/emailupdates/index.html>

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Contact: Chris McManes
IEEE-USA Senior Public Relations
Coordinator
Phone: (202) 530-8356
E-Mail: c.mcmanes@ieee.org

Annual End of the Year Workshop

The North Jersey Executive Committee held its annual end of the year workshop meeting at the Birchwood Manor, Whippany, NJ, on December 6th, 2006. Its basic function is to install the slate of officers for the new year.



North Jersey Section Executive Committee Members attending the Annual End of the Year Workshop

IEEE Personal Email Alias

The IEEE offers a personal e-mail Alias service in which IEEE members can register or instantly update a personal alias of their choice (subject to availability and on a "first-come, first-served" basis). Messages addressed to the alias@ieee.org will automatically be forwarded to the members real Internet e-mail address at their ISP. Over 100,000 members received more than 200 million messages using this service in 2003.

Free Virus Scanning

9,000,000 Virus-Infected Messages Detected in 2005!

The virus-scanning feature helps prevent you from receiving viruses in the first place. Attachments within e-mail sent to your IEEE alias will be scanned, and if a virus is found, the attachment will be deleted. An alert

is then sent to both the sender and recipient. While the IEEE cannot guarantee that every virus will be caught, the virus scanning software is updated daily. A service like this typically costs \$20 to \$30 per year, but as an IEEE member, it is yours FREE of charge.

Free Spam Tagging

Members have the option of adding a new feature to help IEEE members manage the amount of unsolicited commercial email (UCE), or spam, they receive. Members who elect to take advantage of this new service have the option of either tagging or blocking possible UCE. The service also now supports black and white listings.

This e-mail forwarding service is available to IEEE members to simplify the myriad number of constantly changing computer e-mail addresses.

You may choose your alias name, but are encouraged to use a

construction of your family and given names whenever possible, to make it easier for people to contact you.

Advantages of a Personal IEEE E-Mail Alias:

- If you change your Internet Service Provider and hence your e-mail address, you only have to send one correction - an update to the IEEE.
- If you change your employer or your location within the company which results in a different e-mail address, you only have to send one update - to the IEEE.
- An e-mail address which is independent of your service provider or employer.
- Only one place to make changes to your e-mail address.
- IEEE aliases are usually easier to remember and simpler to use than the real address.
- An e-mail address which associates you with the IEEE.

2007 North Jersey Section, Society/Chapter and Committee Officers

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	Women in Engineering	Chair	Melody Bustos	-
Standing Committees	Award/Banquet	Chair	Ken Oexle	k.oexle "AT" worldnet.att.net
	Education	Chair	Dr. Donald Hsu	yanyou "AT" hotmail.com
	Newsletter/EC	Chair	Keith Saracinello	k.saracinello "AT" ieee.org
	Legal	Chair	Naz Simonelli	naz "AT" ieee.org
	Group Coordination	Chair	Howard Leach	h.leach "AT" ieee.org
	Membership	Chair	Peter Donegan	doneganp "AT" ieee.org
	METSAC	Chair	Alan Stolpen	a.stolpen "AT" ieee.org
	Pace	Chair	Richard Tax	rftax "AT" verizon.net
	Student Activities	Chair	Russell Pepe	rpepe "AT" att.net
	Pre-University	Chair	Har Dayal	har.dayal "AT" baesystems.com
	Industry Liaison	Chair	Alin Cosmanescu	973-633-4465
Ad-hoc Committees	History	Chair	Howard Leach	h.leach "AT" ieee.org
	Audit	Chair	Howard Leach	h.leach "AT" ieee.org
	Nominations	Chair	Dr. Fred Chichester	(973) 744-3065
	Inter-Section	Chair	Dr. Durga Misra	dmisra "AT" njit.edu

NJ Power Engineering Society/Industry Applications Society
Mission Critical Power Technical Series
Uninterruptible Power Supplies Seminar

The PES and IAS Chapters will sponsor a 3-month series of technical seminars on mission critical power. This first seminar will be on the topic of Uninterruptible Power Supplies. The session will be held on Friday, March 30, 2007, at the PSE&G Training Center, 234 Pierson Avenue, Edison, NJ.

Topics

Uninterruptible Power Supplies:

- ✓ Differentiating UPS Technologies (Battery and Battery Free)
- ✓ Decision Criteria for Selecting a UPS
- ✓ Relationship Between UPS and Other Emergency Power Equipment
- ✓ Evaluating Life Cycle Costs of Different UPS Technologies
- ✓ Predictive UPS Maintenance
- ✓ Planning for Future - Expandable/Upgradeable Systems
- ✓ Innovative Battery Free UPS Technologies

About the Instructor

Kit Killingsworth is the Northeast Regional Sales Manager for Active Power. He has worked in various sales and field service positions in the UPS industry since 1984. For the past eight years with Active Power, he has developed into an expert in battery free, flywheel UPS technology. Prior to that, he worked for 10 years with MGE, a leading supplier of double conversion, battery based UPS. He also worked for Electronic Data Systems (EDS) maintaining UPS and battery systems as well as ancillary HVAC systems. Kit is a licensed electrician and has a degree in electronics engineering with extensive study in HVAC, Refrigeration and Air Conditioning.

The registration fee for this seminar prior to March 16th will be \$150 for non-IEEE members, \$100 for IEEE Members, \$75 for GOLD Graduates (last 1-10 years) and \$25 for students with valid ID. The fee will be waived for IEEE Life Member Grades with verification at the seminar. Registrations after March 16th must include an additional late fee of \$25. 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.

If desired, IEEE Continuing Education Units will be offered for this course - a small fee of \$25 will be required for processing. A total of 0.4 CEUs will be offered. Please indicate if desired below.

Time: 9:00 AM to 2:00 PM (lunch is included), Friday, March 30, 2007.
Place: PSE&G Training Center, 234 Pierson Avenue, Edison NJ
Directions: www.pseg.com/customer/business/small/facility/edison_directions.jsp
Information: Ronald W. Quade, PE, (732) 205-2614 or [rwquade "AT" ieee.org](mailto:rwquade@at.ieee.org)

Registration: Uninterruptible Power Supplies Seminar 3/30/2007

Register via US mail to: Ronald W. Quade, PE
Eaton Electrical
379 Thornall St, 8th Floor
Edison, NJ 08837

Name _____

Address _____

Phone _____ Email _____

IEEE # _____ Student @ _____ Non IEEE _____ Life Member _____

Continuing Education Units: _____ Yes \$25 _____ No

If CEUs are chosen, please include a \$25 processing fee

Payment Enclosed \$ _____ Add \$25 late registration after March 16, 2007

Make checks payable to North Jersey Section IEEE (Credit Cards cannot be processed at this time).

NJ Power Engineering Society/Industry Applications Society

Predictive Diagnostics Seminar

The PES and IAS Chapters will sponsor a technical seminar on the topic of predictive diagnostics. The session will be held on Friday, February 23, 2007 in the Punch Bowl Room at Jersey Central Power and Light, 300 Madison Ave, Morristown, NJ.

Topics

Predictive diagnostics involving transformers and medium voltage switchgear will be discussed. New technologies involving continuous oil monitoring will be contrasted with traditional oil analysis, including Roger Ratios. On-line bushing monitoring for power factor and potential internal partial discharges will be presented. A case study of a generator step-up (GSU) transformer will be illustrated where the use of partial discharge and oil analysis saved approximately \$ 1M in an unwarranted repair. MV switchgear failure modes will also be reviewed, in addition to the validity of existing IEEE Failure data. Continuous and remote monitoring of medium voltage switchgear partial discharges will also be presented.

About the Instructor

Gabriel J. Paoletti, PE, received a BSEE degree from Drexel University, Philadelphia, PA in 1976. Mr. Paoletti has over twenty-eight years of engineering service experience with Westinghouse, ABB and Eaton Electrical (Cutler-Hammer) Engineering Service. His electrical distribution equipment experience includes field-testing, predictive and preventive maintenance, partial discharge technologies, RCM programs, applications engineering, failure analysis, and power systems studies. He has design experience with vacuum circuit breaker modernization, low voltage circuit breaker cell-retrofits and motor and transformer repair experience. He is also a patent participant for the switchgear partial discharge sensor. Mr. Paoletti is a Senior Member of IEEE and a Registered Professional Engineer in the States of Pennsylvania and Delaware. Mr. Paoletti has had technical papers published in the IEEE-IAS concerning microprocessor-based protective relays (1990), vacuum modernization of MV circuit breakers (1997), partial discharge technology related to MV motors and MV switchgear (2001) and condition-based maintenance of MV switchgear (2002). Mr. Paoletti is currently Division Applications Engineering Manager for the Eaton Engineering Services and Systems Division. He also was a contributing author to the IEEE-Buff Book regarding topics on maintenance, testing and calibration (2002).

The registration fee for this seminar prior to February 9th will be \$150 for non-IEEE members, \$100 for IEEE Members, \$75 for GOLD Graduates (last 1-10 years) and \$25 for students with valid ID. The fee will be waived for IEEE Life Member Grades with verification at the seminar. Registrations after February 9th must include an additional late fee of \$25. 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.

If desired, IEEE Continuing Education Units will be offered for this course - a small fee of \$25 will be required for processing. A total of 0.4 CEUs will be offered. Please indicate if desired below.

Time: 9:00 AM to 1:00 PM (lunch is included), Friday, February 23, 2007.
Place: Punch Bowl Room at Jersey Central Power and Light, 300 Madison Ave, Morristown, NJ.
Directions: Route 287 to Route 124 (Madison Ave exit). Head toward Madison. Jersey Central building is on the left about 1.5 miles from the exit.
Information: Ronald W. Quade, PE, (732) 205-2614 or rwquade "AT" iee.org

Registration: Predictive Diagnostics Seminar 2/23/2007

Register via US mail to: Ronald W. Quade, PE
Eaton Electrical
379 Thornall St, 8th Floor
Edison, NJ 08837

Name _____

Address _____

Phone _____ Email _____

IEEE # _____ Student @ _____ Non IEEE _____ Life Member _____

Continuing Education Units: _____ Yes \$25 _____ No

If CEUs are chosen, please include a \$25 processing fee

Payment Enclosed \$ _____ Add \$25 late registration after February 9, 2007

Make checks payable to North Jersey Section IEEE (Credit Cards cannot be processed at this time).

IEEE North Jersey Section Course C# .NET Programming

Saturday morning, February 17, 2007 through April 28, 2007

Ten weekly classes (February 17, 24, March 3, 10, 24, 31, April 7, 14, 21, 28, 2007)

Place: Avtech, 130 Clinton Road, Fairfield, NJ (Checks should not be mailed to this address)

IEEE North Jersey Section thanks Avtech for sponsoring this "hands-on" course at its site.

The IEEE North Jersey Section is offering a course entitled "C# .NET Programming". Since 2002, C# .NET has generated significant headway in Fortune 1000 enterprise development systems. Dice.com lists 800+ C# .NET jobs in the New York tri-state area daily! This course will cover the fundamentals of C# language, the .NET framework, window and web-based applications, ADO.NET, ASP.NET, and XML. It will be useful for anyone to develop applications based upon these tools.

You will receive the IEEE Certificate of Completion when you finish the course. Microsoft Corp. has MCAD and MCSD certifications. You may wish to get certified by taking the necessary Microsoft exams with the knowledge gained from this course.

Instructor: **Donald Hsu, Ph.D.**, has been a corporate manager for 11 years and is an experienced trainer. Since 2001, he has trained 790+ people in C++, C#.NET, Java, Unix, Visual Basic, WebLogic and XML courses in 10 organizations.

TOPICS

1. Compare the enterprise development tools using C++, Java to C# .NET
2. Define Visual Studio .NET Version 2005, Express Edition
3. Identify C# syntax, data type, control structures and common language runtime
4. Distinguish methods, arrays, object-oriented programming
5. Build graphical user interface, multithreading, files and streams
6. Explain the benefit of using extensible markup language (XML)
7. Select database, SQL server, and ADO .NET
8. Choose ASP .NET, web forms, web controls, and web services
9. Operate the network, streams-based socket and mobile toolkits
10. Search and sort, data structures, generics and collections
11. Present student Projects

WHERE: Avtech, 130 Clinton Road, Second Floor, Fairfield, NJ

WHEN: 10 Saturdays, February 17, 24, March 3, 10, 24, 31, April 7, 14, 21, 28, 2007 from 9:00 AM to 12 Noon

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

CONTACT: Donald Hsu, yanyou "AT" hotmail.com

REGISTRATION: C# .NET Programming

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

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

Name: _____ Email address _____

Non-member

IEEE Member Member #: _____ Member of _____ technical society

Employer: _____

Employer Address: _____

Home Address: _____

Business (day) telephone #: _____ Home telephone #: _____

Please enclose required fee payable to: **North Jersey Section IEEE**

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

I wish to receive IEEE Completion Certificate

Signature: _____

IEEE North Jersey Section Course Project Management

Wednesday Evening, March 14, 2007 through May 9, 2007

Eight weekly classes (March 14, 21, 28, April 11, 18, 25, May 2, 9, 2007)

USPS, NJ International Bulk Mail Center, 80 County Road, Jersey City, NJ 07097

(Checks should not be mailed to this address)

IEEE North Jersey Section thanks USPS, BMC for sponsoring this course at its site

The North Jersey Section IEEE is offering an evening course entitled "Project Management". Dice.com lists 5500+ 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 and the other in *IT Project+* by CompTIA Inc from the knowledge 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: **Donald Hsu, Ph.D.**, has been a corporate manager for 11 years and is an experienced trainer. Since 1999, he has trained 450 people in *IT Project+*, *MS Project 2003*, and *Project Management* courses in eight organizations.

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. Market global e-Commerce projects
11. Present student Projects

WHERE: NJ International Bulk Mail Center, Jersey City, NJ. (Checks **should not** be mailed to this address)

WHEN: 8 Wednesdays, March 14, 21, 28, April 11, 18, 25, May 2, 9, 2007, from 6:30 to 9:00 PM.

COST: IEEE (& affiliate) members \$430; Non-IEEE members \$480.

CONTACT: Donald Hsu: [yanyou "AT" hotmail.com](mailto:yanyou@AT@hotmail.com)

REGISTRATION: Project Management

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

Donald Hsu, Co-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 emailed to you for confirmation.

I wish to receive the IEEE Completion Certificate Signature: _____



LISAT 2007

Third Annual IEEE Long Island Systems, Applications and Technology Conference

Friday, May 4, 2007

Institute for Research & Technology Transfer, Farmingdale State University
Farmingdale, NY

CALL FOR PAPERS AND EXHIBITORS

Last year's successful conference featured contributed papers that were presented in three parallel sessions: Systems, Applications, and Technology. Technical papers describing research development and application on a broad range of electronic and electrical engineering topics are solicited for LISAT2007.

All paper submissions must include title and a 300 to 500 word summary, the speaker(s) full name, affiliation, address, phone number and email address and a 1/3 page long biography. Submissions should be emailed to the LISAT Technical Program Co-Chairmen, Dave Mesecher at d.mesecher@ieee.org and Daniel Rogers at drogers@ieee.org, as well as Jesse Taub, Technical Program Consultant, at jjtaub@aol.com. Papers will be accepted based on their originality, quantitative content, clarity, and interest to IEEE members.

The deadline for paper submissions is December 1, 2006. You will be notified of acceptance or rejection on or before January 10, 2007 and will be given instructions for electronic submission of your full paper which is due by February 15, 2007. One author of each paper must register for the Conference and will be expected to provide a 40 minute PowerPoint presentation at the conference followed by 10 minutes of Q&A. Presented papers will be part of the CD-ROM Conference Proceedings to be given to each attendee and will become part of the IEEE Xplore database.

While LISAT welcomes a wide variety of papers in systems, applications and technology, some examples of topics of particular interest are:

Homeland Defense, Satellite Communications, Mobile Communications, RF ID Tag Technology, Microwave Technology, Electromagnetic Compatibility, Mobile Ad Hoc Networking, Multi-level Network Security, Sensor Fusion, New Electrical Power Sources, Antenna Systems and Processing, Radio Locating, Radar Systems and Techniques, and Medical Electronics

Releases and Approvals: This conference will be unclassified and attended by both US and non-US persons. It is the author's responsibility to obtain all required company and government releases and approvals prior to making a paper submission. A statement that such releases and approvals have been obtained as well as a completed IEEE copyright form (signed by the submitting author) must accompany the final manuscript of each accepted paper.

For information on Exhibiting at LISAT, please contact: Fred Kruger at f.m.kruger@ieee.org or Mark Sadick at mark@sagharborind.com and/or Tel: 516-967-2970

For all other information contact LISAT2007 Conference Chair: Dr. Charles Rubenstein at c.rubenstein@ieee.org or Conference Vice Chair: Dr. Babak Beheshti at b.beheshti@ieee.org

LISAT is sponsored by the IEEE Long Island Section and its Technical Society Chapters, and IEEE Region 1 in cooperation with the Institute for Research & Technology Transfer (IRTT) at Farmingdale State University