

The



IEEE Newsletter

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

NJ SMC Society:

Wildland Fire Monitoring Using Remote Sensing Images

On April 21, 2009, the NJ Systems, Man & Cybernetics (SMC) Chapter will be hosting a seminar at NJIT on the topic noted above. Dr. Ying Li, a lead system designer at GE Healthcare, will be the presenter.

About the Talk

Wildland fire can have important climate and ecological effects via gas and particle emissions and changes to plant communities. The most practical and economically feasible manner of monitoring wild land fire globally is through remote sensing. To date, remote fire detection has been an active research field for many years and a number of algorithms have been proposed for processing satellite and airborne image data. This presentation describes a novel hybrid contextual fire detection algorithm for airborne and satellite thermal images. The proposed algorithm essentially treats fire pixels as anomalies in images and can be considered a special case of the more general clutter or background suppression problem. It utilizes the local background around a potential fire pixel and discriminates fire pixels based on the Mahalanobis distance in multi-spectral feature space.

About the Speaker

Ying Li received the BS, ME degrees from the University of Science and Technology of China, Hefei, China in 1997, and 2000, respectively, and PhD degree in Imaging Science from Rochester Institute of Technology, in 2006. From 2001 to 2005 she was a research assistant in Chester F. Carlson Center for Imaging Science focus on remote sensing image processing. In 2006, She was an intern researcher in Siemens Corporate Research, Princeton, NJ. She is now working in GE Healthcare, Piscataway, NJ, as a lead system designer of a project to automatically analyze microscope images of zebra fishes for pre-clinical

toxicity/efficacy testing of new drugs in the early discover phase. Her research interests lie in the area of digital image processing, pattern classification, and image segmentation.

All Welcome!

You need not be a member of IEEE to attend, and there is no charge for admission.

Time: 7:00 PM, Tuesday, April 21, 2009. Light refreshments will be offered at 6:45 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/University/Directions.html>.

Information/RSVP: Dr. Mike Liechenstein (973-471-0721) or E-Mails: (itsmikesju "AT" aol.com or zhou "AT" njit.edu). Please RSVP and check the electronic newsletter for any changes.

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.

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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>

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) 960-6796, rpepe "AT" ieee.org.

NJ PACE, GOLD, & WIE:

Engineers Meet:

Options: Methods for increasing income and protecting your portfolio

On Wednesday, April 8, 2009 the North Jersey Section Professional Activities Committee, Graduates of the Last Decade and Women in Engineering will host a meeting to discuss systematic methods for your trading strategy. Our speaker will be Bill Purvin, a representative from Charles Schwab and Company.

About the Meeting

A disciplined approach to trading is essential in any market, particularly in today's volatile climate. The discussion will move beyond the basics of technical analysis and learn how to incorporate a systematic method into your trading strategy.

You will learn risk management techniques, how to use Schwab tools to help you identify potential trading opportunities and how to use charts to help you determine buy/sell signals.

Bring your associates, friends and spouses.

About the Speaker

Bill Purvin is an Active Trader Relationship Manager serving Charles Schwab offices in the New York metropolitan area. Bill has worked in the financial services industry for over twenty years with Merrill Lynch, Bear Stearns and Charles Schwab and Co., Inc.

Much of his experience has been with Schwab trading and making markets in NASDAQ stocks for Schwab Capital Markets L.P. (now known as UBS Securities LLC). Bill also traded at a proprietary trading firm in Westchester, NY.

He has a Bachelor of Arts degree in Economics from Rutgers University and has completed courses in advanced technical analysis with New York Institute of Finance. He is currently studying to complete his Certified Financial Planner and Certified Market Technician designations.

All Welcome!

Members and students from all professional societies and engineering disciplines are welcome.

Time: 6:30 PM to 9:00 PM, Wednesday, April 8, 2009. 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, Richard F. Tax, (201) 664-0803, rftax

"AT" verizon.net, Dr. Katherine Duncan, (973) 209-8607, kduncan "AT" ieee.org.

NJ AESS Chapter:

Sensor Networks:

Underlying Present and Future Challenges

On April 2, 2009, the IEEE NJ Section Aerospace & Electronic Systems Society Chapter will host a talk on "Sensor Networks: Underlying Present and Future Challenges." The speaker will be Sachi Desai.

About the Talk

This talk will discuss sensors and sensor network, and provide a brief background on sensors, sensing algorithms, the purpose of sensors for added situational awareness, sensor implementation in a network format, the present and future challenges with sensor networks.

About the Speaker

Sachi Desai received his BS and MS degrees in electrical engineering with concentrations in Microelectronics/Photonics. Since 2002, he has been working at U.S. Army RDECOM-ARDEC where he is involved with acoustic based programs and exploiting signal processing techniques to increase the capability of disparate sensing technologies to provide added situational awareness to warfighters. His duties include acquisition/sustainment of acoustic sensor systems for sniper detection and the development of algorithms for impulsive based events. Currently he is a subject matter expert for utilization of acoustic sensors to provide added information from impulsive based explosions such as mortar/artillery. Much of his work has been published in SPIE, MSS, NDIA, IEEE, and JASA journals and has resulted in algorithms transitioned to fielded systems in OIF & OEF military operations.

All Welcome!

You do not have to be a member of the IEEE to attend the talks but you need to email your name, address, and citizenship to Dr. Naresh Chand by March 30. In your email, please use your subject as "IEEE AESS talk". A free buffet dinner, starting at 6:00 PM, will be provided. Come and bring your friends.

Time: 7:00 PM, Thursday, April 2, 2009. Free buffet will begin at 6:00 PM.

Place: BAE Systems, 164 Totowa Road, Wayne, NJ 07474.

Information: Dr. Naresh Chand, (973) 636-7408, naresh.chand "AT" baesystems.com.

IEEE North Jersey Section Activities

April 2009

Apr. 1 – “NJ Section Meeting”, 6:30 PM, “Executive Committee Meeting” - 7:00 PM, Clifton Public Library - Allwood Branch, 44 Lyall Road, Clifton, NJ, (973) 471-0555. Russell Pepe at rpepe “AT” ieee.org.

Apr. 2 – “Sensor Networks: Underlying Present and Future Challenges” by Sachi Desai, NJ AESS Chapter, 7:00 PM, BAE Systems, 164 Totowa Road, Wayne, NJ 07474. Dr. Naresh Chand, (973) 636-7408, naresh.chand “AT” baesystems.com.

Apr. 8 – “Engineers Meet: Options: Methods for increasing income and protecting your portfolio” by Bill Purvin, NJ PACE, GOLD, & WIE, 6:30 PM to 9:00 PM, Clifton Memorial Library, 292 Piaget Ave, Clifton, NJ. Paul Ward, (973) 790-1625, PWARD1130 “AT” aol.com, Richard F. Tax, (201) 664-0803, rftax “AT” verizon.net, Dr. Katherine Duncan, (973) 209-8607, kduncan “AT” ieee.org.

Apr. 21 – “Wildland Fire Monitoring Using Remote Sensing Images” by Dr. Ying Li, NJ SMC Society, 7:00 PM, New Jersey Institute of Technology (NJIT), Room 202, ECE Center (Intersection between Warren & Summit Streets), Newark, NJ. Dr. Mike Liechenstein (973-471-0721) or E-Mails: itsmikesju “AT” aol.com or zhou “AT” njit.edu.

Apr. 24 - "Low Voltage Circuit Breakers Seminar" by Thomas A. Domitrovich, NJ PES/IAS, 9:00AM to 2:00PM, Jersey Central Power and Light, Punch Bowl Room, 300 Madison Ave, Morristown, NJ. Ronald W. Quade, PE, (732) 205-2614 or rwquade “AT” ieee.org. Details to follow in the April Newsletter.

Apr. 25-26 – “34th Annual Trenton Computer Festival”, 9:00 AM to 5:00 PM, The College of NJ, Ewing, NJ. www.tcf-nj.org.

Apr. 29 – “Renewable Energy Projects in New Jersey” by George Dzurina, NJ SMC Society, 7:30 PM, New Jersey Institute of Technology (NJIT), Room 202, ECE Center (Intersection between Warren & Summit Streets), Newark, NJ. Dr. Mike Liechenstein (973-471-0721) or E-Mails: itsmikesju “AT” aol.com or zhou “AT” njit.edu.

Apr. 30 – “Hitting Bottom is the Best Thing that Can Happen to You – But I Wouldn’t Wish It on Anyone” by Randi Altschul, NJ Consultants' Network, 6:00 PM, Aeroflex/KDI-Integrated Products, 60 S. Jefferson Rd, Whippany, NJ. Robert Walker (973) 728-0344 or www.TechnologyOnTap.org.

Upcoming Meetings

May 1-2 – “The 18th Wireless and Optical Communications Conference”, NJ Communications Society, New Jersey Institute of Technology (NJIT), Newark, NJ. Directions are available at <http://www.njit.edu/University/Directions.html>. Dr. Nirwan Ansari (973) 596-3670 (nirwan.ansari “AT” njit.edu).

May 3 – “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 6 – “NJ Section Meeting”, 6:30 PM, “Executive Committee Meeting” - 7:00 PM, ITT, 77 River Rd, Clifton, NJ. Russell Pepe at rpepe “AT” ieee.org.

May 22 – “Superconductor Power Cables Seminar” by Jack McCall, NJ PES/IAS, 9:00 AM to 2:00 PM, PSE&G Training Center, 234 Pierson Ave, Edison NJ. Ronald W. Quade, PE, (732) 205-2614 or rwquade “AT” ieee.org.

Members and Non-Members Welcome
PLEASE POST

2008 IEEE North Jersey Fellows

Professor Nirwan Ansari

"for contributions to broadband networks and communications"



Nirwan Ansari received the BSEE degree (summa cum laude, gpa=4.0/4.0) from the New Jersey Institute of Technology (NJIT), Newark, NJ, in 1982, the MSEE degree from the University of Michigan, Ann Arbor, MI, in 1983, and the PhD degree from Purdue University, West Lafayette, IN, in 1988.

He joined the Department of Electrical and Computer Engineering, NJIT, as Assistant Professor in 1988, and has been Full Professor since 1997. He has also assumed several administrative positions at NJIT. He authored *Computational Intelligence for Optimization* (Springer, 1997) with E.S.H. Hou, and edited *Neural Networks in Telecommunications* (Springer, 1994) with B. Yuhas. He is a Senior Technical Editor of the *IEEE Communications Magazine* (the flagship publication of IEEE Communications Society), and also serves on the Advisory Board of *Journal of Communications*, and on the editorial board of *Computer Communications*, the *ETRI Journal*, *Wireless Communications and Mobile Computing*, and the *Journal of Computing and Information Technology*. He has been a guest editor of several special issues on various emerging technologies. His current research focuses on various aspects of broadband networks and multimedia communications. He is leading an international collaboration with Japan on "Advanced Security Technologies for Next Generation Ubiquitous Networks", jointly funded by the Strategic International Cooperative Program between NSF and JST (Japan Science

and Technology Agency). He has been frequently invited to deliver keynote addresses, distinguished lectures, tutorials, and invited talks. He is a co-inventor of over twenty issued and pending patents. He has also contributed over 300 technical publications, in which over one third are widely cited refereed journal and magazine articles. Many of these works would not have been possible without contributions from over twenty doctoral advisees he has guided and many colleagues/collaborators both within and beyond NJIT.

Professor Ansari is an active contributor to the IEEE. He initiated (as the General Chair) the First IEEE International Conference on Information Technology: Research and Education (ITRE2003); was instrumental, while serving as its Chair, in rejuvenating the North Jersey Chapter of the IEEE Communications Society which received the 1996 Chapter of the Year Award and a 2003 Chapter Achievement Award; served as Chair of the IEEE North Jersey Section and in the IEEE Region 1 Board of Governors during 2001–2002; has been Chair and TPC Chair of several conferences/symposia/ workshops; and is Cluster Chair of COMSOC Technical Committee Networking Cluster, and Chair of COMSOC Technical Committee on Ad Hoc and Sensor Networks. His recent recognitions include an IEEE Fellow (Communications Society), an IEEE Leadership Award (2007, from Princeton/Central Jersey Section), the NJIT Excellence Teaching Award in Outstanding Professional Development (2008), an IEEE MGA Leadership Award (2008), and designation as an IEEE Communications Society Distinguished Lecturer.

Dr. Yves Baeyens

"for contributions to the broadband and millimeter-wave circuits for optical and wireless communications"



Yves Baeyens received his PhD degree in electrical engineering from the Catholic University of Leuven (K.U.Leuven), Belgium in 1997. His PhD work was performed in collaboration with the Interuniversity Micro Electronics Center (IMEC), Leuven, Belgium. Dr. Baeyens was a visiting scientist at the Fraunhofer Institute for Applied Solid-State Physics in Freiburg, Germany in 1997.

Since 1998, he has been with Bell Laboratories, now a Division of Alcatel-Lucent. He is currently the technical manager for the High-Speed Electronics Design Research Group at Murray Hill, NJ. His group is conducting long-term research in advanced microwave, mixed-mode, analog and digital circuits for next-generation lightwave and wireless systems. Dr. Baeyens main research interest is in the design of ultra-wideband sources and receivers for ultra-high-speed optical and (sub-) millimeterwave wireless applications.

Dr. Baeyens authored or co-authored close to 100 publications on high-speed semiconductor technologies and circuits. He is a reviewer for several IEEE Journals, a technical program committee member of international conferences such as the IEEE Radio and Wireless Symposium and was the Guest Editor for the October 2004 Special Issue of IEEE Journal of Solid-State Circuits. In 2008, he was inducted as a member of the Alcatel-Lucent Technical Academy (ALTA).

Since 2003, Yves Baeyens has been an adjunct associate professor at the

Department of Electrical Engineering of Columbia University, New York City, NY, where he teaches a graduate course on advanced microwave circuit design.

Dr. Anwar Walid

"for contributions to multimedia traffic in telecommunication networks"



Anwar Walid is a Distinguished Member of Technical Staff with the Mathematics of Networks and Communications Research Department at Bell Laboratories, Alcatel-Lucent, Murray Hill, New Jersey, and a member of Alcatel-Lucent Academy. He joined Bell Labs in 1991 after receiving the PhD degree in Electrical Engineering from Columbia University, New York, and the BS degree in Electrical Engineering from Polytechnic University of New York. He developed theory and algorithms for resource management and QoS support for several products. He has seven issued patents and six pending patent applications on network feedback congestion control, scheduling, admission control and information processing in IP/MPLS networks. He received multi-year research funding from DARPA on traffic engineering and routing, and network modeling and optimization. Dr. Walid received the Best Paper Award in ACM SIGMETRICS/IFIP Performance 1995 on statistical modeling and analysis of multi-media traffic. He contributed to the Internet Engineering Task Force (IETF), wrote RFC's and helped in creating the Traffic Engineering Working Group. He served on NSF panels and on executive and technical program committees of IEEE, MPLS and SPIE conferences, and was a guest editor of IEEE Journal on Selected Areas in Communications (JSAC). Dr. Walid gave invited tutorials in IEEE INFOCOM and in

INFORMS Telecommunications Conferences and was an adjunct Professor of Electrical and Computer Engineering at Polytechnic of NYU. He is an elected member of Tau Beta Pi (National Engineering Honor Society) and IFIP Working Group 7.3.

Dr. Thomas Woo

"for contributions to network security and mobile data services"



Thomas Woo is a Director in the Networking Research Laboratory at Bell Labs. He has over 15 years of research and development experience in data networking, spanning both wireline and wireless areas. At Bell Labs, he has led a number of data networking projects, including Wireless Data Server, a system for providing advanced data services over wide-area wireless data services, VIPER, a high-density IP edge router supporting fine-grained QoS, and an all IP media server. Most recently, he is involved in an Alcatel-Lucent venture.

Prior to his current tenure at Bell Labs, he spent two years in RedWave Networks, a Silicon Valley startup, as Chief Network Architect and VP of Software Engineering. Dr. Woo has received more than 10 US patents, and served on the program committees for various premier networking conferences, including ACM SIGCOMM and IEEE INFOCOM. Dr. Woo is an Editor of IEEE Wireless Communications and is an adjunct faculty member at the University of Pennsylvania. In 2005, Dr. Woo received the prestigious ACM Software System Award for his contribution to secure sockets. Dr. Woo received a BSC degree in Computer Science (First Class Honor) from the University of Hong Kong, and MS and PhD degrees in Computer Science from the University of Texas at Austin.

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 technical to non-technical, leadership or just participatory. For Society Chapter Chairs, you must be a member of the corresponding IEEE Society.

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 "AT" ieee.org](mailto:c.gupta@AT.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 below.
- GOLD (Graduates of the Last Decade) Affinity Group Volunteers and Committee members needed - contact [northjerseygold "AT" ieee.org](mailto:northjerseygold@AT.ieee.org)
- WIE (Women in Engineering) Affinity Group Volunteers and Committee members needed - contact [kduncan "AT" ieee.org](mailto:kduncan@AT.ieee.org)
- EMBS (Engineering in Medicine and Biology Society) is seeking a chair and active committee volunteers - contact [c.gupta "AT" ieee.org](mailto:c.gupta@AT.ieee.org).
- Membership Development Committee Chair and Volunteers - contact c.gupta below.

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 "AT" ieee.org](mailto:c.gupta@AT.ieee.org).

NJ Consultants' Network:

Hitting Bottom Is the Best Thing That Can Happen to You – But I Wouldn't Wish It on Anyone

On April 30, 2009, the IEEE Consultants' Network of Northern NJ (www.technologyontap.org) will be holding a meeting featuring a talk titled "Hitting Bottom Is the Best Thing That Can Happen to You – But I Wouldn't Wish It on Anyone". Randi Altschul will be the speaker.

About the Topic

Randi Altschul offers unorthodox views on new product development – something of great interest to independent engineering practitioners. She spoke to the Consultants' Network in the past; this presentation is a follow-up to her well-received talk on entrepreneurship in 2000. In her own words:

"Over the past few years my life has been a roller coaster ride from which I have emerged better than I ever was before. Smarter, stronger, more energized than I'd ever thought possible. During this time I lost everything I owned and the two people I loved more than anything, but all in all I wouldn't change a thing because I'm in a really good place, I own several new companies and am developing groundbreaking product for industries I never thought I'd enter. Conceive it, believe it, achieve it! And never let them get you down."

"Our discussion will take you through the creation and development of incredible products to the pitfalls along the way and the realization that they can take everything away but as long as you have your brain and your reputation you can make miracles happen."

About the Speaker

Randice-Lisa Altschul is an inventor of new products and author of books and intellectual properties. She created the disposable cell phone, the credit card phone, the programmable debit card, the paper laptop, and other new products and properties which range from games and game shows to high tech electronics and everything in between, including food, gifts, etc. She has licensed more than 250 projects around the World and has been associated with major licenses since she started her first company, Dieceland, in 1985.

Her first major project was the Miami Vice game, which put her on the map in the toy industry. She went on to create games and shows for the likes of Tonka, Coleco, Ohio Art, Toy Biz, and NBC.

Randi has written several books, including her memoir, "Financiers, Lawyers and Other Assorted Snakes" and her latest novel, "Sorry, You Can't Enter Heaven". She was the first inventor represented by William Morris Agency and the first inventor contracted by NBC to develop merchandise-based television programs. Randi has two patents on Interactive Cereal and numerous patents in the telecommunication / technology fields.

Randi Altschul established herself as a creative resource to virtually any market from simple toys and games, to television, medical and high-tech industries. She also teaches classes on How to Make Money from Your Ideas. For more information, visit www.inventing411.com.

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 is welcome. No registration needed. Free admission.

Time: 6:00-8:00 PM, Thursday, April 30, 2009.

Place: Aeroflex/KDI-Integrated Products, 60 S. Jefferson Rd, Whippany, NJ. (Entrance at rear of building). To download a map to KDI, go to: <http://www.mcekdi-integrated.com/directions.htm>.

Information: For directions and up-to-date meeting status, call Robert Walker (973) 728-0344 or visit our website at www.TechnologyOnTap.org.

NJ SMC Society:

Renewable Energy Projects in New Jersey

On April 29, 2009, the NJ Systems, Man & Cybernetics (SMC) Chapter will be hosting a seminar at NJIT on the topic noted above. Mr. George Dzurina, the President of Triple G Energy (TGE) & the Founder and President of G-CREW LLC., will be the presenter.

About the Talk

Renewable energy systems have been one of the hottest research and application topics in the recent years. This seminar will present

- Overview of current pending projects in New Jersey
- The G-CREW 12 Step Plan for Quick Estimation for Solar Electric Systems
- A pictorial review of Solar Electric Systems for Residential and Commercial Facilities

About the Speaker

Mr. George Dzurina is the President of

Triple G Energy (TGE) & the Founder and President of G-CREW LLC. He is a Senior Member of the Association of Energy Engineers. TGE is a research company specializing in Renewable Energy Solutions and Energy Audits. G-CREW specializes in marine terminal efficiencies & ops management, consults & trains on solar electric systems. Previously, Mr. Dzurina was a General Manager at APM Terminals & A.P. Moller Maersk, where he managed ship to shore (STS) & rail mounted gantry (RMG/RTG) cranes. He has over 10 years of experience with Ford Motor as the Manufacturing Engineering Manager and a total productive and reliability centered maintenance (TPM, RCM) expert and lean champion in the auto industry. He holds a Six Sigma Black Belt and has managed projects utilizing robotics, PLC's, automation & vision systems. He is an Electrical Engineer & Technical Manager with over 20 yrs of experience in managing labor unions (UAW & ILA). He was also a Controls Engineer at Syncro Machine in the wire & cable industry.

All Welcome!

You need not be a member of IEEE to attend, and there is no charge for admission.

Time: 7:30 PM, Wednesday, April 29, 2009. Light refreshments will be offered at 7:15 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/University/Directions.html>.

Information/RSVP: Dr. Mike Liechenstein (973-471-0721) or E-Mails: (itsmikesju "AT" aol.com or zhou "AT" njit.edu). Please RSVP and check the electronic newsletter for any changes.

IEEE North Jersey Section Education Committee

- ran courses: C, C++, Java, Advanced Java and C# programming successfully since 1993
- 138 IEEE engineers and non-engineers took these courses and they gave excellent reviews
- We need a company that has a classroom with 10+ computers, to run the programming courses.
- Contact Donald Hsu, Education Committee Chair, yanyou@hotmail.com if you can help. Thanks!

News from IEEE-USA:

IEEE-USA Commends Congress, Administration for Investing in Science & Technology to Create Jobs, Bolster U.S. Innovation & Competitiveness

Washington (18 February 2009) - IEEE-USA President Gordon Day commends Congress and the administration for investing in science, technology, energy, and education in the American Recovery and Reinvestment Act.

President Barack Obama signed the legislation yesterday in Denver.

"IEEE-USA strongly endorses these much-needed investments in research and our science and technology infrastructure," Day said. "We believe the investments will help stimulate education, innovation and economic development across the country, saving or creating jobs now and building a stronger America for the future."

Energy projects and programs will receive billions of dollars to improve energy efficiency, develop a "Smart Grid," provide incentives to electrify transportation and develop energy storage technology. The spending is consistent with IEEE-USA's latest energy policy recommendations (<http://www.ieeeusa.org/policy/positions/energypolicy.pdf>).

"We particularly welcome the investments in energy because energy is central to three of the most important challenges we face as a nation: prosperity, security and environmental health," Day said.

The law also takes important steps toward achieving universal access to broadband data services through the Federal Communications Commission, the Department of Commerce and the Department of Agriculture. IEEE-USA recently restated its commitment to this initiative in <http://www.ieeeusa.org/policy/positions/broadband.pdf>.

"Investing in universal broadband access will permit workers to perform many jobs almost anywhere, and will provide new educational opportunities and improved medical care everywhere," Day said.

The package also directs the National Institute of Standards and Technology (NIST) to develop standards for a national health information network, something IEEE-USA has long championed (<http://www.ieeeusa.org/policy/positions/NHINinteroperability.html>).

"Having an interoperable health

information network will not only help medical professionals save lives and improve the quality of care, but will also create a more effective marketplace for health services by enabling consumer access to information on healthcare costs, quality and outcomes," Day said.

The law puts the budgets of NIST, the National Science Foundation and the Department of Energy's Office of Science on track to double over the next seven years.

"Funding the programs in science and mathematics education and R&D that Congress authorized in the America COMPETES ACT of 2007 is an essential step toward maintaining a healthy, innovation-driven economy, and assuring a vibrant high-tech workforce for the future," Day said.

IEEE-USA advances the public good and promotes the careers and public policy interests of more than 215,000 engineers, scientists and allied professionals who are U.S. members of the IEEE. IEEE-USA is part of the IEEE. See <http://www.ieeeusa.org>.

Chris McManes, IEEE-USA Public Relations Manager, (202) 530-8356, c.mcmanes@ieee.org

Time for Action on New Jersey Mathematics Education

New Jersey is reconsidering its licensure requirements for public school teachers, so now is the time for concerned citizens to register their recommendations. Addresses follow. Currently there are no requirements for prospective elementary school teachers to take any appropriate mathematics courses, and their lack of knowledge of what their pupils should learn is appalling.

IEEE members may want to recommend four courses in accordance with the recommendations of the Combined Board of Mathematical Sciences: one each in arithmetic and number sense; geometry; statistics, probability, and data analysis; and algebraic reasoning. Or you may want to support the recommendations of the New Jersey Association of Mathematics Teacher Education: the first three listed above and a course in mathematical pedagogy.

In either case, write to Dr. Robert Higgins, Director, Office of Licensure and Certification and to the State Board of Education. Both addresses are at the New Jersey Department of Education, Box 500, Trenton, NJ 08625. The email addresses are Robert.higgins@doe.state.nj.us and StateBD@doe.state.nj.us.

Currently, New Jersey elementary

school teachers are foggy on fractions, division, and subtraction, and not strong on addition. One nice prospective teacher in her last college math class insisted that because in 1999 small trucks owned by Americans averaged 20 mpg and sedans averaged 28 mpg that altogether they must average 48 mpg. "Altogether" means "add." Last year a fifth grade teacher in a nice suburban town was observed drilling her pupils in adding fractions by adding across the numerators and then adding across the denominators. Unprepared teachers resort to teaching key words and incorrect algorithms.

Elementary school teachers are eager to learn, and can learn quickly if taught appropriately. However, they emerged from our highly flawed system, and they need help if New Jersey's children are to learn mathematics. Please help by writing to the above addresses.

New Instrumentation and Measurement Society (IMS) Formed for North Jersey Section

On Tuesday, March 3, 2009, the Instrumentation and Measurement Society (IMS) was officially formed for the North Jersey Section of the IEEE. Russell Pepe will hold the position as Chair; and Dr. Santosh Mukherjee, as Vice Chair. We are planning several stimulating talks, given by experts in the industry. Announcements will be posted as we organize these meetings. Please contact Russell Pepe, IMS Chair (rcpepe@ieee.org) should you be interested in speaking or attending an upcoming IMS Meeting. All IEEE members and non-members are welcome at our IMS meetings, in addition to IMS members.

NJIT Course on Microwave Filters and Networks

Taught by Professor Richard V. Snyder (RS Microwave), this course will take the student through microwave filter and network design for lumped and distributed elements, covering passive and active implementations. In order to offer this course in Fall 2009, NJIT requires a minimum enrollment of six students. If you are interested in finding out more about the course content, contact Ralph Giffone (ralph.giffone@gdsatcom.com, 814-360-3733) for a 33-page PDF file containing a course abstract, bibliography and excerpts from the course notes.

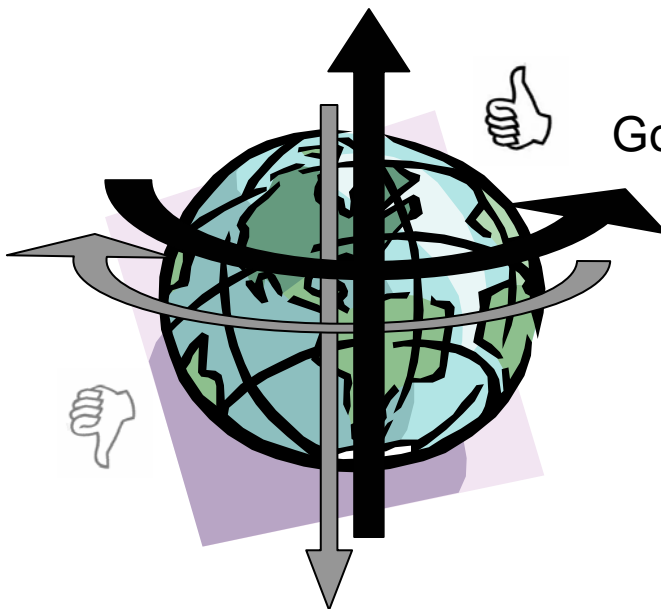
GLOBALIZATION FORUM 2009

Outsourcing & Offshoring Impact: Reversing the Flux of Technical Leadership and Engineering Jobs on LI

Where do you stand?

Friday April 24, 2009
7 – 9 PM
Farmingdale
State College
SUNY

Hosted by
Peter Eckstein
Vice President,
Government Relations,
IEEE-USA



"I do not accept a future where the jobs and industries of tomorrow take root beyond our borders - and I know you don't either.

It is time for America to lead again."

President Obama, 24 Feb 2009

Keynote Speakers:

Pearl Kamer, **PhD, Chief Economist of Long Island**

Ron Hira, PhD, Asst. Prof. Public Policy, RIT, Author of *Outsourcing America*

Russ Harrison, Sr. Legislative Representative, Grassroots Affairs, IEEE-USA

Gary Huth, Principal Economist / Labor Market Analyst, NYS Dept. of Labor

The Eighteenth Wireless and Optical Communications Conference

May 1 – 2, 2009, NJIT, Newark, New Jersey, USA

Conference Chair

Junyi Li, Qualcomm

Conference Organizer

Yu-Dong Yao, Stevens

Program Chairs

Wireless Symposium:

Guangying Li, Alcatel-Lucent

Jane Luo, Qualcomm

Networks Symposium:

Zhuangbo Tang, Johns Hopkins

Ben Tang, AT&T

Optical Symposium:

Angela Chiu, AT&T

Xiang Liu, Alcatel-Lucent

Multimedia Symposium:

Zhu Liu, AT&T

Hong Man, Stevens

Research Posters

Yingying Chen, Stevens

Tutorials

Hongya Ge, NJIT

Conference Coordinator

Sigen Ye, Alcatel-Lucent

Publications

Russell Sun, Alcatel-Lucent

Jin Yu, iBiquity Digital

Fund Raising

Qi Bi, Alcatel-Lucent

Treasurer

James Hwang, Lehigh

Local Arrangement

Mengchu Zhou, NJIT

Registration

Nirwan Ansari, NJIT

Public Relations

Kevin Lu, Telcordia

Shuang Yu, Alcatel-Lucent

International Liaison

Li Fung Chang, Broadcom

Steering Committee

Qi Bi, Alcatel-Lucent

Li Fung Chang, Broadcom

Ying Hu, Alcatel-Lucent

James Hwang, Lehigh

Kevin Lu, Telcordia

Shuang Yu, Alcatel-Lucent

Mengchu Zhou, NJIT

Co-Sponsoring Associations

- Chinese American Academic and Professional Society
- Chinese Association of Science and Technology
- Chinese Institute of Engineers
- IEEE Communications Society
- IEEE Northern Jersey Section
- Monte Jade Science and Technology Association
- Photonics Society of Chinese Americans

The eighteenth Annual Wireless and Optical Communications Conference (WOCC) will bring together technical experts and business leaders from the North America and Pacific Rim to discuss multimedia, optical, and wireless communications technologies and business opportunities. The theme of WOCC 2009 is **Converging Broadband Communications** over public mobile wireless networks, public fixed broadband wireline networks, and private customer premises networks. The integration of these three networks is the focus of a new next-generation network providing convergent user-centric services that are no longer associated with the types of network access or content media. Instead, these convergent user-centric services will offer seamless delivery of multimedia applications including voice, data, image, and streaming video independent of any access technologies. The transport layer protocol is converging on Internet Protocol that propelled the growth of the world wide web. The network and service providers will need to deploy standard-compliant converged networks and offer these new value-added services to save operational cost and grow their revenue. Convergent Communications can truly be considered as the enabler for the next phase of growth for the telecommunication industry.

High quality presentations and papers are solicited in the areas of wireless networking, intelligent multimedia, optical communications, and network solutions. The conference consists of four symposiums, with topics including, but not limited to, the following:

Wireless Symposium

- Wide-area and fixed wireless communications
- Wireless LAN/PAN
- Convergence of fixed and mobile hybrid communication system
- Low-power mobile end-devices and system-on-chip
- Security in mobile and wireless networks
- Sensor network and distributed mobile computing
- Location-based services and positioning
- Mobile and wireless applications
- Fundamental research in mobile and wireless communications

Networks Symposium

- Convergence architectures and solutions
- Migration to NGN and mobile broadband
- Network planning, design methods and tools
- Position of new technologies in the network

Optical Symposium

- Optical network planning, designing, and modeling
- Optical access/metro networks
- Photonic switching system architectures and network elements
- Optical passive/active components and devices
- Optical network protection and restoration
- Optical network applications

Multimedia Symposium

- Multimedia indexing and search
- Semantic-based multimedia analysis
- Multimedia database
- Multimedia content personalization
- Multimedia content distribution
- Peer-to-peer multimedia
- IPTV technologies and services
- Security of multimedia data
- QoS for multimedia applications

Submission Deadline: February 1, 2009

Notification: March 15, 2009

Submit the abstract/bio in Microsoft Word to one of the symposium chairs:

- **Wireless:** Guangying Li, gli@alcatel-lucent.com
- **Networks:** Zhuangbo Tang, z.bo.tang@jhuapl.edu
- **Optical:** Angela Chiu, chiu@research.att.com
- **Multimedia:** Zhu Liu, zliu@research.att.com

Please refer to www.wocc.org for the abstract/bio template and additional info.

NJ Power & Energy Society/Industry Applications Society

Superconductor Power Cables Seminar

The PES and IAS Chapters will sponsor a technical seminar on the topic of superconductor power cables. The session will be held on Friday, May 22, 2009 at the PSE&G Training Center, 234 Pierson Avenue, Edison, NJ.

Topics

Superconductor Power Cables – More Power, Less Space, Fault Current Limiting

- ✓ Introduction to superconductivity
- ✓ Quantify the unique capabilities provided superconductor power cables
- ✓ Understand why utilities are installing this capability today
- ✓ Review of current superconductor cable installations and projects
- ✓ Identify the opportunities for superconductor use
- ✓ Appreciate that these systems are composed of commercial, off-the-shelf components

About the Instructor

Jack McCall is the Director of T&D Systems for American Superconductor with responsibility for superconductor cable systems, STATCOMs, SVCs, and related FACTS solutions. Jack has over 25 years experience in the utility T&D business holding a variety of product engineering, product management, system engineering, business development, marketing, and strategic planning roles. He has his Master's in Electric Power Engineering from Rensselaer Polytechnic Institute, Troy, NY, and his BSEE from Gannon University, Erie, PA. He is a member of the IEEE and CIGRE.

The registration fee for this seminar 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. 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, May 22, 2009.

Place: PSE&G Training Center, 234 Pierson Avenue, Edison NJ

Directions: http://maps.google.com/maps?f=q&source=s_q&hl=en&geocode=&q=234+pierson+ave,+edison,+nj++08837&sl=37.0625,-95.677068&sspn=32.472848,55.546875&ie=UTF8&ll=40.530714,-74.349353&spn=0.0076,0.013561&z=16&iwloc=addr

Information: Ronald W. Quade, PE, (732) 205-2614 or [rwquade "AT" ieee.org](mailto:rwquade@at.ieee.org)

Registration: Superconductor Power Cables Seminar 5/22/2009

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 \$ _____

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

NJ Power & Energy Society/Industry Applications Society

Low Voltage Circuit Breakers Seminar

The PES and IAS Chapters will sponsor a technical seminar on the topic of low voltage circuit breakers. The session will be held on Friday, April 24, 2009, in the Punch Bowl Room at Jersey Central Power and Light, 300 Madison Ave, Morristown, NJ.

Topics

Low voltage circuit breakers:

- ✓ Standards
- ✓ Types – thermal magnetic vs. electronic
- ✓ Molded Case, Insulated Case, Power Breakers
- ✓ Application
- ✓ Arc Flash Mitigation

About the Instructor

The instructor will be Thomas A. Domitrovich. Thomas is an Application Engineer for Eaton Corporation in Pittsburgh PA. Thomas began his career in 1990, after graduating from Gannon University in Erie PA with a Bachelor of Electrical Engineering (BEE), with Gilbert Commonwealth as an electrical engineer. Thomas has worked with electrical power systems from residential to large industrial and utilities. He is a member of the Institute of Electrical and Electronic Engineers (IEEE), is involved with the National Electrical Manufacturer's Association (NEMA) and the National Fire Protection Association (NFPA). Thomas is an Alternate member on NFPA 73 and has published industry articles as well as IEEE white papers.

The registration fee for this seminar 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. 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, April 24, 2009.
Place: Punch Bowl Room at Jersey Central Power and Light, 300 Madison Ave, Morristown, NJ 07960
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" ieee.org

Registration: Low Voltage Circuit Breakers Seminar 4/24/2009

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 \$ _____

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

IEEE AWARDS RECEPTION

*North Jersey Section
May 3, 2009
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 3, 2009** 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, 2009. 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, 2009.** 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