

The



IEEE Newsletter

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

NJ Section PACE & GOLD:

Engineers Meet:

What's Next – Action

Items Continued from - Where Do We Go From Here?

On Wednesday, February 8, 2006 the North Jersey Section Professional Activities Committee and Graduates of the Last Decade will meet to discuss the engineering profession.

About the Meeting

Continued from January meeting "Where Do We Go From Here?"

Engineering, especially EE, and Computer Science employment in the US have been in a recession since the telecom bust of 2002. It's easy to blame the usual suspects; outsourcing, hi tech immigration, the NSF, inflated shortage projections by government, industry and academia, low achievement in science and tech education.

This meeting will address action items – Past and Future: What works? - What Doesn't?

What's the future look like for engineers? Several grassroots groups have sprung up taking very different paths to attack the issue. Can any of them be successful? What's the IEEE doing?

The engineering profession needs help if it's going to offer a viable career and profession. The past activities did not work.

What do we do? Get political; get organized; make friends in high places. What's your opinion? It's time to come together to enhance the profession we love. We all need to get involved. Remember; "If you always do what you always did, you will always get what you always got."

About the Speaker

Open discussion with Richard F. Tax PACE Chair as Moderator. Richard has over 25 years as an IEEE volunteer at the Section, Region and National level. We will focus on action items.

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 8, 2006. 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 (rtax "AT" bellatlantic.net).

North Jersey Spring 2006 Student Presentation Contest Set for Early March

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 both categories of \$100/\$75/\$50. The contest is now accepting abstracts and **required** registration of student talks. The online registration can be found on the website http://ewh.ieee.org/r1/north_jersey/sac/iee.htm.

Additional topic and contest information is also available. Feel free to email the organizer any questions.

Time: Check Website for exact Date (free dinner at 5:30PM)

Place: NJIT, Newark, NJ (Free Parking available.)

Registration is now open, all presenters must register. Winners from the section contest can progress to the regional competition. Details are at Region 1 Student Activities Website.

FEBRUARY 2006

February 2006

Volume 52, 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, (908) 791-4067.

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 Seth Jakel at (973) 731 1902, [sgjakel "AT" comcast.net](mailto:sgjakel@comcast.net).

NJ Consultants' Network:

New Client Development for the Technical Professional

On Thursday, February 23, 2006, the IEEE Consultants' Network of Northern NJ is pleased to present "New Client Development for the Technical Professional", presented by David Mills & Ed McCauley, courtesy of the Sandler Sales Institute.

About the Talk

As technical professionals we often give away valuable information and expertise without any commitment as to what they will do with it once they have it. This puts many of us in chase mode, making it difficult to manage our time effectively and forecast concisely.

It doesn't matter what you call it – client development, practice-building, or marketing, everyone sells. But not everyone is comfortable selling. You are not alone if you are uncomfortable with the fact that part of your job requires that you "sell" your ideas, your company and services to your clients.

Many people perceive sales as exploitative and even manipulative but selling doesn't have to be a bad word; it CAN be just another way of looking at providing a solution. Selling is a respectable and profitable part of your profession, and a necessary function of marketing and growing your business. It's a necessary skill in today's competitive marketplace.

Sales is not a mystical art or the domain of those with certain personalities. Rather, successful selling is dependant upon the process we use and who is in charge of leading it.

Join David Mills, Principal of the Sandler Sales Institute, for a comprehensive, highly interactive program designed to help you take greater charge of the sales process, avoid unpaid consulting, deal with money issues and get commitments while building better relationships with your Clients.

Discover how traditional sales practices:

- Turn you into an unpaid consultant
- Why prospective clients always want to think-it-over
- And why traditional approaches lead to price-cutting

During this program we will learn how to:

- Enhance account development strategies.
- Effectively manage existing client relationships and referral development.
- Develop the appropriate networking

and prospecting activities.

- Conduct presentations that will permit the client to say "yes" without pressure from you!
- Help your organization develop a larger client base.
- Learn why people really buy.

About the Speakers

David Mills, Principal of the Sandler Sales Institute of Philadelphia (<http://davidmills.sandler.com>), possesses 15 years of business development, management, and training experience. David has created many proprietary products and processes and today holds three global patents. He is internationally published and holds a BS in Mechanical Engineering from the University of Delaware and a Black Belt in Isshinryu Karate.

Ed McCauley has 17 years of experience applying a disciplined and systematic approach to high-tech sales, marketing, and management. In addition to teaching for the Sandler Sales Institute, Ed remains president of a high tech corporation where he continues to sell technical solutions to companies ranging in size from start-up to the Fortune 100. Ed is an alumnus of The U.S. Naval Academy, Rutgers and Drexel Universities, a longtime member of CNNNJ, and can be contacted at (908) 479-1200 or via email: [ed.mccauley "AT" blitinc.com](mailto:ed.mccauley@blitinc.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 welcome. No registration needed. Free admission.

Time: 7:30 PM, Thursday, February 23, 2006.

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>.

IEEE North Jersey Section Activities

February 2006

Feb. 1 – “NJ Section Meeting”, 6:30 PM, “Executive Committee Meeting” - 7:00 PM, ITT, 100 Kingsland Rd, Clifton, NJ. Seth Jakel at [sgjakel “AT” comcast.net](mailto:sgjakel@comcast.net).

Feb. 8 – “Engineers Meet: Items Continued from - Where Do We Go From Here?” by Richard Tax, 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](mailto:PWard1130@comcast.net)) or Richard F. Tax, (201) 664-6954 ([rtax “AT” bellatlantic.net](mailto:rtax@bellatlantic.net)).

Feb. 15 – “Energy Conservation Series - Solar Power” by Thomas P. Kuster, NJ IAS/PES Chapters, 6:30 PM, Eaton Electrical, 690 Rahway Ave, Union, NJ. Ronald W. Quade, PE, (732) 205-2614 or [rwquade “AT” ieee.org](mailto:rwquade@ieee.org).

Feb. 18-May 6 – “C# .NET Programming” by Dr. Donald Hsu, North Jersey Section, Saturday Mornings, 10 sessions, 9:00 AM-12:00 PM, location TBA. Bhanu Chivukula ([b.chivukula “AT” computer.org](mailto:b.chivukula@computer.org)).

Feb. 21 – “A Crash Course in Search Engine Marketing” by Mike Moran, NJ Computer & EMS Chapters, 7:00 PM, Lucent Technologies, 67 Whippany Road, Room 3C-222, Whippany, NJ, (973) 779-5500. Seth Jakel (973) 731 1902 or (973) 820-1865 ([sgjakel “AT” Comcast .net](mailto:sgjakel@comcast.net)), Howard Leach (973) 540-1283 ([hhleach “AT” aol.com](mailto:hhleach@aol.com)), or Steve Wilkowski (973) 386-6487 ([swilkowski “AT” lucent.com](mailto:swilkowski@lucent.com)).

Feb. 23 – “New Client Development for the Technical Professional” by David Mills and 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.

Upcoming Meetings

Mar. 1 – “NJ Section Meeting”, 6:30 PM, “Executive Committee Meeting” - 7:00 PM, ITT, 100 Kingsland Rd, Clifton, NJ. Seth Jakel at [sgjakel “AT” comcast.net](mailto:sgjakel@comcast.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. Bhanu Chivukula ([b.chivukula “AT” computer.org](mailto:b.chivukula@computer.org)).

Mar. 15 – “Energy Conservation Series - High Efficiency Motors & Variable Frequency Drives” by John Hyfantis, PE, NJ IAS/PES Chapters, 6:30 PM, Eaton Electrical, 690 Rahway Ave, Union, NJ. Ronald W. Quade, PE, (732) 205-2614 or [rwquade “AT” ieee.org](mailto:rwquade@ieee.org).

Mar. 22 – “Innovations in Light-Emitting Diodes for Solid-State Lighting Applications” by Dr. E. Fred Schubert, 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 ([dmsira “AT” njit.edu](mailto:dmsira@njit.edu)).

Mar. 24 – “Electric Power Transfer Switch Seminar” by Mr. Ronald Schroeder, NJ IAS/PES Chapters, 9:00 AM – 3:00 PM, Automatic Switch Co., 50 Hanover Rd, Florham Park, NJ 07932. Ken Oexle, (973) 386-1156 or [k.oexle “AT” worldnet.att.net](mailto:k.oexle@worldnet.att.net).

Mar. 27-28 – “2006 IEEE Sarnoff Symposium” – see www.sarnoffsymposium.org for details.

Mar. 30 – “Professional Networking 101” 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.

Apr. 19 – “Electromagnetics and Semiconductor Device Simulations” by Dr. Ramesh K. Agarwal, 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 ([dmsira “AT” njit.edu](mailto:dmsira@njit.edu)).

Apr. 21 – “Lighting Seminar” by John Hyfantis, PE, NJ IAS/PES Chapters, 8:30 AM – 3:00 PM, PSE&G Training Center, 234 Pierson Avenue, Edison, NJ. Ronald W. Quade, PE, (732) 205-2614 or [RWQuade “AT” ieee.org](mailto:RWQuade@ieee.org).

May 7 – “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.

Members and Non-Members Welcome

PLEASE POST

NJ PES/IAS Chapters:

Energy Conservation Series - Solar Power

On February 15, 2006, as part of an ongoing series of free seminars on the topic of energy conservation, the PES and IAS Chapters will sponsor an evening discussion on Solar Power by Thomas P. Kuster.

About the Meeting

The presentation will include an overview of current solar technology, as well as a detailed review of the financial incentive programs available for businesses and organizations specifically in New Jersey. The combination of the New Jersey Clean Energy Program's 60% capital rebates and the current market for Solar Renewable Energy Certificates has brought project paybacks to an all time best of 5-6 years.

Businesses in New Jersey are good candidates for solar systems given their extremely high energy usage, day/summer demand peaking (from HVAC), and community/ environmental missions. Solar in facilities is a viable part of a comprehensive energy management strategy, since solar electricity is an excellent hedge against fuel price volatility and energy inflation.

Interested building and facility managers should apply for rebates now, while funding at current levels remains available. This presentation will help you get started and take advantage of both the financial and publicity rewards offered by photovoltaic power.

Attendees will gain a basic understanding of solar technology, the funding available to implement this technology and the additional benefits available.

About the Speaker

The presenter will be Thomas P. Kuster, President, Dome-Tech Solar.

Tom Kuster is president of Dome-Tech Solar, a premier provider of solar energy systems serving commercial, institutional and industrial businesses. Tom is active at the Renewable Energy Subcommittee of the NJ Clean Energy Council, a group of industry experts that lead the discussion on renewable energy policy for the state's Board of Public Utilities. Tom's broad experience includes positions in corporate development, sales, marketing, engineering and business unit leadership while working at NUI, Air Products and Chemical Inc. and AT&T - Bell Laboratories. Prior to joining Dome-Tech Solar he served as managing director and founder of Hunts Mills Energy Group, a management consultants specializing in business development, strategic planning and business process evaluation and

redesign. Tom earned his master's degree in business administration from Lehigh University, in addition to a master's degree in mechanical engineering from Stanford University and bachelor's degree in mechanical engineering from Manhattan College. He is certified in energy management by the Association of Energy Engineers, and has completed programs with the Center for Creative Leadership and Hammer Institute.

Time: 6:30 PM, Wednesday, February 15, 2006. A pre-meeting buffet will be available starting at 6:00PM.

Place: Eaton Electrical, 690 Rahway Ave, Union, NJ. Directions: Route 82 Morris Avenue from either Springfield or Union to Rahway Ave.

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

NJ Computer Chapter: A Crash Course in Search Engine Marketing

On Tuesday, February 21, 2006, the North Jersey Chapter of the IEEE Computer Society will host a presentation titled "A Crash Course in Search Engine Marketing" by Mike Moran.

About the Talk

Do you want to learn search engine marketing in 90 minutes? Find out what search marketing can do for your Web site, whether you're selling products online, passing leads to offline channels, or just raising brand awareness. Learn how search engines work and discover the opportunities in both paid and organic search--and what you can do to take advantage of them.

Find out how to optimize your organic search results in just a few steps. Start by ensuring your site's design allows your pages to be indexed. Then identify the search keywords people are using that should find your site, so you can optimize your pages to use those words. Finally, attract links to your pages from other sites to show the search engine how important your site is.

You can succeed at paid search too. Learn the paid search options so you can choose the best venues for your budget. Discover how to optimize your bidding so that you get the highest return on your investment. Finally, round out your knowledge by learning the metrics tools you need to keep your search marketing humming.

About the Speaker

Co-author of the new book *Search*

Engine Marketing, Inc., Mike is an IBM Distinguished Engineer with more than 20 years experience in search technology working at IBM Research, Lotus, and other IBM software units. He led the product team that developed the first commercial linguistic search engine in 1989, and has been granted four patents in search and retrieval technology. He led the original search marketing strategy for ibm.com, as well as the integration of ibm.com's site search technologies. Mike has worked on IBM's Web site for the past seven years and is currently the Manager of ibm.com Site Architecture. In addition to his search work, Mike has spearheaded ibm.com projects in Content Management, Personalization, and Web Metrics.

Mike is a frequent conference speaker, appearing at Search Engine Strategies, Consumer Reports WebWatch, AD:TECH, Enterprise Search Summit, and many more. In addition to Mike's broad technical background, he also holds an Advanced Certificate in Market Management Practice from the Royal UK Charter Institute of Marketing, helping bridge the gap between technology and marketing concepts. Mike can be reached through his Web site (mikemor.com), which is also home to his Biznology newsletter and blog.

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 PM.

Time: 7:00 PM, Tuesday, February 21, 2006. Pre-meeting buffet starting at 6:00 PM.

Place: Lucent Technologies, 67 Whippany Road, Room 3C-222, Whippany, NJ.

Information: Seth Jakel (973) 731 1902 or (973) 820-1865 (sgjakel "AT" Comcast .net), Howard Leach (973) 540-1283 (hhleach "AT" aol.com), or Steve Wilkowski (973) 386-6487 (swilkowski "AT" lucent.com). Registration in advance is recommended with full name, affiliation and nationality so that an admission badge will be available for you on arrival.

NJ PES/IAS Chapters:

Energy Conservation Series - High Efficiency Motors & Variable Frequency Drives

On March 15, 2006, as part of an ongoing series of free seminars on the topic of energy conservation, the PES and IAS Chapters will sponsor an evening discussion on High Efficiency Motors and Variable Frequency Drives by John Hyfantis, PE.

About the Meeting

The first part of the presentation will focus on the performance and efficiency improvements offered by high efficiency motors (HEM). A "replace versus repair" analysis, including the NJ Smart Start incentives, will be demonstrated using the "MotorMaster +" software (free downloads are available from a USDOE website).

The second part of the presentation will focus on the application of Variable Frequency Drives (VFD) to centrifugal loads, such as fans and pumps. A VFD payback analysis will be demonstrated, including a comparison of VFD speed control versus mechanical speed control, harmonic filtering and VFD interaction with "inverter-grade" motors.

About the Speaker

The presenter will be John Hyfantis, PE.

Mr. Hyfantis' first career path was in the electronic engineering field, 1961 to 1975. Employed by the Southern New England Telephone Co, US Army Electronics Command, Electronic Associates, RCA-Astro Electronics, Dow Jones and Co and Intec, Inc. With Johnson and Johnson ESDP, power distribution engineering was added to the career path.

Mr. Hyfantis is President of Energistics, LLC, since 1978. Energistics provides engineering consulting services to commercial, industrial and institutional clients in the Mid-Atlantic region. Engineering services include HVAC equipment replacement and upgrade analysis; process and space conditioning VF drive design and installation; building management system design; building commissioning; compressed air system analysis; and power allocation surveys. Energistics also provides workshops, covering the topics of motors, motor controls, energy reduction and power quality.

Time: 6:30 PM, Wednesday, March 15, 2006. A pre-meeting buffet will be available starting at 6:00PM.

Place: Eaton Electrical, 690 Rahway Ave, Union, NJ. Directions: Route 82 Morris Avenue from either Springfield or Union to Rahway Ave.

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

NJ EDS/C&S Chapters:

Innovations in Light- Emitting Diodes for Solid-State Lighting Applications

On March 22, 2006, the IEEE NJ Section Electron Devices, Circuits and Systems Chapters together with the New Jersey Institute of Technology will host a talk on "Innovations in Light-Emitting Diodes for Solid-State Lighting Applications." The speaker will be Dr. E. Fred Schubert.

About the Talk

The use of highly efficient semiconductor light-emitting diodes (LEDs) suitable for illumination applications will enable huge energy savings, reduction in green-house gas generation, and reduction of environmental pollution. Luminous source efficiencies exceeding 300 lm/W and color-rendering indices (CRIs) greater 90 are feasible with solid-state sources. This talk discusses critical issues in solid-state lighting, including practical limits to efficacy and efficiency, and scalability of chip size and current density. Possible solutions to current device-performance limitations are presented: A new type of triple-layer omni-directional reflector (ODR) with a mirror loss that is two orders of magnitude lower than the mirror losses of either metal reflectors or distributed Bragg reflectors (DBRs). One layer of the reflector consists of a new class of dielectric materials, low-refractive-index materials, with a very low refractive index, close to that of air. The low-index material is based on highly porous SiO₂ and is deposited by oblique-angle evaporation. We will also present results on white LEDs with remote phosphor distributions. Such phosphor distributions offer higher efficiency than conventional proximate phosphor distributions. Solid-state sources based on LEDs have advantages not offered by conventional light sources, namely tunability and adaptability. In contrast to conventional incandescent and fluorescent sources, future smart light sources based on LEDs offer control of their spectral composition, spatio-chromatic emission pattern, temporal modulation, polarization, and color temperature. This will allow for fundamental innovations in bio-imaging, communications, circadian lighting, and the optimization of light sources for specific applications. Several specific

application areas will be discussed.

About the Speaker

E. Fred Schubert received his PhD in Electrical Engineering from the University of Stuttgart (Germany) in 1986. From 1981 to 1985 he worked on compound semiconductor crystal growth at the Max Planck Institute for Solid State Research, Stuttgart, as a Member of Scientific Staff. From 1985 to 1995, he was a Post-doctoral Fellow, Member of Technical Staff, and Principal Investigator at AT&T Bell Laboratories in Holmdel and Murray Hill, New Jersey. In 1995, he joined Boston University as a Professor of Electrical Engineering. He joined Rensselaer Polytechnic Institute in 2002 where he is the Wellfleet Senior Constellation Professor of the Future Chips Constellation with appointments in the Electrical Engineering Department and in the Physics Department.

Dr. Schubert has made pioneering contributions to the field of compound semiconductor materials and devices in particular to the fields of alloy broadening, delta-doping, resonantcavity light-emitting diodes, enhanced spontaneous emission in Er-doped Si/SiO₂ microcavities, elimination of unipolar heterojunction band discontinuities, p-type superlattice doping in AlGaIn, polarization-enhanced ohmic contacts, omni-directional reflectors, light-emitting diodes, and solid-state lighting.

He is inventor or co-inventor of 28 issued US patents and has authored and co-authored more than 200 publications. He authored the book Doping in III-V Semiconductors (1993), Delta Doping in Semiconductors (1996), and Light-Emitting Diodes (2003). He is a Fellow of the APS, IEEE, OSA, and SPIE. He received the Alexander von Humboldt Senior Research Award, Discover Award, R&D 100 Award, Boston University Provost Innovation Fund Award, and VDE Literature Award for the book Doping in III-V Semiconductors.

All Welcome!

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

Time: 7:00 PM, Wednesday, March 22, 2006. 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).

NJ EDS/C&S Chapters:

Electromagnetics and Semiconductor Device Simulations

On April 19, 2006, the IEEE NJ Section Electron Devices, Circuits and Systems Chapters together with the New Jersey Institute of Technology will host a talk on "Electromagnetics and Semiconductor Device Simulations." The speaker will be Dr. Ramesh K. Agarwal.

About the Talk

In recent years, there has been considerable thrust toward the development of finite-difference time-domain (FDTD) and finite-volume time-domain (FVTD) methods for the numerical solution of Maxwell equations for electromagnetic scattering from complex three-dimensional objects. Maxwell equations are written in conservation form and solved on a three-dimensional grid both inside and outside the scattering body. Higher-order spatial and temporal discretization are generally employed to obtain accurate solutions efficiently especially for large scattering bodies. An important aspect of the calculations is the formulation and implementation of the boundary conditions – both the radiation boundary condition (RBC) and the material interface boundary conditions in discretized form. Recent developments in boundary conditions formulations and implementations will be reviewed and critically examined. Three-dimensional examples including complete aircraft configurations will be presented to demonstrate the power of the FVTD approach.

About the Speaker

Professor Ramesh K. Agarwal is the William Palm Professor of Engineering and the director of Aerospace Research and Education Center at Washington University in St. Louis. From 1994 to 2001, he was the Sam Bloomfield Distinguished Professor and Executive Director of the National Institute for Aviation Research at Wichita State University in Kansas. From 1978 to 1994, he was the Program Director and McDonnell Douglas Science and Engineering Fellow at McDonnell Douglas Research Laboratory (MDRL) in St. Louis. Dr. Agarwal obtained his PhD from Stanford University in 1975. Since then, he has worked in Computational Fluid Dynamics (CFD), Computational Magneto-hydrodynamics and Electromagnetics, and Semiconductor Device Simulation.

Dr. Agarwal is a Fellow of eight societies - American Association for Advancement of Science (AAAS),

American Institute of Aeronautics and Astronautics (AIAA), American Physical Society (APS), American Society of Mechanical Engineers (ASME), Royal Aeronautical Society (RAeS), Society of Manufacturing Engineers (SME), Society of Automotive Engineers (SAE), and the Institute of Electrical and Electronics Engineers (IEEE). He has served as a distinguished lecturer of AIAA (1996-1999), ASME (1994-1997), and IEEE (1994-2006). He has received many honors and awards for his research contributions including the ASME 2001 Fluids Engineering Award and AIAA 2002 Sustained Achievement Award.

All Welcome!

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

Time: 7:00 PM, Wednesday, April 19, 2006. 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).

New Public Announcements - Mailing for North Jersey Section!

A new North Jersey Section non-IEEE members mailing list for public announcements has been created. The purpose of this mailing list is to disseminate to the North New Jersey section information pertinent to their professional and technical enhancement. It also provides information about IEEE membership services, benefits, social events, networking opportunities, technical and professional meetings, and contests. All events are open for the benefit of the membership and potential new membership. Basic mailing list commands for subscribing and unsubscribing to the mailing list are initiated by email:

TO: listserv@listserv.ieee.org
JOIN BODY: subscribe northjerseypublic
firstname lastname
LEAVE BODY: signoff northjerseypublic

Notice to NJ Section Engineers

Paul Ward, a member of the NJ Section IEEE USA and Co-chair of its PACE committee, is looking for (a donation of) electronic test equipment that can be used for teaching electronics and electricity to students with learning disabilities (LD) at the Craig Upper School in Lincoln Park, NJ. This school is a private institution that receives its operating funds from either the parents of the students or some governmental subsidy.

The Craig Upper School is a school dedicated to teaching LD students at the high school level, preparing them to continue on to college or to enter the work force. It teaches a full curriculum, i.e., English, History, Mathematics, Science, and special courses directed at LD students. The staff is limited to approximately fifteen (15) including office, nurse, and guidance with the student population that ranges in the upper fifties (50) which is expected to grow. This ratio of student-to-staff helps to keep class size small and manageable, a class rarely exceeds seven (7).

Paul is trying to accumulate a couple of oscilloscopes, multimeters (analog or digital), oscillators, and function generators, so that a Basic EE course could be put together for a technical course and added to the present academic curriculum. The course would help the student to connect what he or she learned in Mathematics and Science into a practical experience.

The equipment does not have to be in perfect condition, just safe and usable.

If you can donate such equipment, please send it to the following address:

Craig Upper School
Attn: Paul Ward
200 Comely Road
Lincoln Park, NJ 07035

Alternatively, contact Paul Ward at (973) 790-1625 or [PWard1130 "AT" aol.com](mailto:PWard1130@att.net). He will pick it up if needed.

NJ Consultants' Network:

Professional Networking 101

On Thursday, March 30, 2006, the IEEE Consultants' Network of Northern NJ will present "Professional Networking 101", presented by Ed McCauley of Bottom Line Technologies.

About the Talk

You're an expert in your field. So how do you turn your expertise into business?

One simplistic way of solving this problem is to connect the supplier of expertise (you) with those who need your help. That's called networking.

Now if you're like me, you're probably more comfortable with Ethernet, 802.11, or SONET than the human form of the networking. In fact, while professional networking can provide incredible returns for us as business owners / consultants, obviously, it's not for everyone.

By now you may be thinking "This is definitely not for me!" If so, you're not alone!

Many of us find dealing with the technical aspects of our consulting businesses much more comfortable than the interpersonal or business aspects. However, given that most of us enjoy learning new technologies, try considering networking as simply a systematic and repeatable process by which we, as business owners, can interact with our world. While this may be awkward for some, the horizons that networking may open for you are likely to far exceed the price of any short-term discomfort you may experience.

Sounds like fun eh? Actually, after you get the hang of it and understand some of the ground rules, yes, it can be fun, and rewarding too, and not just professionally!

So please, you're among friends and colleagues. Come out and join us for an evening of being uncomfortable together!

About the Speaker

Ed McCauley is President and Founder of Bottom Line Technologies Inc. (BLT), a 16-year old design services corporation offering FPGA, board, and complete system solutions for commercial, industrial, and military clients seriously committed to quality product development. Ed is also an associate trainer for the Sandler Sales Institute.

Ed began his career at Datatel, a datacom startup that grew from 3 to 300 people and an acquisition. Next he joined then start-up "Xilinx" as FAE covering the northeastern US. After their IPO, he left to start BLT. Ed is an alumnus of The U.S. Naval Academy, Rutgers and Drexel Universities, a longtime member of CNNNJ, and can be contacted at (908) 479-1200 or via email: ed.mccauley "AT" bltinc.com.

After the Talk

Members are invited to share their experiences with the group. Come prepared to share, in 30 seconds and, if you dare, for 3-5 minutes, what your business is all about. Why companies hire you. To kick things off, here is the bio of our first after-talk speaker:

Peter Schutz is a mechanical engineer who has been working as an independent consultant for the last 21 years. He specializes in the development of new products, especially in the areas of medical and laboratory equipment, instrumentation, prototypes, and special machinery. Some of his areas of technical expertise include: electronics packaging, fluid systems, and thermal analysis. Peter has a BSME from Lehigh University and an MSME from NJIT. He has been a member of CNNNJ for the last 7 years and is presently serving as the Vice Chairman. His company, Schutz Engineering Corp., is located in High Bridge, NJ. He can be reached at 908-638-3300 or schutze "AT" compuserve.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 welcome. No registration needed. Free admission.

Time: 7:30 PM, Thursday, March 30, 2006.

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>.

Conference Rooms Needed!

The North Jersey Section (Education Committee) is looking for conference room facilities to hold their training seminars. The seminars are being held on one weeknight from 6:30 PM to 9:00 PM. In return for providing the conference facility for free, the organization can get free registration up to three members in the course/seminar. Please contact Bhanu Chivukula, Education Committee Chairman, at b.chivukula "AT" computer.org for suggestions or discussions, if interested.

North Jersey Student Activities Grant Awarded

The IEEE North Jersey Section Student Activities Committee Grant for IEEE North Jersey Student Branch Local Activities for the calendar year of 2006 has been awarded. The student branch at FDU in Teaneck, NJ was the winner for 2006.

The purpose of this grant is to fund well-defined activities planned by a North Jersey Section university student branch for one calendar year. These activities are to promote the student branch's ability to conduct activities for the benefit of its IEEE student membership, the advancement of engineering, and related goals. Applications are available on the North Jersey Section Student Activities Committee website. A 2007 grant will become available for application in late 2006.

The NJ Section Education Committee Requests Your Feedback

The IEEE North Jersey Section has been helping fellow engineering professionals for the last fifty years. The Education Committee has successfully conducted software and engineering training courses over the last few decades. The Committee is committed to professional development of the members and the instructors for the courses are very qualified and experienced in their respective fields. Classes are arranged on weekday evenings or on Saturdays provided at least fifteen candidates are available. Completion certificates are issued by IEEE Headquarters with CEU credits for the number of training hours.

Due to the slow growth of the economy and several other factors, registration for these courses has diminished over the last few years. I would urge members to send their feedback regarding what courses they would be interested in, the format, location, and day/time, etc., by email to b.chivukula "AT" computer.org.

Regards,
Bhanu Chivukula
Chair, Education Committee
Vice Chair, IEEE North Jersey Section

IEEE USA:

H-1B Visa Program Update

Back in October, IEEE-USA sent out an Action Alert to all IEEE members in the U.S. regarding a plan in Congress to expand the H-1B visa program. As the year winds down, I wanted to update you on the effort.

The Alert itself was sent in response to a provision in the Senate Budget Reconciliation Act. This bill included a host of provisions on a wide range of issues, all of which were designed to either save the government money or raise additional funds. Two of the provisions dealt with visas. One would expand the number of permanent immigration visas available for skilled workers (EB2 and EB3 visas). The second provision expanded the H-1B (non-immigration) visa program. The IEEE-USA Alert asked members to contact Congress to express opposition to the H-1B provision. IEEE-USA supports changes to the EB program, but felt that a budget bill was the wrong place to enact such a major change in policy.

The Alert was a huge success. Over 500 letters were sent to Congress expressing concern about the H-1B provision. Better yet, we were able to target a few politically important legislators with extra attention. Legislators in Kansas, Pennsylvania and Indiana all received more letters than usual as IEEE members from those states responded to our request for help. Over 100 letters came from New Jersey alone, which is why it is not surprising that legislators from New Jersey have been very helpful to IEEE-USA over the past two months.

The H-1B provision did initially pass in the Senate, although the number of new visas was reduced by half before it did so. The House of Representatives, on the other hand, did not include any significant changes to visa programs in its version of the bill. In the Conference Committee between the House and Senate, the House version prevailed and the H-1B provisions were removed from the bill.

Since then, the House has approved the new bill with no H-1B provisions. The Senate defeated their version of the bill, but for reasons that have nothing to do with IEEE. It is still technically possible that the H-1B provision could be added back into a revised version of the bill, but it is not likely. It is almost certain that the attempt to increase the H-1B visa cap this year has failed. Congress recognized that a budget bill was not the right vehicle for making major changes to the immigration system. Moreover, Congress recognized that the H-1B visa program is

in need of reform.

Swift action from IEEE members and IEEE-USA played an important role in this. For the first time in years, Congress is starting to talk about flaws in the H-1B program. It takes pressure from voters to get Congress to investigate programs, especially small ones like the H-1B.

Thank you for your help with this project. IEEE-USA depends on IEEE members for support with our legislative programs. This case demonstrates that we can have an impact in Congress when we speak up.

Russ Harrison
r.t.harrison "AT" ieee.org

North Jersey Section Seeks Committee Chairs and Volunteers

The NNJ IEEE Section ExCom is seeking new volunteers to help conduct business at the section level for the benefit of its membership in the North Jersey section and surrounding areas. There are a variety of volunteer positions open and available. They range from long-term to short-term, technical to non-technical, leadership or just participatory. All activities have varying levels of time commitment. For 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 NNJ IEEE Section, please contact the persons listed below for additional information and questions. You can even 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 of the positions currently open and available are:

- *Engineering in Medicine & Biology Chair/Vice-Chair.* Contact Har Dayal (har.dayal "AT" baesystems.com).
- *Solid State Circuits Chair/Vice-Chair.* Contact Har Dayal (har.dayal "AT" baesystems.com).
- *Historian Committee* seeks help collecting IEEE historical information and specifically IEEE North Jersey Section History. Contact Al Stolpen (a.stolpen "AT" ieee.org)

Additionally, if interested volunteers would like to get more general information about other activities in our section, visit the North Jersey Section website for newsletter information <http://web.njit.edu/~ieeenj/> or contact Har Dayal, har.dayal "AT" baesystems.com.

NEWS from IEEE-USA:

IEEE Student Members Encouraged to Apply for IEEE-USA/AAAS Mass Media Fellowships

Washington (21 December 2005) - IEEE-USA is seeking two U.S. IEEE student members to work as reporters, researchers and production assistants in newsrooms across the country during a 10-week mass media fellowship in the summer of 2006.

Administered by the American Association for the Advancement of Science (AAAS), Fellows must have the ability to explain complex scientific and engineering principles in a way the general public can understand. This program helps strengthen connections between engineers and journalists, and increases public understanding and awareness of science, engineering and technology.

To apply, individuals must be at least a senior in college majoring in mathematics or the natural, physical, health, engineering, computer or social sciences. Fellows receive a weekly stipend of \$450. Applications are due by 15 January 2006. Go to <http://www.aaas.org/programs/education/MassMedia/> for more information; or contact Stacey Pasco at spasco@aaas.org, or (202) 326-6441.

Abby Vogel, a graduate student at the University of Maryland, served as IEEE-USA's 2005 fellow. She worked for the Richmond (Va.) Times-Dispatch and wrote many articles that appeared on the newspaper's front page. For more on IEEE-USA's participation in this program, go to <http://www.ieeeusa.org/communications/massmedia.asp>.

IEEE-USA advances the public good and promotes the careers and public policy interests of the more than 220,000 engineers, scientists and allied professionals who are U.S. members of the IEEE. IEEE-USA is part of the IEEE, the world's largest technical professional society with 360,000 members in 150 countries. For more information, go to <http://www.ieeeusa.org>.

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

NEWS from IEEE-USA:

21st Century Electric Transmission Infrastructure Analyzed in IEEE-USA eBook

Washington (15 December 2005) - The "vital American energy infrastructure" will "deteriorate before our eyes" unless economists, engineers and policy specialists resolve "a raging battle" among market pressures, technical necessities and policy priorities, according to Patrick E. Meyer, author of a new IEEE-USA eBook. Titled "The Reliability of the Electric Transmission Infrastructure in the 21st Century, An Analysis of 'The Energy Policy Act of 2005,'" the eBook provides a detailed discussion of the key provisions of the first comprehensive U.S. energy bill signed into law since 1992.

The 60-page document analyzes the legislation as it addresses tax benefits for traditional and alternative fuel sources, offshore drilling and Alaska development, nuclear energy, Daylight Savings, alternative fuels, energy efficiency, and electricity market reform. The eBook also provides a detailed summary of Title XII of the legislation, which covers the American electricity sector. In multiple tables, the publication summarizes important electricity sector-related action dates.

In addition, the eBook provides background on which U.S. congressional body supported each of the contending issues in the Electricity Title XII, including sections covering electric reliability standards, siting of interstate electric transmission facilities, third-party finance, advanced transmission technologies, funding new interconnection and transmission upgrades, market transparency rules, sanctity of contract and electric utility mergers.

Finally, the publication identifies IEEE-USA priority issues on current and future energy policy affecting advanced transmission technologies, development of advanced nuclear power, hybrid-electric vehicles and electric transportation, and renewable energy technologies. According to Meyer, the eBook author, further input from professional societies, including the IEEE, and others, will be crucial as the legislation is implemented.

Still pending are final rules on Electric Reliability Organization implementation and reliability standards, an inventory report on renewable energy resources, a study on the future location of national interest electric transmission corridors, and a report on demand-response resources and advanced electricity

metering.

Patrick Meyer is a graduate student in public policy at the Rochester Institute of Technology and was an energy intern at IEEE-USA in Washington during the summer of 2005.

To order the new eBook: IEEE members pay a special discounted price of \$4.95; non-members pay \$19.95.

To order, go to https://salaryapp.ieeeusa.org/rt/salary_database/shop. Then, scroll down to product number UH3510.

IEEE-USA advances the public good and promotes the careers and public-policy interests of more than 220,000 engineers, scientists and allied professionals who are U.S. members of the IEEE. IEEE-USA is part of the IEEE, the world's largest technical professional society with 360,000 members in 150 countries.

For more information, go to <http://www.ieeeusa.org>.

CONTACT: Pender M. McCarter, APR,
Fellow PRSA
IEEE-USA Director of Communications &
Public Relations
PHONE: (202) 530 8353
E-MAIL: p.mccarter "AT" ieee.org

CONTACT: Chris McManes
IEEE-USA Senior Public Relations
Coordinator
PHONE: (202) 530-8356
E-MAIL: c.mcmanes "AT" ieee.org

Technology Can Improve Health Care for United States' Growing Aging Population, IEEE-USA Says

Washington (6 January 2006) - The proper use of technology can improve the efficiency and quality of health care for our aging population, lower costs and perhaps improve senior citizens' quality of life, according to a position recently adopted by IEEE-USA.

The oldest of the estimated 78.2 million baby boomers – the generation born between 1946 and 1964 – are turning 60 this year at the rate of 7,918 per day. According to the 2000 U.S. Census, the United States' over-60 population is expected to more than quadruple over the next decade, making it critical that geriatric healthcare providers take advantage of existing and emerging technologies to improve health care for this growing segment of society.

In "Addressing the Healthcare Needs of Our Aging Population with Technology," IEEE-USA recommends, among other things, that:

- The federal government provide new incentives for more of our nation's physicians and other healthcare professionals to specialize in geriatrics, and receive training in utilizing information, communication and remote sensing technologies to facilitate geriatric treatment.
- Medical information technologies and enhanced communications capabilities be incorporated into patient care.
- Communication standards be adopted to facilitate effective communication and information sharing by converging technologies and devices.
- The National Health Information Network (NHIN) be designed to address specific medical information needs of our aging population.

IEEE-USA in June 2004 cosponsored a symposium that focused on the role computer, communication and other electronic technologies could be used to improve the quality and cost efficiency of geriatric care. To view the presentations and final report, go to <http://www.ieeeusa.org/calendar/conferences/geriatrictech/index.html>.

Currently, of our nation's 650,000 practicing physicians, only a little over 1 percent (6,776) are geriatricians. The Alliance for Aging Research estimates that by 2030, the United States will need about 36,000 of these practitioners. Congress recently eliminated \$31.5 million in funding to train physicians and other healthcare providers in geriatric education programs.

IEEE-USA's entire position statement, developed by its Medical Technology Policy Committee, is available at <http://www.ieeeusa.org/policy/positions/healthcareneeds.html>. IEEE-USA's support of the NHIN is accessible at <http://www.ieeeusa.org/policy/positions/NHIN.asp>.

IEEE-USA advances the public good and promotes the careers and public policy interests of more than 220,000 engineers, scientists and allied professionals who are U.S. members of the IEEE. IEEE-USA is part of the IEEE, the world's largest technical professional society with 360,000 members in 150 countries. For more information, go to <http://www.ieeeusa.org>.

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

North Jersey Executive Committee December Workshop



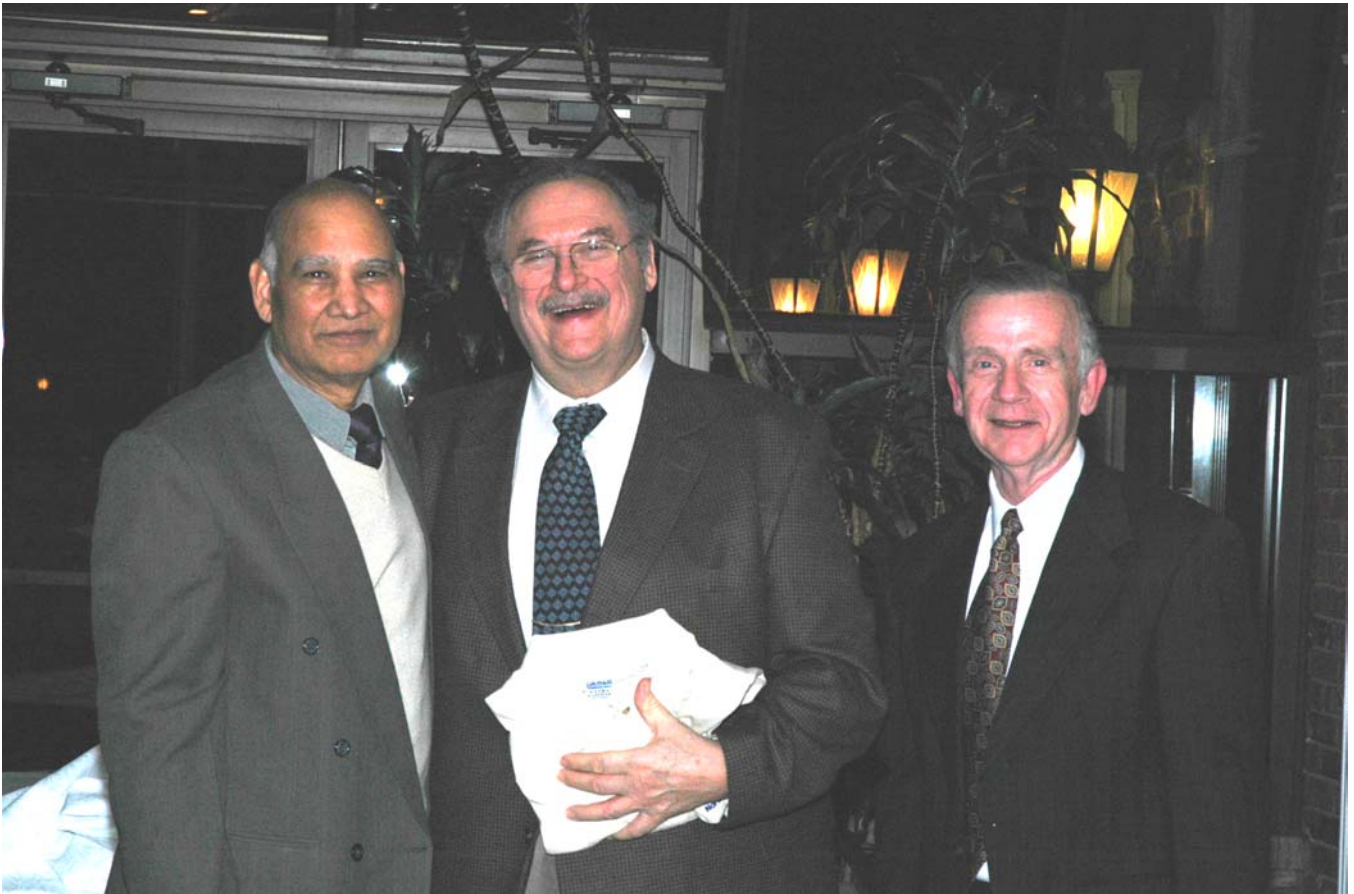
(from left) Excom Members Willie Schmidt, Ken Oexle, Har Dayal, Bhanu Chivukula, Ron Quade, and Paul Ward



(from left) Excom Members Dr. Yun-Qing Shi, Dr. Fred Chichester, guests, along with Har Dayal, Dr. Sanghoon Shin, and Kirit Dixit



(from left) Excom Members Dr. Moncef Elaoud, Ron Quade, Ken Oexle, Anne Giedlinski, Al Stolpen, Seth Jakel, and Bhanu Chivukula



North Jersey Chair Har Dayal, Historian Al Stolpen, and IAS/Awards Chair Ken Oexle

IEEE-USA President's Column

Welcome to the New Year, fellow U.S. IEEE members. I hope you enjoyed time with family and friends, while renewing your spirit.

In my years of service, I have kept the IEEE-USA mission close to my heart. As your 2006 IEEE-USA President, it is my guiding purpose. Our mission is "to recommend policies and implement programs specifically intended to serve and benefit the members, the profession and the public in the United States in appropriate professional areas of economic, ethical, legislative, social and technology policy concern."

To me, our mission translates into four primary areas of focus:

- Ensuring that U.S. technology policy enhances America's future and protects American workers
- Developing new tools and improving our career resources for U.S. IEEE members
- Supporting and publicizing valuable continuous education opportunities for our members
- Promoting IEEE fields of interest needed by the next generation of technical professionals

In 2006, we have a prime opportunity to act on our first focus, technology policy. As a participant in the National Innovation Initiative, IEEE-USA will urge Congress to pass comprehensive legislation designed to promote U.S. innovation and competitiveness, starting with the National Innovation Act (S. 2109), introduced this past December by Senator John Ensign (R-Nev.) and Senator Joseph Lieberman (D-Conn.).

In addition, IEEE-USA will continue to support immigration reforms that enable the United States to admit foreign technical talent as new Americans rather than as "guest workers," and has endorsed legislation designed to reform the flawed H-1B visa program. The Defend the American Dream Act (H.R. 4378) seeks to strengthen safeguards for affected workers, redress the weak prevailing wage requirement, require employers to actively admit American workers, as well as improve H-1B program administration and enforcement in order to reduce fraud and abuse.

We applaud Congressman Bill Pascrell (D-N.J.) for sponsoring this bill, and IEEE-USA will support this legislative effort to protect U.S. IEEE members and their careers. Other IEEE-USA policy priority issues for 2006 include retirement security, e-health-related measures, and the planned revamping of the U.S. patent system.

IEEE-USA will support our second

focus by continuing to enhance the Employment Navigator with its several-million job listings, resume tools and other resources. Each day, the Employment Navigator collects more than five-million job leads from more than 170,000 Web sites, and consolidates them into a single, searchable database. As many of you already know, nearly one-third of the jobs available to subscribers are not found on public job boards.

We will also continue to promote the IEEE-USA Career and Employment Strategies Forum. With more than 2,300 members, this thriving online forum provides discussion areas, job opportunities and other useful information for members who wish to communicate and collaborate on career topics. The Consultants Database and Salary Service are also slated for major upgrades this year.

The IEEE-USA Employment Navigator complements the IEEE Job Site, which provides access to more than 3,000 employers who are specifically looking to recruit from IEEE members. The nearly 41,000 registered members can view and apply for nearly 10,000 jobs at the site. This resource has raised approximately \$925,000 in revenue for the IEEE, which, in turn, allows us to offer more services to IEEE members.

Turning to continuous education, IEEE-USA is working with the IEEE Educational Activities Board to make available the best of the IEEE's educational content through one-hour online learning modules. Expert Now IEEE contains the latest information on emerging technologies and seminal works presented at the highest-rated IEEE conference tutorials, short courses and workshops. These unique, Web-based courses run the technical gamut from aerospace to vehicular technology, and are designed to save members time and travel costs.

In addition, IEEE-USA is offering 29 online "soft skills" courses with partner AchieveGlobal. And we'll continue to provide our members with P.E. Exam review courses in the months ahead.

Further, IEEE-USA is joining with IEEE Educational Activities in promoting the IEEE Education Partners Program in which IEEE members have access to some 6,000 courses from more than a dozen providers to help members meet their continuing education, certificate and graduate needs. And savings on this program could easily offset the cost of member dues.

Finally, in 2006, IEEE-USA will be sponsoring the expansion of the IEEE Teacher In-Service Program (TISP) into Massachusetts and Indiana. And we'll be leveraging our volunteer networks to support the future of the profession by

working with IEEE Educational Activities to promote pre-university initiatives such as TISP and the K-12 student mentoring program.

Both provide useful resources for U.S. IEEE members to bring technology education into their local schools. I commend and support these committed individuals who strive to enhance the level of technological literacy, science and mathematics among pre-university educators and their students.

We must all renew our commitment to support the IEEE-USA mission and our careers by making our voices heard in Washington as well as in our local schools.

I look forward to sharing this exciting year ahead with you. Please share your ideas with me at r.wyndrum@ieee.org.

Dr. Ralph W. Wyndrum Jr.

Nominate a Colleague for Fellow

It's never too early to start thinking about nominating a colleague who is a senior member for the 2007 class of IEEE Fellows. Nominating forms are due to the Fellow Committee by 1 March 2006.

The IEEE Fellow grade is conferred by the Board of Directors upon a person with an extraordinary record of accomplishments in any of the IEEE fields of interest. The total number of Fellows selected in any one year cannot exceed one-tenth of 1 percent of the total voting IEEE membership.

To obtain the IEEE Fellow Nomination Kit, visit the IEEE Fellow Activities Web site at <http://www.ieee.org/fellows> or send a message to fellow-kit@ieee.org.

NJ Power Engineering Society/Industry Applications Society

Lighting Seminar

The PES and IAS Chapters will sponsor a technical seminar covering lighting sources, systems, and performance. The session will be held on Friday, April 21, 2006, at the PSE&G Training Center, 234 Pierson Avenue, Edison, NJ.

Topics

- Efficient Lighting Practices
- The Nature of Light
- Determining Lighting Levels
- Comparison of Lamps (incandescent, fluorescent, metal halide, sodium and LED)
- Ballast Performance and Rating
- Commercial office fixtures, Low Bay and High Bay Luminaires
- Lighting Controls (occupancy, daylighting, dimming)
- Lighting Maintenance
- Lighting Surveys

About the Instructor

The instructor will be John Hyfantis, PE.

Mr. Hyfantis' first career path was in the electronic engineering field, 1961 to 1975. Employed by the Southern New England Telephone Co, US Army Electronics Command, Electronic Associates, RCA-Astro Electronics, Dow Jones and Co and Intec, Inc. With Johnson and Johnson ESDP, power distribution engineering was added to the career path.

Mr. Hyfantis is President of Energistics, LLC, since 1978. Energistics provides engineering consulting services to commercial, industrial and institutional clients in the Mid-Atlantic region. Engineering services include HVAC equipment replacement and upgrade analysis; process and space conditioning VF drive design and installation; building management system design; building commissioning; compressed air system analysis; lighting system analysis; and power allocation surveys. Energistics also provides workshops, covering the topics of motors, motor controls, lighting, energy reduction and power quality.

The registration fee for this seminar prior to April 7th 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 April 7th 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 \$15 will be required for processing. A total of .6 CEUs will be offered. Please indicate if desired below

Time: 8:30 AM to 3:00 PM, Friday, April 21, 2006.
Place: PSE&G Training Center, 234 Pierson Avenue, Edison, NJ
Directions: See www.pseg.com/customer/business/small/facility/edison_directions.jsp
Information: Ronald W. Quade, PE, (732) 205-2614 or RWQuade "AT" ieee.org

Registration: Lighting Seminar 4/21/2006

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

Name _____

Address _____

Phone _____ Email _____

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

Continuing Education Units: _____ Yes \$15 _____ No

If CEUs are chosen, please include a \$15 processing fee

Payment Enclosed \$ _____ Add \$25 late registration after April 7, 2006

Make checks payable to North Jersey Section IEEE

NJ Power Engineering Society/Industry Applications Society

Electric Power Transfer Switch Seminar

The PES and IAS Chapters will present a technical seminar on the design, operation and application of industrial grade low – medium voltage (120 thru 15000 volt) Power Transfer Switches and Power Control Systems. The session will be held at Automatic Switch 50 Hanover Road in Florham Park, NJ 07932 on Friday, March 24, 2006 beginning at 9:00AM.

Topics

- Power Transfer Switch Design and Construction
- Transfer Switch Ratings
- Power Switching Applications
- Controls and Communication Systems for Transfer Switching
- Power Control Systems
- Connectivity
- Tour of ASCO/Emerson Switch Assembly and Test Facility

About the Instructor

Mr. Ronald Schroeder, Director – Product Management, Power, Switching and Controls, will lead the seminar and be assisted by other members of the staff at ASCO Power technologies (a Division of Emerson Electric). Ron has over 34 years of experience in the design and application of power transfer switches to meet specific project requirements. A graduate of Union College and Kean University, he is a Senior Member of IEEE.

The registration fee for this seminar prior to March 10, 2006 will be \$175 (non-IEEE members), \$125 (IEEE Members), and \$50 (students with valid ID). The fee will be waived for IEEE Life Member Grades with verification at the seminar. Registrations after March 10th 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

Time: 9:00 AM to 3:00 PM, Friday, March 24, 2006
Place: Automatic Switch Company, 50 Hanover Road, Florham Park, NJ 07932 (973-966-2000)
Directions: From Route 80 Take I-287 to Exit 37 (NJ 24 East - Springfield). Take NJ 24 East to Exit 2B (Columbia Turnpike). Proceed 2.2 miles to Hanover Road (6th set of traffic lights). Turn left on Hanover Road (AAA Building). Automatic Switch will be on the right (0.4 mile). Enter first driveway-marked shipping/receiving and proceed to visitor parking lot on the left. Follow sidewalk to office entrance door.
Information: Ken Oexle, (973) 386-1156

Registration: Electric Power transfer switch Seminar 3/24/2006

Register via US mail to: K. Oexle
11 Deerfield Rd
Whippany, NJ 07981

Name _____

Address _____

Phone _____ Email _____

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

Payment Enclosed \$ _____ Add \$25 late registration after March 10, 2006.

Make checks payable to North Jersey Section IEEE

IEEE North Jersey Section Course Project Management

Tuesday Evenings, March 14, 2006 through May 9, 2006

Eight weekly classes (March 14, 21, 28, April 4, 18, 25, May 2, 9, 2006)

USPS, NJI & BMC, 80 County Road, Jersey City, NJ 07097-9998 (Checks should not be mailed to this address)

IEEE North Jersey Section appreciates USPS, BMC for sponsoring these courses at their premises

The North Jersey Section IEEE is offering an evening course entitled "Project Management". Dice.com lists 3200+ 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 2003 software, you will learn to accomplish various project plans. In addition, it will greatly enhance your business, communications and interpersonal skills.

The IEEE certificate of completion will be given to you when you complete 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.

Instructor: Donald Hsu, Ph.D., has been a corporate manager for 11 years and is an experienced trainer. Since 1999, he has trained 300+ people in *IT Project+*, *MS Project 2003*, and *Project Management* courses in eight organizations. **Effective Project Management:** Traditional, Adaptive, Extreme, Third Edition (Paperback) by Authors: Robert Wysocki and Rudd McGary – would be given in the class.

(This is not an exclusive PMP-PMI examination prep course even though project management processes and concepts are discussed in the class. No PDUs are issued for PMP eligibility. CEU credits would be given by IEEE)

TOPICS

1. Explain the need for a project manager
2. Define SOW, PERT, GANTT, CPM, and Scope of the project
3. Identify the team members, resources and plan for the strategy
4. Calculate schedule, budget variances, and monitor project progress
5. Manage changes, estimates, and communications
6. Set a baseline, import tasks from MS Excel, export Project files to MS Word
7. Create and modify custom reports, templates and combination views
8. Share resources and create a master plan loaded to Project Server
9. Approve updates and conclude a project plan
10. Analyze Global E-Commerce and present student Projects

Class size will be limited to a maximum of 25 with a minimum of 15. Early registration is recommended. 5% Discount for the first 10 registrations. Phone reservations will NOT be accepted. Reservations accepted after March 3, 2006 will require a late fee of \$25. No reservations will be accepted after March 9, 2006.

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

WHEN: 8 Tuesdays, March 14, 21, 28, April 4, 18, 25, May 2, 9, 2006, 6:30-9:00 PM.

COST: IEEE (& affiliate) members \$400; Non-IEEE members \$480.

CONTACT: Bhanu Chivakula -email b.chivakula "AT" computer.org

REGISTRATION: Project Management

Please mail the registration form with the check (**Checks payable to "North Jersey Section IEEE"**) to **Bhanu Chivakula, PMP, Chair Education Committee, IEEE North Jersey Section, 19 Prestwick Way, Edison, NJ 08820.**

Name: / Mr. / Mrs. / Miss / Ms. / _____

Non-member

✉ email address ✉

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**

Registration status will be emailed after March 10, 2006. Phone inquiries concerning registration will NOT be honored. In general, the effective date of the application corresponds to the date when BOTH a fully completed application/registration and payment are received.

Tuition receipt will be mailed only if this box is checked

Signature: _____

IEEE North Jersey Section Course C# .NET Programming

Saturday Mornings, February 18, 2006 through May 6, 2006

Ten weekly classes (February 18, 25, March 4, 18, 25, April 1, 8, 22, 29, May 6, 2006)

Place: Avtech Fairfield Campus, 130 Clinton Rd, 2nd Floor, Room B, Fairfield, NJ 07004, (973) 882-8996
(Checks should not be mailed to this address)

The North Jersey Section IEEE 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 650+ C# .NET related 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.

The IEEE certificate of completion will be given to you when you complete the course. Microsoft has MCAD and MCS D 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 2002, he has trained 250+ people in Java, C++, XML, C# .NET courses in 6 organizations.

TOPICS

1. Compare the enterprise development tools using C++, Java to C# .NET
2. Define Visual Studio .NET common language runtime
3. Identify C# syntax, data type, control structures
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. Analyze the accessibility regulations and resources
11. Present student Projects

If desired, IEEE Continuing Education Units will be offered for this course. A small fee of \$15 will be required for processing. A total of 30 CEUs will be offered. Please indicate if desired below.

Class size will be limited to a maximum of 25 with a minimum of 15. Early registration is recommended. Phone reservations will NOT be accepted. Reservations accepted after February 8, 2006 will require a late fee of \$25. No reservations will be accepted after February 11, 2006.

WHERE: Avtech Fairfield Campus, 130 Clinton Rd, 2nd Floor, Room B, Fairfield, NJ 07004, (973) 882-8996
(Checks **should not** be mailed to this address)

WHEN: 10 Saturdays, Feb 18, 25, March 4, 18, 25, April 1, 8, 22, 29, May 6, 2006, 9:00 AM to 12 noon

COST: IEEE (& affiliate) members \$475; Non-IEEE members \$550.

CONTACT: Bhanu Chivakula -email b.chivakula "AT" computer.org

REGISTRATION: C# .NET Programming

Please email details to address b.chivakula "AT" computer.org. The filled in registration with the check (**Checks payable to "North Jersey Section IEEE"**) should be mailed to B. Chivukula, Chair, Education Committee, IEEE North Jersey Section, NJ, 19 Prestwick Way, Edison, NJ 08820

Name: / Mr. / Mrs. / Miss / Ms. / _____

Non-member ✉ email address ✉

IEEE Member Member #: _____ Member of _____ technical society

Employer: _____

Employer Address: _____

Home Address: _____

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

Continuing Education Units: _____ Yes \$15 _____ No

If CEUs are chosen, please include a \$15 processing fee

Payment Enclosed \$ _____ Add \$25 late registration after February 8, 2006

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

Registration status will be mailed after February 12, 2006. Phone inquiries concerning registration will NOT be honored. In general, the effective date of the application corresponds to the date when BOTH a fully completed application/registration and payment are received.

Tuition receipt will be mailed only if this box is checked

Signature: _____