

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

NJ Computer Society:

# Next Generation Passive Optical Network Standard and Field Trial

On Monday, September 27, 2010, the IEEE North Jersey Section Computer Society Chapter will host a presentation entitled "Next Generation Passive Optical Network Standard and Field Trial." The speaker will be Dr. Yuanqiu Luo.

#### About the Talk:

If you are a triple play user, you may have experienced the high-speed broadband access services with voice, data, and video via passive optical networks (PONs). With an ever growing bandwidth demand for emerging services, the next generation PON (NG-PON) is expected to provide much higher bandwidth and protect legacy investment. These requirements motivate the research and standard of NG-PON. This talk starts with a brief introduction of broadband access and PONs. Candidate technologies for NG-PON will be examined with a focus on cost efficiency and available bandwidth. The selection of 10-gigabit-capable PON (XG-PON) in Full Service Access Network (FSAN) and International Telecommunication Union Telecommunication Standardization Sector (ITU-T) will be reviewed by comparing different proposals. Kev characteristics of XG-PON will be described to highlight smooth migration and improved performance. The first XG-PON field trial will be reviewed to discuss challenges and feasibility. Possible directions for future research will be presented in the last part of this talk.

### About the Speaker:

Yuanqiu Luo is a senior research engineer in the advanced technology department of Huawei Technologies USA, Bridgewater, NJ. Before joining Huawei, she was with NEC Laboratories America, Princeton, NJ. Her research interests are in the areas of broadband access networks, next generation optical access, network modeling, and integrated

optical/wireless networks. She is actively involved in the standards of next generation passive optical networks. She is a co-editor of ITU-T G.987, G.987.3 and a clause editor of IEEE 802.1AS. She received her Bachelors degree in electronics and information systems and Masters degree in electrical her from all engineering, Shandong University, China. Her PhD degree in electrical engineering was received from New Jersey Institute of Technology, Newark, NJ.

### 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 5:15 PM.

**Time:** 6:00 PM, Monday, September 27, 2010. Buffet will be available starting at 5:15 PM.

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

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

# **Open Call for Candidates for IEEE North Jersey Executive Committee**

This announcement is to seek and solicit the members in IEEE North Jersey section who might be interested in participating in the elections for the following positions

- Chair
- Vice Chair 1
- Vice Chair 2
- Treasurer
- Secretary
- Member at Large (2)

Interested candidates (must be IEEE members current with their dues) are invited to submit their name forward together with the position of interest on the committee.

Interested candidates should send forward their candidature together with the petition to c.gupta@ieee.org. Ror more information call (973) 885-1904.

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#### NEWSLETTER STAFF

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

#### IEEE NJ SECTION HOME PAGE http://web.njit.edu/~ieeenj/ IEEE NJ SECTION NEWSLETTER HOME PAGE http://web.njit.edu/~ieeenj/NEWSLETTER.html

#### **REPORT ADDRESS CHANGES TO:**

IEEE Service Center, 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331, (732) 981-0060. It is not necessary to inform the North Jersey Section when you change your mailing address. "The IEEE Newsletter" and other section mailings use a list provided by IEEE's national headquarters.

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Dr. Mengchu Zhou (zhou@njit.edu)

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

## NJ Section PACE: Engineers Meet: For a Critical Discussion Concerning the Problems of the Off-shoring of Manufacturing and the Need for Its Return

On Wednesday, September 8, 2010, the North Jersey Section Professional Activities Committee of IEEE will meet for a critical discussion concerning offshoring of manufacturing, affects on engineering and the social implications. This will include all the aspects of design, development and support to manufacture a product. This is the second meeting dedicated to this subject.

### About the Meeting:

This meeting will be facilitated by Richard F. Tax, chair of NJ Section PACE and Paul Ward (Co Chair). Richard and Paul have more than forty years of experience in the field of engineering and manufacturing support.

The purpose of the meeting is to develop a list of the issues and subjects related to sending U.S. manufacturing off shore. All interested parties are invited for an evening of discussion and hospitality. We are concerned about what is occurring with the disappearance of manufacturing in our North Jersey Section, New Jersey and our nation.

#### About the Speaker:

Richard is a graduate of Fairleigh Dickinson University with a BSEE degree. He is a Senior, Life Member of IEEE and was awarded his Senior membership based on his experience in the design of precision electro mechanical control systems.

Mr. Tax received the North Jersey Section Award for Leadership in 1979, the Region I United States Activities Board (USAB) Award for Leadership in 1981, the IEEE Centennial Medal in 1984, the USAB Citation of Honor in 1984, the USAB Professional Achievement Award in 1988, and the Region I Award for Outstanding Contributions to Engineering Professionalism in 1989. He has been active in the Section since 1974 and was appointed Chairman of the Professional Activities Committee for Engineers (PACE) in 1976. Richard has served the section as Member at Large, Vice Chairman, and member of the Education Committee. He was Chairman of the North Jersey Section from 1985 through 1986. In 1987 - 1988 he chaired the 20,000 member Metropolitan Sections Activities Council (METSAC).

As PACE Chairman he organized more than 100 meetings and advised other IEEE Sections about PACE activities. Richard originated and managed Project EGO, a program to stimulate member interest by adding a PACE NEWS column to the Section's Newsletter. This column continued for 9 years. He wrote more than 70 articles dedicated to professional activities. In 1977, he started the USAB Task Force for the BLS, Occupational Outlook Department. With Congressional assistance this Task Force made significant corrections their to Occupational Outlook Handbook. He directed the efforts of this operation for 6 vears.

During 1985 he chaired the North Jersey Ad hoc Committee that critiqued condemned a Northeastern and University report that claimed EE's were obsolete at age 35. In 1989 he organized the Region I Careers Conference with 110 registered attendees. Richard again served as PACE Chairman of the North Jersey Section, and was appointed as PACE Chairman of METSAC and Area B of Region I. He was active at the national level on USAB's (IEEE-USA) Manpower Committee and the author of USAB's Entity Position Statement "Enhancing U.S. Productivity Through Improved Utilization of Engineers." He continuously stresses the importance of membership participation at the Section level.

In 1990 Richard joined the American Engineering Association (AEA), developed their publication "AMERICAN ENGINEER" (AE) and was voted to the position of President in 2005. AE can be found at http://www.aea.org/american Engineer.htm.

#### All Welcome!

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

www.aea.org

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

**Time:** 6:30 PM to 9:00 PM, Wednesday, September 8, 2010. Refreshments will be served.

Place: Clifton Memorial Library, 292 Piaget Ave, Clifton, NJ, (973) 772-5500. Information: Paul Ward, (973) 790-1625, peward@ieee.org, Richard F. Tax, (201) 664-6954, rtax@aea.org.

# IEEE North Jersey Section Activities September 2010

**Sep. 1** – "NJ Section Meeting", 6:30 PM, "Executive Committee Meeting" - 7:00 PM, Clifton Public Library - Allwood Branch, 44 Lyall Road, Clifton, NJ 07012. Russell Pepe at rcpepe@ieee.org.

**Sep. 8** – "Engineers Meet: For a Critical Discussion Concerning the Problems of the Off-shoring of Manufacturing and the Need for Its Return" with Richard Tax, NJ PACE, 6:30 PM to 9:00 PM, Clifton Memorial Library, 292 Piaget Ave, Clifton, NJ. Paul Ward, (973) 790-1625, peward@ieee.org, Richard F. Tax, (201) 664-6954, rtax@aea.org.

**Sep. 9** – "Emerging Technology and Current Trends in Voltage Controlled Oscillators (VCOs)" by Dr. Ajay K. Poddar, NJ AESS, 6:45 – 8:30 PM, BAE Systems, 164 Totowa Road, Wayne, NJ. Dr. Naresh Chand, (973) 633-6310, naresh.chand@baesystems.com.

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

**Sep. 16** – "Detection of Spam Hosts and Spam Bots Using Network Flow Traffic Modeling" by Dr. A. Karasaridis and Dr. D. Liu, NJ Control Systems Society, 11:30 AM - 1:00 PM, New Jersey Institute of Technology (NJIT), Room 202, ECE Center (Intersection between Warren & Summit Streets), Newark, NJ. Professor MengChu Zhou (973) 596-6282, zhou@njit.edu.

**Sep. 16** – "Understanding the Unfair Behavior of IEEE 802.11 Wireless LANs" by Dr. Yigal Bejerano, NJ Communications Society, 6:15 PM, New Jersey Institute of Technology (NJIT), Room 202, ECE Center (Intersection between Warren & Summit Streets), Newark, NJ. Dr. Nirwan Ansari (973) 596-3670 (nirwan.ansari@njit.edu) or Yanchao Zhang (973) 642-7817. Also check http://web.njit.edu/~ieeenj/ comm.html for the latest updates.

**Sep. 23** – **Oct. 14** – "Improving Your Writing Skills – Tips & Techniques" by Wilma Hurwitz, 6:30 PM to 9:00 PM, Technical Marketing, Suite 113, 1719 Route 10, Parsippany, NJ. Larry Yang, yangl@ieee.org.

Sep. 24 – "IEEE Northeast Industry Day", Portsmouth Harbor Events Center, Portsmouth, NH. http://ewh.ieee.org/reg/1/irc/.

Sep. 25 – "End of Summer Picnic", NJ WIE & GOLD, 11:00 AM to 4:00 PM, Fords Park, Woodbridge, NJ. http://www.co. middlesex.nj.us/parksrecreation/ford.asp.

**Sep. 27** – "Next Generation Passive Optical Network Standard and Field Trial" by Dr. Yuanqiu Luo, NJ Computer Society, 6:00 PM, Auditorium M105, Muscarelle Center, Fairleigh Dickinson University, 1000 River Rd, Teaneck, NJ. Michael Malm, (201) 355-6167, mmalm@ieee.org, Hong Zhao, (201) 692-2350, zhao@fdu.edu, Howard Leach, h.leach@ieee.org.

**Sep. 30** – "Unemployment Or Prosperity for U.S. Engineers?" by Richard Tax, NJ Consultants' Network, 6:15 – 8:30 PM, Morris County Library, 30 East Hanover Avenue, Whippany, NJ. Robert Walker, (973) 728-0344, or visit www.TechnologyOnTap.org.

**Sep. 30** – "Introduction to Cisco Networking" by Dr. Joseph Miao, 6:30 PM to 9:00 PM, Polaris Microsystems, Inc., 2337 Lemoine Avenue, Fort Lee, NJ. Donald Hsu, yanyou@hotmail.com.

### **Upcoming Meetings**

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

**Oct. 7** – "2010 MTT/AP Symposium and Mini-Show" – MTT-S/AP-S Chapter, 9:00 AM - 4:30 PM, Hanover Manor, 16 Eagle Rock Avenue, E. Hanover, NJ. Kirit Dixit (201) 669-7599 (kdixit@ieee.org), Art Greenberg (a gadner1@optonline.net), Har Dayal (973) 628-7394 (dayalhar@gmail.com), or George Kannell (973) 386-4170 (gkk@lgsinnovations.com).

Oct. 9 – Dec. 4 – "Project Management" by Donald Hsu, PhD, 9:30 AM to 12:00 PM, NJIT, Newark, NJ. Donald Hsu, yanyou@hotmail.com.

**Oct. 20 – Dec. 15 –** "C# .NET Programming" by Donald Hsu, PhD, 6:30 PM to 9:00 PM, NJIT, Newark, NJ. Donald Hsu, yanyou@hotmail.com.

**Oct. 28** – Nov. 18 – "Developing Your Presentation Skills – Tips & Techniques" by Wilma Hurwitz, 6:30 PM to 9:00 PM, Technical Marketing, Suite 113, 1719 Route 10, Parsippany, NJ. Larry Yang, yangl@ieee.org.

Oct. 28 – "Life Grade Luncheon", Hamilton Park Conference Center, Florham Park, NJ. Ken Oexle (973) 386-1156.

# Members and Non-Members Welcome

# PLEASE POST

# Emerging Technology and Current Trends in Voltage Controlled Oscillators (VCOs)

On September 9, 2010, the IEEE NJ Section Aerospace will host a talk on "Emerging Technology and Current Trends in Voltage Controlled Oscillators (VCOs)." The speaker will be Dr. Ajay K. Poddar.

### About the Talk

This tutorial reports the emerging technology and current trends in voltage controlled oscillator (VCO) for modern communication systems, including the transition from high quality factor discrete resonator based oscillators to integrated circuits. Solutions that are gaining more popularity such as MEMS and Tunable active inductor oscillator (TAIO) are described for completeness, including CAD simulation and practical examples.

### About the Speaker

Dr. Ajay K. Poddar is a Chief Scientist, responsible for design and development of state-of-the-art technology (oscillator, mixer, amplifier, filters, and MEMS based RF components) at Synergy Microwave Corporation NJ, USA. He holds 42 US and European patents and has published more than 170 scientific papers in international conferences and professional journals, contributed as an authors and coauthor of three technical books.

### All Welcome!

You do not have to be a member of the IEEE to attend the talks but please register at http://meetings.vtools.ieee.org/meeting\_view/list\_meeting/2831 by September 2, 2010. If you are not a US citizen or permanent resident, send your name, profession, citizenship, and passport # to Dr. Naresh Chand by September 2, 2010. Please use your email subject as "IEEE AESS talk".

**Time:** 6:45 - 8:30 PM, Thursday, September 9, 2010. Free buffet will begin at 6:00 PM.

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

Information: Dr. Naresh Chand, (973) 633-6310, naresh.chand@baesystems. com.

# NJ IMS: Selecting the Appropriate Environmental Test Chamber for Renewable Energy Applications

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

### About the Talk

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

### About the Speaker

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

### All Welcome!

Free admission. Members and nonmembers welcome.

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

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

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

# North Jersey Section Seeks Committee Chairs and Volunteers

The North Section is seeking new volunteers to help conduct business for the benefit of its membership. There are a variety of volunteer positions open and available. They range from 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@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.

- Aerospace and Electronic Systems Society Chair – contact naresh.chand@baesystems.com
- Power Electronics Society Chapter Chair contact c.gupta below.
- GOLD (Graduates of the Last Decade) Affinity Group Volunteers and Committee members needed - contact northjerseygold@ieee.org
- WIE (Women in Engineering) Affinity Group Volunteers and Committee members needed - contact kduncan@ieee.org
- EMBS (Engineering in Medicine and Biology Society) is seeking a chair and active committee volunteers - contact RaquelPC@njit.edu
- Membership Development Committee Chair and Volunteers – contact kduncan@ieee.org.
- Computer Society Chapter Committee Volunteers contact zhao@fdu.edu.
- Technical Management Council Committee Volunteers – contact saumil@ieee.org
- North Jersey Section Awards Committee Volunteers – contact k.oexle@verizon.net

Additionally, if interested volunteers would like to get more general information about the Section, including a complete listing of all chapters and committees, visit the North Jersey Section website http://web.njit.edu/~ieeenj/, or contact Dr. Chandra Gupta c.gupta@ieee.org.

### NJ Control Systems Society:

# **Detection of Spam Hosts** and Spam Bots Using **Network Flow Traffic** Modeling

On September 16, 2010, the IEEE NJ Control Systems Chapter together with the New Jersey Institute of Technology will host a seminar on "Detection of Spam Hosts and Spam Bots Using Network Flow Traffic Modeling." The speakers will be Dr. A. Karasaridis and Dr. D. Liu.

### About the Topic

We continue to see the proliferation and persistence of cyber-threats which are now in the top 3 priorities of the FBI among terrorism. Botnets provide the platform for online organized crime and occasionally for pressing national agendas such as espionage. Some of the recent corporate espionage attacks (e.g., to Google) come from well targeted emails with disguised links to malware that once embedded to an end-user electronic device (desktop, laptop, smart phone etc.). It quietly leaks out lavered information to foreign repositories. We will present techniques for detecting spam bots, i.e., hosts that send unsolicited email that are remotely controlled by a malicious entity. Α Bayesian classification approach is used to identify spam hosts and an entropy significant component extraction technique is used to identify hosts that are likely compromised. Flows from these hosts are further analyzed to fit botnet control models. In addition, DNS transient domain analysis is used to increase confidence on the detection of remote controllers. We will describe examples of large botnet controller detection using our prototype tools.

### About the Speakers

Dr. Karasaridis is a Principal Member of Technical Staff at AT&T Labs and member of the Network Design and Performance Analysis (NDPA) Dept, in Middletown NJ. He is currently performing applied research in network security algorithms with focus on botnet detection and characterization. He is also efforts leading the content in delivery/cloud services developing algorithms that enhance the performance of the service. In the past 10 years he worked on performance analysis and modeling projects in mobile, broadband access and infrastructure services. He holds a PhD in Electrical and Computer Engineering from the University of Toronto, a MSE from the University of Pennsylvania, and BSEE from the Aristotle University of Thessaloniki (highest honors).

Dr. Danielle Liu received her PhD in Industrial Engineering under the guidance of Professor Marcel Neuts at University of Arizona in 1993. She was a visiting professor at Department of Electrical Engineering at Case Western Reserve University for one year before joining Bell labs in 1994. Danielle has worked on various projects in AT&T including Internet traffic characterization, IP QoS, WiMAX and IP security. She is currently working on Mobility traffic modeling and network capacity planning. Dr. Liu is the author of over 20 papers on in the fields Analysis of Queuing of Telecommunications Systems, Internet Traffic Characterization and IP security. She also served as an editor for the journal of Queueing Systems: Theory and Applications.

Time: 11:30 AM - 1:00 PM, Thursday, September 16, 2010.

Place: New Jersev Institute of Technology (NJIT), Room 202, ECE Center (Intersection between Warren & Summit Streets), Newark, NJ. Directions available at http://www.njit.edu/ are University/Directions.html.

Information: Professor MengChu Zhou, (973) 596-6282, zhou@njit.edu.

# NJ Communications Society: Understanding the **Unfair Behavior of IEEE 802.11 Wireless** LANS

On Thursday, September 16, 2010, the IEEE North Jersey Section Communications Society Chapter will presentation entitled host а "Understanding the Unfair Behavior of IEEE 802.11 Wireless LANs" by Dr. Yigal Bejerano.

### About the Talk

In recent years, IEEE 802.11 wireless LANs (WLANs) have been rapidly deployed all over the world at numerous cities, enterprises and universities. These networks provide high bandwidth to mobile users by deploying low-cost points. wireless access Several equipment vendors such as Cisco and SpectraLink have introduced 802.11 phones for providing wireless phone service in these networks and it is expected that the emerging IEEE 802.11n standard will support video traffic. Τo make such efforts successful, however, certain serious shortcomings of WLANs must be overcome. These include the lack of fair service for data users and the inability to provide quality of service (QoS) guarantees for real-time (RT) services, such as voice and video.

In this talk, Dr. Bejerano will address the challenges of providing fairness and QoS support in WLANs without changing the standard. Dr. Bejerano will start with a short overview of the IEEE 802.11 medium access control (MAC) standard and the obstacles that it raises for providing fairness and QoS support. Dr. Bejerano will show that even in the case of a small network with two access points, a user may not get any service and be practically starved.

Then, Dr. Bejerano will describe a few management schemes for improving the fair service provided to mobile users, while preserving high throughput of the wireless networks. These schemes are based on efficient usage of the 802.11 standard as well as advanced algorithms.

### About the Speaker

Yigal Bejerano received his BSc in Computer Engineering in 1991 (summa cum laude), his MSc in Computer Science in 1995, and his PhD in Electrical Engineering in 2000, from the Technion -Israel Institute of Technology, Haifa, Israel. He is currently a member of the technical staff (MTS) at Bell Laboratories, Alcatel-Lucent. His research interests are mainly management aspects of highspeed and wireless networks, including the areas of mobility management, network monitoring, topology discovery and QoS and fault resilience routing. Dr. Bejerano has published over 40 papers in the main venues of the networking research community and he holds 30 patents and pending patent applications. Dr. Bejerano is on the technical program committee (TPC) of numerous conferences.

### All Welcome!

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

Time: 6:15 PM, Thursday, September 16, 2010, refreshments will be available starting at 6:00 PM.

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

Information: Dr. Nirwan Ansari (973) 596-3670 (nirwan.ansari@njit.edu) or Yanchao Zhang (973) 642-7817. Also check http://web.njit.edu/~ieeenj/ comm.html for the latest updates.

# NJ Consultants' Network: Unemployment Or Prosperity for U.S. Engineers?

The September 30, 2010, meeting of the IEEE Consultants' Network of Northern NJ features a presentation by Richard Tax, President of the American Engineering Association. The talk examines the present "engineering shortage" in the U.S. and what our government is doing about it.

### About the Talk

Of primary interest is the Labor Supply/Demand Equation ratio, or specifically the supply/demand of engineers and STEM professionals. This is very well controlled, but maybe not in the best interest of our profession or our country. We will discuss the problem associated with the present Labor Supply/Demand Equation and the influence, support/opposition to the direction of the equation. Who supports increasing the number and who is in favor of reducing the number? Who benefits, who is harmed? How does it affect our nation's economy?

The speaker believes the public policy of the United States should be to rely primarily upon U.S. workers for our supply of engineers and scientists. This position is in response to claims that America faces shortages of engineers, programmers and high tech professionals and companies must import foreign workers to meet demands. Come and express your opinions. More at http://www.aea.org/pdf/AEA\_POSITION\_ Workforce.pdf.

### About the Speaker

Richard Tax is a graduate of Fairleigh Dickinson University with a BSEE degree. He is a Senior Member of the Institute of Electrical and Electronics Engineers (IEEE) and was awarded his senior membership based on his experience in the design of precision electro mechanical control systems. Mr. Tax has a long history of involvement and leadership in the IEEE on regional and national levels.

He has written more than 80 articles dedicated to professional activities. In 1977, he started the USAB Task Force for the BLS. Occupational Outlook Department. Congressional With assistance this Task Force made significant corrections their to Occupational Outlook Handbook. He directed the efforts of this operation for 6 years. This project is now supported by the IEEE-USA Manpower Committee.

During 1985 he chaired the North Jersey Ad hoc Committee that critiqued and condemned a Northeastern University report that claimed EE's were obsolete at age 35. Later in an Electronic Engineering Times interview the authors admitted they could not validate their accusations. While still actively involved with the IEEE, Mr. Tax also leads the American Engineering Association, with which he has been involved since 1990.

### 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!

Members and non-members are welcome.

**Time:** 6:15 - 8:30 PM, Thursday, September 30, 2010.

**Place:** Morris County Library, 30 East Hanover Avenue, Whippany, NJ. Directions are available at www.mclib.info.

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

## IEEE-USA in ACTION:

# 2009 Online Annual Report Highlights Increased Efforts in Expanding Career-Related Products & Services & Anticipating Public Policy Opportunities

Washington (9 August 2010) - In an introductory letter to IEEE-USA's newly unveiled 2009 online annual report, 2009 IEEE-USA President Gordon Day observed that "the year began with serious concerns about employment," and IEEE-USA "scrambled to meet the needs and concerns of U.S. IEEE members by expanding our career-related products and services -- and making them easier to access."

Day added that the organization "had already anticipated new challenges and opportunities in public policy" with the Obama administration arriving in January, especially with energy, communications and patent reform issues. And he noted that IEEE-USA's "efforts in both career support and public policy provided more than the usual number of opportunities to engage in public discussions on the issues."

The online annual report includes detailed sections on addressing IEEE-USA's 2009 strategic goals and priorities in support of members' careers and shaping public policy, as well as in increasing the public visibility of IEEE and engineering, and advancing the globalization of IEEE's professional activities.

For an overview of IEEE-USA's 2009 activities, see http://www.ieeeusa.org/ about/annual\_report/2009.pdf. For a look at all IEEE-USA online reports from 2004 through 2009, go to http://www.ieeeusa. org/about/default.asp.

# Elevate to Senior Member Grade!

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

# From the North Jersey Section's Education Committee: Hot courses can enhance your position in the job market

IEEE North Jersey Education Committee ran programming and management courses since 1993. 252 IEEE members and non-members completed these courses. Benefits: Some got jobs at AT&T and Microsoft Corporation.

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

# Life Grade Luncheon

The PES Chapter and the Section will sponsor a luncheon for North Jersey IEEE Life Grades (Members, Senior Members and Fellows) on Thursday, October 28, at

Hamilton Park Conference Center 175 Park Avenue Florham Park, NJ 07932

The luncheon will begin at 11:30 AM in the Terrace area. Cost is \$ 5.00 per person

Advance registration is required prior to October 19. We can accommodate only 30 people. Registrations will be processed in the order of receipt and will be confirmed by return mail. Please complete the following registration form and include a check payable to the North Jersey Section IEEE in the amount of \$ 5.00 per person.

Reservations cannot be accepted at the door. For additional information regarding the event contact Ken Oexle at (973) 386-1156.

ade Luncheon Registration NJ - October 28, 2010
Yes
Ken Oexle 11 Deerfield Rd Whippany, NJ 07981

Prior to October 19 and enclose \$5.00. Make check payable to NJ Section IEEE

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IEEE Northeast Industry Day September 24, 2010 Portsmouth Harbor Events Center Portsmouth, NH http://ewh.ieee.org/reg/1/irc/index.html

### **Connecting Professionals -- Advancing Technology**

At the intersection of engineering and opportunity, the IEEE Northeast Industry Day brings together leaders in developing and leveraging new technology

# **Program Highlights**

The world of technology demands constant awareness to change combined with the know-how to get things done. The IEEE Northeast Industry Day is being launched this year to provide a forum to learn from the top players in the industry; expand your network of resources; and build partnerships for future success.

### Gain insight from keynote speakers:

- Pr. John Vig, President of IEEE (2009)
- **Pr. Norbert Doerry**, US Navy Electric Ships Program Director

### Focus on key technologies shaping the future of the industry:

- **Proadband communications**, to every house, car, and person
- Energy, generation, harvesting, storage, applications
- **\*** Human/Computer Interfaces, hardware & software
- Systems, from nano-scale to global scale

# Interactive Sessions in Parallel Tracks

Share your story, find what you need to advance your work

Informal workshop sessions make productive opportunities to make connections to enable your current and future programs.

- 9 World Café : dialog on current and future technology needs
- S Workshop Track 1 : making technology personal
- Workshop Track 2 : technology venture strategies
- Early Evening Reception sponsored by IEEE Women in Engineering (WIE) Enjoy wine & cheese, beer & snacks with friends and colleagues by the Portsmouth Harbor Walk (cash bar)

Registration, workshop submissions, contact information: <u>http://ewh.ieee.org/reg/1/irc/index.html</u>

### **SPONSORS**

- IEEE Boston Section
- IEEE New Hampshire Section

### CONTRIBUTORS

**IEEE Providence Section** 

IEEE Region 1 Industrial Liaison Program

## ORGANIZING COMMITTEE

Ali Abedi, Chair Stanley Koski, Secretary James Anderson, Treasurer Darlene Rivera, Sponsorship Don Sherwood, Venue Madeleine Lowe, Venue Dilip Chakravarty, Program Bruce Hecht, Program Rob Vice, Education Priyanka Shitole, Webmaster Ashutosh Dutta, Advisor Tom Perkins, Advisor

"Get connected to the the drivers of today's engineering innovations"



# **IEEE Northeast Industry Day 2010**

	Program at a Glance		
8:00 - 9:30 am	World Café : How do you Innovate?		
9:30 - 11:30 am	Plenary Session Welcome: Dr. Ali Abedi and Dr. Ashutosh Dutta Welcome: Dr. Charles Rubenstein, IEEE Region 1 Director Keynote: Dr. John Vig, IEEE President (2009), Technology News Keynote: Dr. Norbert Doerry, US Navy, Electric Ships Program Systems Engineering and the Navy's Next Generation Integrated Power System (NGIPS)		
11:30 - 1:00 pm	Luncheon Speaker Dr. Shri Goyal, IEEE Communication Society		
1:00 - 2:45 pm	Track A <b>Broadband</b>	Track B <b>Energy</b>	Workshop 1 Making Technology Personal
2:45 - 3:00 pm	Coffee Break		
3:00 - 4:45 pm	Track C Human-Computer Inteface	Track D <b>Systems Engineering</b>	Workshop 2 Technology Venture Strategies
4:45 - 5:00 pm	Closing Comments and Reflections		
5:00 - 6:00 pm	Evening Reception Sponsored by IEEE Women in Engineering Welcome: Dr. Karen Panetta, Tufts University		

## Call for Workshop Proposals

The Workshop Tracks offer a venue for informal dialog and participation. You are invited to submit a topic proposal in your area of interest for a 30-minute segment. Please describe the topic area you would like to propose, format (e.g. presentation, conversation, panel discussion), and provide your contact information. Workshop proposals will be reviewed by the program committee and accepted on a rolling basis until September 3, 2010. Submit your proposal to Madeleine Lowe, (m.lowe@ieee.org).

Registration, workshop submissions, contact information: http://ewh.ieee.org/reg/1/irc/index.html







END OF SUMMER PICNIC



# SATURDAY, SEPTEMBER 25, 2010

# 11Ам то 4рм

# FORDS PARK IN WOODBRIDGE, PICNIC GROVE

HTTP://WWW.CO.MIDDLESEX.NJ.US/PARKSRECREATION/FORD.ASP

IEEE MEMBERS AND THEIR FAMILIES ARE WELCOME MEET YOUR LOCAL IEEE SECTION EX-COM OFFICERS Network with other IEEE WIE/GOLD members Learn about WIE/GOLD activities and local Section activities Enjoy the outdoors, food and games (Volleyball, Football, Frisbee etc.) Bring your favorite picnic food to share with others. We will provide the beverages. NO BEER/WINE PERMITTED

REGISTER AT: <u>HTTP://MEETINGS.VTOOLS.IEEE.ORG/MEETING\_VIEW/LIST\_MEETING/2713</u>

ORGANIZED BY: NORTH JERSEY WIE/GOLD NEW JERSEY COAST WIE/GOLD PRINCETON/CENTRAL JERSEY WIE/GOLD

FOR ANY QUESTIONS, PLEASE E-MAIL JIGNASA.RAY@IEEE.ORG, NORTH NJ WIE VICE-CHAIR.



THE INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS, INC.

# **IEEE NORTH JERSEY SECTION**

MTT-Society and AP-Society Joint Chapter

## PRESENT

# 25<sup>th</sup> ANNUAL SYMPOSIUM AND MINI-SHOW FOCUS: SELECTED TOPICS IN RF AND MICROWAVE TECHNOLOGIES FOR COMMERCIAL AND MILITARY APPLICATIONS

DATE: THURSDAY OCTOBER 7, 2010

PLACE: Hanover Manor, 16 Eagle Rock Ave., E. Hanover, NJ 07936. Ph#973-992-7425

# SCHEDULE OF EVENTS

9:00 AM TO 4:30 PM

**TECHNICAL SESSIONS** 

### 10 –12 LECTURES FEATURING SPEAKERS FROM LEADING COMPANIES, WITH EMPHASIS ON MILITARY ELECTRONICS, WIRELESS TECHNOLOGIES AND MICROWAVE COMMUNICATIONS

MINI SHOW FEATURING LATEST PRODUCTS (APPX. 30-40 EXHIBITORS)

(COMPLIMENTARY LUNCH SERVED)

Details of the schedule and speakers and the topics will be posted on the IEEE North Jersey Section Home page http://www-ec.njit.edu/~ieeenj/NEWSLETTER.html by September 2010.

For further information contact: CHAIR/EXHIBITION: KIRIT DIXIT (201-669-7599), kdixit@ieee.org PUBLICITY: ARTHUR GREENBERG, gadner1@optonline.net EVENT/ LOCATION CO-ORDINATOR: KEN OEXLE (973-386-1156), k.oexle@verizon.net CO-CHAIR- TECHNICAL PROGRAMS : HAR DAYAL, dayalhar@gmail.com CO-CHAIR - TECHNICAL PROGRAM: GEORGE KANNELL (973-437-9990), gkk@lgsinnovations.com

THERE IS NO CHARGE TO ATTEND THE SYMPOSIUM OR SHOW

# IEEE North Jersey Section Course C# .NET Programming

Wednesday, October 20, 2010 through December 15, 2010 Eight weekly classes (October 20, 27, November 3, 10, 17, December 1, 8, 15, 2010) Location: New Jersey Institute of Technology Newark, New Jersey 07102 (Checks should not be mailed to this address)

### IEEE North Jersey Section thanks New Jersey Institute of Technology, for sponsoring this course.

The IEEE North Jersey Section is offering a course "C# .NET Programming". Since 2004, C# .NET has generated significant headway in Fortune 1000 enterprise development systems. Dice.com lists 1000+ C# .NET jobs in the New York tri-state area daily! This course will cover the fundamentals of C# language, the .NET framework, window and web-based applications, ADO.NET, ASP.NET, and XML. It will be useful for anyone to develop applications based upon these tools.

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

Instructor: **Donald Hsu, PhD,** has been a corporate manager for 11 years and is an experienced trainer. Since 2004, he has trained 850+ people in C++, Java, WebLogic, Database, XML, and C# .NET courses in 8 organizations.

### TOPICS

- 1. Compare the enterprise development tools using Java to C# .NET
- 2. Define Visual Studio .NET Version 2008
- 3. Identify C# syntax, data type, control structures and common language runtime
- 4. Distinguish methods, arrays, object-oriented programming
- 5. Build graphical user interface, multithreading, files and streams
- 6. Explain the benefit of using extensible markup language (XML)
- 7. Select database, SQL server, and ADO .NET
- 8. Choose ASP .NET, web forms, web services, advanced topics
- 9. Present student Projects

WHERE:	New Jersey Institute of Technology, Newark, NJ
WHEN:	Eight evenings, October 20, 27, November 3, 10, 17, December 1, 8, 15, 2010, 6:30 to 9:00 PM.
COST:	IEEE (& affiliate) members \$500; Non-IEEE members \$550.
CONTACT:	Donald Hsu, yanyou@hotmail.com

### **REGISTRATION: C#.NET Programming**

Please mail the completed registration with a check (payable to "North Jersey Section IEEE") to: Donald Hsu, Chair Education Committee, IEEE North Jersey Section, P.O. Box 2093, Fort Lee, New Jersey 07024.

Name:		Email address		
<ul> <li>Non-member</li> <li>☐ IEEE Member</li> </ul>	Member #:	Member of	technical society	
Employer:				
Employer Address:				
Home Address:				
Business (day) telepl	hone #:	Home telephone #:		
Please enclose requi	ired fee payable to: North Jersey Section IEE	E		
	pleted registration form and the payment are readily the confirmed by email.	ceived, you are officially registered fo	r this course.	

□ I wish to receive IEEE Completion Certificate

Signature:

# IEEE North Jersey Section Course Project Management

Saturday Mornings, October 9, 2010 through December 4, 2010 Eight weekly classes (October 9, 16, 23, 30, November 6, 13, 20, December 4, 2010) New Jersey Institute Technology, Newark, New Jersey (Checks should not be mailed to this address)

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

The North Jersey Section IEEE is offering a course "Project Management". Dice.com lists 4,000+ Project related jobs in the New York tri-state area daily! This course will help you to break down a master project into manageable tasks, pinpoint possible solutions, and provide information to keep the project under control. Using Microsoft Project software, you will learn to accomplish various project plans. In addition, it will greatly enhance your business, communications and interpersonal skills.

You will receive the IEEE certificate of completion when you finish the course. You may wish to take two Certification exams, one in *Project Management* administered by Project Management Institute from the knowledge that you learned in this course. (This is *not an exclusive PMP-PMI examination prep course.* No PDUs are issued for PMP eligibility. CEU credits would be given by IEEE).

Instructor: **Donald Hsu, PhD,** has been a corporate manager for 11 years and is an experienced trainer. Since 2003, he has trained 900+ people in Contract Procurement, IT Project+, MS Project, and Project Management courses in eleven organizations.

### TOPICS

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

CONTACT:

- 10. Analyze global E-Commerce and present student Projects
- WHERE: New Jersey Institute Technology, Newark, NJ.
- WHEN: 8 Saturdays, October 9, 16, 23, 30, November 6, 13, 20, December 4, 2010, 9:30 AM 12:00 noon.
- **COST:** IEEE (& affiliate) members \$500; Non-IEEE members \$550.
  - Donald Hsu: yanyou@hotmail.com

### **REGISTRATION: Project Management**

### Please mail the registration form with the check (Checks payable to "North Jersey Section IEEE") to Donald Hsu, Chair Education Committee, IEEE North Jersey Section, P. O. Box 2093, Fort Lee, NJ 07024

Name:		Email address	Email address		
Non-member					
IEEE Member	Member #:	Member of	technical society		
Employer:					
Business (day) telep	hone #:	Home telephone #:			
Please enclose requ	ired fee payable to: North Jers	sey Section IEEE			
As soon as a comple will be notified by en	•	ayment are received, you are officially registered for the	nis course. Registration status		

☐ I wish to receive IEEE Completion Certificate

# IEEE North Jersey Section Course Developing Your Presentation Skills – Tips & Techniques

(Four weekly classes on Thursday, October 28, November 4, 11 & 18) Location: Advanced Technical Marketing, Suite 113, 1719 Route 10, Parsippany, NJ 07054 (Do not mail checks here)

### IEEE North Jersey Section thanks Advanced Technical Marketing for sponsoring this course.

If you are saying a few words" to a client prospect, giving a detailed explanation to some technical experts, interviewing for a new job or preparing a sales presentation, it can be a challenge to deliver an effective presentation. Developing Your Presentation Skills–Tips & Techniques will cover what it takes to plan, organize, develop and deliver effective presentations for any audience.

Instructor: **Wilma Hurwitz** has managed design, marketing and delivery of over 200 industry conferences, trade shows and special events on information technology; software project management; manufacturing; plastics, metals and packaging technology; financial services and supply chain management. Clients include Alcatel-Lucent (network systems), Honeywell, American Electronics Association, Administrative Management Society, Rutgers Center for Management Development, NYU School of Continuing Education and Boston University Center for Project Management. For some of these events she has been a presentation skills coach to individual software project managers and technical marketing/sales executives.

### TOPICS

- Different kinds of presentations (informational, persuasive, good/bad news)
- Your audience and their expectations
- How to structure your presentation key points, supporting information, presentation flow
- Selecting the right audio-visuals to get your points across
- Pre-performance practice and staging
- Actual performance -- on-site delivery considerations: problem listeners, handling nervousness, handling questions
- Post-presentation debrief What went well? What needs improvement?

Methodology: This course is presented via class discussion, Q&A, case studies, exercises and actual practice in class. In order to provide individual attention, class size is limited to the first 12 registrations. Additional courses maybe held in the future. IEEE will be offering CEUs (PDUs) at an additional cost of \$25 per person if you would like to get CEU (0.1) or PDU (10 hours) credit.

### WHERE: Technical Marketing, Suite 113, 1719 Route 10, Parsippany, NJ 07054

WHEN: Four evenings, October 28, November 4, 11, 18, 2010, 6:30 to 9:00 PM.

COST: IEEE members \$225; Non-IEEE members \$300; Student/Unemployed members \$125 (add \$25 for CEU/PDUs)

**CONTACT:** Larry Yang, yangl@ieee.org

DEADLINE: October 18, 2010 REGISTRATION: DEVELOPING YOUR PRESENTATION SKILLS – TIPS & TECHNIQUES
Please mail the completed registration with a check (payable to "North Jersey Section IEEE") to:
Larry Yang, Chair GOLD Committee, IEEE North Jersey Section, 9 Braemar Court, Parsippany, NJ, 07054

Name:		Email address	Email address		
Non-member IEEE Member	Member #:	Member of	technical society		
Employer:					
Employer Address:_					
Home Address:					
Business (day) telep	hone #:	Home telephone #:			
		ection IEEE nt are received, you are officially registered fo	r this course. Registration status		
I wish to receive	IEEE CEUs/PDUs, \$25 extra	Signature:			

## IEEE North Jersey Section Course Improving Your Writing Skills – Tips & Techniques

(Four weekly classes on Thursday, September 23, 30 and October 7, 14)

Location: Advanced Technical Marketing, Suite 113, 1719 Route 10, Parsippany, NJ 07054

(Do not mail checks here)

### IEEE North Jersey Section thanks Advanced Technical Marketing for sponsoring this course.

When you write an email, test report, technical memo, manual or formal job search correspondence, there are some valuable "best" practices to make the process easy and your documents clear. Upon completion of Improving Your Writing Skills–Tips, & Techniques, attendees will be able to plan, organize and prepare effective business correspondence, e-mails, memos, reports and job search documents (resumes, cover letters) for select external and internal readers.

Instructor: **Wilma Hurwitz** is a training consultant and executive coach specializing in verbal and written workplace communications, presentation skills and customer service techniques. Key communications clients have included Alcatel-Lucent, (network systems), Jersey Central Power & Light, Pershing Division of Bank of NY Mellon and GlaxoSmithKline. Since 2007, she has also been a freelance writer with the Morris County Daily Record authoring select business feature articles and cover stories. She is currently their weekly columnist covering Morristown area restaurants.

### TOPICS

- The Communication Model what it is, how it works
- Different purposes for written communications: editorial, informational, good/bad news, directive and persuasive
- Who is/are your reader(s)? What do they want to achieve upon reading your document?
- Writer's "block" how to get started with your communication
- Structuring your message
- Writing sentences the "fog" index and how to avoid it
- Developing your document use of language, flow of key points
- Grammar some essential rules to ensure that our writing is clear
- Beyond "spellchecker" some guidelines for proofreading
- Special documents praise, instructions, new concept presentation and communicating about change.

Methodology: Improving Your Writing Skills–Tips & Techniques is delivered via discussion, Q&A, document preparation and review of different writing samples throughout the program. Assignments will be made to address individual business writing needs. Special attention will be given to those attendees for whom English is a second language.

To allow for individualized instruction, class size is limited to the first 12 registrations. Additional courses may be held in the future. IEEE will be offering CEUs (PDUs) at an additional cost of \$25 per person if you would like to get CEU (0.1) or PDU (10 hours) credit.

- WHERE: Technical Marketing, Suite 113, 1719 Route 10, Parsippany, NJ 07054
- WHEN: Four evenings, September 23, 30, October 7, 14, 2010 from 6:30 to 9:00 PM.

COST: IEEE members \$225; Non-IEEE members \$300; Student/Unemployed members \$125 (add \$25 for CEU/PDUs)

CONTACT: Larry Yang, yangl@ieee.org

DEADLINE: September 13, 2010 REGISTRATION: Improving Your Writing Skills – Tips & Techniques Please mail the completed registration with a check (payable to "North Jersey Section IEEE") to: Larry Yang, Chair GOLD Committee, IEEE North Jersey Section, 9 Braemar Court, Parsippany, NJ, 07054.

Name:	Email address	Email address	
Non-member IEEE Member       Member #:	Member of	technical society	
Employer:			
Employer Address:			
Home Address:			
Business (day) telephone #:	Home telephone #:		
Please enclose required fee payable to: North Jersey S As soon as the completed registration form and the payr Registration status will be confirmed by email.		ered for this course.	
I wish to receive IEEE CEUs/PDUs, \$25 extra	Signature:		

# IEEE North Jersey Section Course Introduction to Cisco Networking

September 30, 2010 through December 9, 2010 Ten weekly classes (Sept. 30, Oct. 7, 14, 21, 28, Nov. 4, 11, 18, Dec. 2, 9, 2010) Polaris Microsystems, Inc., 2337 Lemoine Avenue, Fort Lee, NJ (Checks should not be mailed to this address)

The North Jersey Section IEEE offers an evening course entitled "Introduction to Cisco Networking" for practical "hands-on" training using Cisco routers, switches, and Cisco's Packet Tracer to install, configure, operate, troubleshoot, and design small to medium-size networks.

You will receive the IEEE certificate of completion when you finish the course. You may wish to take the CCNA exam from the knowledge and experience you gained in this course. (This is *not an exclusive CCNA examination prep course.* CEU credits would be given by IEEE)

Instructor Dr. Joseph Miao, CCNA, CCNP, CCSP, CCVP, CISSP, has trained and consulted for small to large organizations in networking, security and voice for more than 15 years. In addition, he has developed several commercial database applications.

### Topics

- 1. OSI Model
- 2. Assembling and Cabling Cisco Devices
- 3 IP Addressing & Subnetting, VLSM
- 4. Routing with RIP v1&v2, EIGRP, and OSPF
- 5. VLANs, Trunking and Spanning Tree Protocol
- 6. PPP, Frame-Relay, Virtual Private Network
- 7. Access Lists & NAT

WHERE:	Polaris Microsystems, Inc., 2337 Lemoine Avenue, Fort Lee, NJ
	(Checks <b>should not</b> be mailed to this address)
WHEN:	10 Thursdays, Sept. 30, Oct. 7, 14, 21, 28, Nov. 4, 11, 18, Dec. 2, 9, 2010, 6:30 - 9:00 pm
COST:	IEEE (& affiliate) members \$600; Non-IEEE members \$650.
CONTACT:	Donald Hsu: yanyou@hotmail.com

### **REGISTRATION: Introduction to Cisco Networking**

Please mail the registration form with the check (Checks payable to "North Jersey Section IEEE") to Donald Hsu, Chair Education Committee, IEEE North Jersey Section, P. O. Box 2093, Fort Lee, NJ, 07024

Name: E		Email address:	
	Member #:	Member of	technical society
Employer:			
Employer Address:			
Home Address:			
Business (day) tele	phone #:	Home telephone #:	
Please enclose req	uired fee payable to: <b>North Jersey Se</b>	ection IEEE	
As soon as a comp will be notified by er		nt are received, you are officially registere	ed for this course. Registration status

□ Tuition receipt will be mailed only if this box is checked

Signature: