The IEEE Newsletter

◆IEEE

NJ Control Systems Chapter:

Sustainable Technologies for Humans and the Earth

On September 10, 2009, the IEEE NJ Control Systems Chapter together with the New Jersey Institute of Technology will host a presentation on "Sustainable Technologies for Humans and the Earth." The speaker will be Dr. Yoshihiko Takahashi.

About the Talk

In this talk, aspects and examples of the sustainable technologies for humans and the earth will be presented. The first example is a robotic wheelchair with inverted pendulum control by which a wheelchair-bound person can climb over a step without external assistance. The robotic wheelchair raises its front wheels in front of a step and maintains the inverted pendulum control to go forward and backward using the user's body inclination. After the front wheels land on the step, the robotic wheelchair can climb over the step, assisted by DC motor force. The experimental results focus on the step climbing control and the human psychological flutter. The next example is a self-transfer aid robotic system which assists people with impaired walking ability. With the aid transfer, these users can maneuver themselves independently to carry out daily necessities. In practice, users lean their upper-bodies onto the saddle of a robotic arm, which lifts and transfers them to their destination. Results have confirmed that this self-transfer aid robotic system can lift a human body gently and more efficiently. The third example is a low cost, small fuel cell vehicle with reduced carbon dioxide emissions. The design is based on the rules of the Japanese light weight electrical vehicle competition, ECONO MOVE, held every year in May in Akita prefecture, Japan. In this competition, each vehicle is evaluated based on its running distance while using two 60 NL hydrogen tanks over a two hour period. We will detail the vehicle concept and fuel cell driving system. Finally, we will provide the experimental results of the improvements of the fuel cell driving system and the efficiency of the hydrogen flow rate of the system.

About the Speaker

Yoshihiko Takahashi is a Professor of Mechanical Systems Engineering at Kanagawa Institute of Technology. He has also been working for Toshiba Corporation since 1980. He has been teaching control systems, mechatronics, and robotics at the same school since 1996. His research interests are in human assist robotic systems, fuel cell electrical vehicle, and applications of sustainable energy. He is the author or coauthor of more than one hundred journal and international conference papers, and four books. Yoshihiko Takahashi received his Master's and Doctorate degrees in mechanical systems engineering from Tokyo University of Agriculture and Technology, Japan, in 1980 and 1995 respectively.

Time: 5:00-6:00 PM, Thursday, September 10, 2009.
Place: New Jersey Institute of Technology (NJIT), Room 202, ECE Center (Intersection between Warren & Summit Streets), Newark, NJ. Directions are available at http://www.njit.edu/University/Directions.html.
Information: Professor Timothy Chang, (973) 596-3519, changtn "AT" njit.edu.

SEPTEMBER 2009

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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 "AT" 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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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 "AT" ieee.org.

NJ Computer Society:
Digital Insecurity

On Thursday, September 24, 2009, the IEEE North Jersey Section Computer Society Chapter will host a presentation entitled "Digital Insecurity" by Arthur J. Hedge III.

About the Talk

The amount of digital information is growing at an exponential rate. As it becomes more and more valuable the number of data breaches and risk of data loss faced by individuals, organizations, and countries continue to grow. Mr. Hedge will cover what the digital world looks like today, what the threat landscape is, and how we can protect ourselves.

- Threats faced by individuals.
- Threats faced by organizations.
- What you can do about it.
- What organizations can do about it

About the Speaker

Arthur Hedge is the President of Castle Ventures LLC. Castle Ventures is an Information Technology consulting firm focused on security. Mr. Hedge has over 20 years of consulting experience in the IT field. Mr. Hedge is a graduate of the Massachusetts Institute of Technology. He lives in New Jersey with his wife and two sons. He is a member of a number of professional organizations, including Information Systems Security Association (ISSA), and the Open Web Application Security Project (OWASP). Mr. Hedge serves as a mentor for Columbia University's Technology Management program. He is a frequent speaker and writer on technology subjects.

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, Thursday, September 24th, 2009, pre-meeting buffet starting at 6:00 PM.
Place: Public Meeting Room, Morris County Library, 30 E. Hanover Ave, Whippany, NJ, (973) 285-6930.
Information: Michael Malm (201) 355-6167, mmalm "AT" ieee.org, Seth Jakel (973) 731 1902, (973) 820-1865, sgjakel "AT" comcast.net or Howard Leach (973) 540-1283, hhleach "AT" ieee.org.

NJ Section PACE, GOLD:
Engineers Meet:
The Engineer's View

On Wednesday, September 9, 2009 the North Jersey Section Professional Activities Committee along with Graduates of the Last Decade will host a meeting to discuss the Profession as viewed by attending Members.

About the Meeting

The meeting will focus on the status of our engineering profession from the viewpoint of members attending the meeting. Subjects: off-shoring, importing H-1B workers, etc. will be itemized and sent on to the Presidents of IEEE and IEEE-USA.

We will also plan for future PACE meetings, subjects and guest speakers.

You are encouraged to attend, voice your opinion and invite your associates.

About the Speaker

We will not have a special guest speak. Richard Tax and Paul Ward, PACE Chair and co-chair will host the meeting and collect the information from the floor.

All Welcome!

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

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

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

Time: 6:30 PM to 9:00 PM, Wednesday, September 9, 2009. Refreshments will be served.
Place: Clifton Memorial Library, 292 Piaget Ave, Clifton, NJ, (973) 772-5500.
Information: Paul Ward, (973) 790-1625, PWard1130 "AT" aol.com, Richard F. Tax, (201) 664-6954, rtax "AT" aea.org.

IEEE North Jersey Section Activities
September 2009

Sep. 2 – "NJ Section Meeting", 6:30 PM, "Executive Committee Meeting" - 7:00 PM, ITT, 77 River Rd, Clifton, NJ. Russell Pepe at rcpepe "AT" ieee.org.

Sep. 9 – "Engineers Meet: The Engineer's View", NJ PACE, GOLD, 6:30 PM to 9:00 PM, Clifton Memorial Library, 292 Piaget Ave, Clifton, NJ. Paul Ward, (973) 790-1625, PWard1130 "AT" aol.com, Richard F. Tax, (201) 664-6954, rtax "AT" aea.org.

Sep. 10 – "Sustainable Technologies for Humans and the Earth" by Dr. Yoshihiko Takahashi, NJ Control Systems, 5:00-6:00 PM, New Jersey Institute of Technology (NJIT), Room 202, ECE Center (Intersection between Warren & Summit Streets), Newark, NJ. Professor Timothy Chang, (973) 596-3519, changtn "AT" njit.edu.

Sep. 12-13 – "Vintage Computer Festival East 6.0", Saturday 10:00 AM - 6:00 PM , Sunday 10:00 AM - 5:00 PM, InfoAge Science Center, 2201 Marconi Rd, Wall, NJ. Evan Koblentz, (646) 546-999, evan@snarc.net.

Sep. 17 – "Nanowire Biosensors" by Professor Mark A. Reed, NJ EDS/C&S Chapters, 7:00 PM, New Jersey Institute of Technology (NJIT), Room 202, ECE Center (Intersection between Warren & Summit Streets), Newark, NJ. Dr. Richard Snyder (973) 492-1207 (RS Microwave), Dr. Edip Niver (973) 596-3542 (NJIT), or Dr. Durga Misra (973) 596-5739 (dmisra "AT" njit.edu).

Sep. 24 – "Digital Insecurity" by Arthur J. Hedge III, NJ Computer Society, 7:00 PM, Public Meeting Room, Morris County Library, 30 E. Hanover Ave, Whippany, NJ. Michael Malm (201) 355-6167, mmalm "AT" ieee.org, Seth Jakel (973) 731 1902, (973) 820-1865, sgjakel "AT" comcast.net or Howard Leach (973) 540-1283, hhleach "AT" ieee.org.

Sep. 25-27 – "2009 Region 1 Professional Development Seminar – Engineer the Future", NJ WIE, Crowne Plaza Hotel, White Plains, NY. See www.ieee.org/go/wiepds2009 or email drivera938@ieee.org for more information.

Upcoming Meetings

Oct. 1 – "2009 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 "AT" ieee.org), Art Greenberg (a.h.greenberg "AT" ieee.org), Har Dayal (973) 633-4618 (har.dayal "AT" baesystems.com), or George Kannell (973) 386-4170 (gkk "AT" gsinnovations.com).

Oct. 7 – "NJ Section Meeting", 6:30 PM, "Executive Committee Meeting" - 7:00 PM, ITT, 77 River Rd, Clifton, NJ. Russell Pepe at rcpepe "AT" ieee.org.

Oct. 14 - Dec. 9 – "C# .NET Programming" by Donald Hsu, PhD, 6:30 PM to 9:00 PM, Advanced Technical Marketing, Suite 113, 1719 Route 10, Parsippany, NJ. Donald Hsu, yanyou "AT" hotmail.com.

Oct. 22 – "Long Term Evolution (LTE) Radio Access Network (RAN) Overview" by Dr. Matthijs A. Visser, NJ VTS & MTT-S/AP-S, 7:00 PM, Alcatel-Lucent, 67 Whippany Rd, Whippany, NJ. Pre-registration is requested! Stephen Wilkowski (973)-386-6487 (swilkowski "AT" alcatel-lucent.com) or Arthur Greenberg (a.h.greenberg "AT" ieee.org).

Oct. 29 – "Life Grade Luncheon", Hamilton Park Conference Center, Florham Park, NJ. Ken Oexle (973) 386-1156.

Members and Non-Members Welcome
PLEASE POST

Nanowire Biosensors

On September 17, 2009, the IEEE NJ Section Electron Devices, Circuits and Systems Chapters together with the New Jersey Institute of Technology will host a talk on "Nanowire Biosensors." The speaker will be Distinguished Lecturer, Professor Mark A. Reed.

About the Talk

Nanoscale electronic devices have the potential to achieve exquisite sensitivity as sensors for the direct detection of molecular interactions, thereby decreasing diagnostics costs and enabling previously impossible sensing in disparate field environments. Semiconducting nanowire-field effect transistors (NW-FETs) hold particular promise, though contemporary NW approaches are inadequate for realistic applications. We present here a novel approach using complementary metal-oxide-semiconductor (CMOS) technology that has not only achieved unprecedented sensitivity, but simultaneously facilitates system-scale integration of nanosensors for the first time. This approach enables a wide range of label-free biochemical and macromolecule sensing applications, including cell type discrimination through the monitoring of live, stimulus-induced cellular response, and specific protein and complementary DNA recognition assays. An important achievement is the introduction of real-time, unlabeled detection capability, allowing for fundamental studies of cellular activation, and specific macromolecule interactions at femtomolar concentrations. Important aspects of microfluidic integration and Debye screening will be discussed, along with the demonstration of live cell peptide-specific immunoresponse.

About the Speaker

Professor Mark A. Reed received his PhD in Physics from Syracuse University in 1983, after which he joined Texas Instruments. In 1990 Mark joined Yale University where he holds the Harold Hodgkinson Chair of Engineering and Applied Science, and is the Associate Director of the Yale Institute for Nanoscience and Quantum Engineering. His research activities have included the investigation of electronic transport in nanoscale and mesoscopic systems, artificially structured materials and devices, molecular scale electronic transport, plasmonic transport in nanostructures, and chem/bio nanosensors. Mark is the author of more than 180 professional publications and 6 books, has given 19 plenary and over 260 invited talks, and holds 25 U.S. and foreign patents on quantum effect, heterojunction, and molecular devices.

He has been elected to the Connecticut Academy of Science and Engineering and Who's Who in the World. His awards include; Fortune Magazine "Most Promising Young Scientist" (1990), the Kilby Young Innovator Award (1994), the Fujitsu ISCS Quantum Device Award (2001), the Yale Science and Engineering Association Award for Advancement of Basic and Applied Science (2002), Fellow of the American Physical Society (2003), the IEEE Pioneer Award in Nanotechnology (2007), and Fellow of the Institute of Electrical and Electronics Engineers (2009).

All Welcome!

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

Time: 7:00 PM, Thur., September 17, 2009. Free buffet will begin at 6:15 PM.
Place: New Jersey Institute of Technology (NJIT), Room 202, ECE Center (Intersection between Warren & Summit Streets), Newark, NJ. Directions are available at http://www.njit.edu/University/Directions.html.
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).

North Jersey Section Life Members Affinity Group and Membership Renewals

A Life Members Affinity Group (LMAG) Chapter was created last year in the North Jersey Section of the IEEE. All Life Grade Members in the North Jersey Section are automatically members of this new group.

For the past few years we've had a Life Grade Members Luncheon in the Fall, co-sponsored by the North Jersey Power Engineering Society Chapter and the North Jersey Section. We continue to plan additional meetings during the year, based on feedback received from the over 600 Life Grade Members in our Section.

If you are a Life Member and did not respond to the membership dues mailing last fall, you were re-categorized as a member "in arrears" a few months ago.

Even though Life Grade Members do not pay standard dues or dues for societies in which they have been members for at least five years, a response is still needed acknowledging that they are still in the section and are interested in maintaining their relationship with the IEEE.

If you haven't responded to Member-ship Dues mailings for more than one year, you probably have been categorized as an "Inactive" member by the IEEE. By contacting IEEE Member Services, as described below, your membership can be reinstated and you will again be placed in "Active" member status.

The 2010 Membership Renewal drive starts this month, September 2009.

If you do not wish to wait for the 2010 Membership mailing, or have been categorized as Inactive, you may be able to renew your membership on line.

If you already have an IEEE Web Account, your Membership Renewal can be done directly on the web at:

http://www.ieee.org/web/membership/renew/index.html

If you do not have one, you can create a (free) IEEE Web Account at:

http://www.ieee.org/web/aboutus/help/task/my_account/web_account.html#create

If you had one and can't remember your login or password, you can go to the same web page and recover them, as long as you have your membership number. If you no longer have your membership number, please contact Alan Stolpen at the North Jersey Section's Life Members Affinity Group email address listed below to get your membership number.

If you have any difficulty in submitting your renewal electronically, presently do not have an IEEE web account or had difficulty getting one or recovering your login or password, would like to receive a paper version of the renewal form, or have any other questions, please contact Member Services on line at:

http://www.ieee.org/memberservices

or contact

Debra Hale,
Member Services Associate
IEEE Member Services Contact Center
(732) 562-6586

The main number for the IEEE in Piscataway is (800) 678-4333.

If you have difficulty contacting Member Services, contact Alan Stolpen at the following Life Members Affinity Group email address: lm.norjersec "AT" gmail.com.

Alan H. Stolpen
Chair, North Jersey Section Life Members Affinity Group (LMAG)
lm.norjersec "AT" gmail.com
a.stolpen "AT" ieee.org

Long Term Evolution (LTE) Radio Access Network (RAN) Overview

On October 22, 2009, the IEEE North Jersey Section Vehicular Technology Society and MTT/AP Chapters will host a joint talk entitled "Long Term Evolution (LTE) Radio Access Network (RAN) Overview" by Dr. Matthijs A. Visser.

About the Talk

Long Term Evolution (LTE) has been almost universally selected as the technology of choice for 4th generation wireless communications systems. It has been designed to meet high throughput and low latency requirements to support next generation wireless services. LTE allows for high spectral efficiency, flexible bandwidth utilization from 1.4 to 20 MHz, and high peak data rates through the use of higher order modulation (64-QAM) and multi-antenna techniques (MIMO). For example, peak rates in 10 MHz bandwidth are: for the downlink 75 Mbps with 2x2 MIMO, and for the uplink 20 Mbps with 16-QAM. This talk will give an overview of the LTE air interface, including OFDM, Downlink and Uplink air interface structure, LTE channels, peak rates, MIMO, scheduling and resource allocation, etc.

About the Speaker

Dr. Matthijs A. Visser received his PhD in Electrical Engineering from the New Jersey Institute of Technology in 1999, and prior to this a Masters degree in Electrical Engineering from Delft University of Technology in Delft, the Netherlands. Dr. Visser is currently employed by Alcatel-Lucent where for the past 1.5 years he has worked on LTE trial activities. He has over 10 years of wireless industry experience and is the holder of two patents.

All Welcome!

You do not have to be a member of IEEE to attend. Pre-registration is requested!

Time: 7:00 PM, Thursday, October 22, 2009. A free buffet will begin at 6:30 PM.
Place: Alcatel-Lucent, 67 Whippany Rd, Whippany, NJ.
Information: For information, directions and to register please contact Stephen Wilkowski (973)-386-6487 (swilkowski "AT" alcatel-lucent.com) or Arthur Greenberg (a.h.greenberg "AT" ieee.org).

2009-2010 Student Activities Kickoff

Welcome back to the beginning of a new school year of student activities for the North Jersey Section. This year promises to be filled with new activities and events. We hope you and your student branches will be participating in all of these events throughout the 2009-2010 academic year. Also, since the year is just getting started, it is a good time for a refresher on what your branch must be doing to be recognized by the IEEE. Information about IEEE, student branch bylaws and forms to fill out is available on the website given below.

My name is Jacqueline Varghese, and I plan to Chair the Student Activities Committee (SAC) this year. Russell Pepe, who has chaired the committee for several years, is now passing the baton onto me. You can reach me at the following e-mail address: northjerseysac "AT" ieee.org. I met several of you last year at and look forward to working with all of you during the upcoming school year.

To start off with, if you have not had elections yet, it would be a good idea to hold them and report to IEEE with the officer election form. Also, coming up is a leadership workshop that new (or potentially new) officers can attend to get essential training on running a branch. Your branch should fill out an annual plan of events in the fall and an annual report in the spring. Part of the reporting is on membership, which qualifies the branch for per member rebates. It's free money for turning in the right forms by the right time. Speaking of money, your branch should also plan fundraisers for basic expenses. If you really want to get started right, host one of these leadership workshops to learn the basics. Contact the organizer below.

So what's happening this year? Lots of things! Details of the event's exact location, date, time, directions, and registration will become available on the SAC website below. Free Student Leadership Training Workshops in and Professional Skills Development Workshop will start up in the fall. Instead of just holding single workshops, multiple individual workshops will be held at each university who wishes to receive formal training at their local branch for this and upcoming year's students. This holds true for both the leadership and professional skills training. If you would like to host these events then contact the organizer below. The annual Paper Presentation Contest is also tentatively planned for March 2010. This is a chance for students to showcase their hard work on different projects worked on during the year. It is open to both graduate and undergraduate students.

Last, but not least, the SAC and GOLD committees are looking for volunteers who might be graduating soon and would like to help out in the North Jersey Section. To find out how you can help, contact: northjerseysac "AT" ieee.org. Also, visit the new website at http://ewh.ieee .org/r1/north_jersey/sac. You will find the latest information updated there or you can also join the mailing list to get regular reminders of different events.

North Jersey Section Seeks Committee Chairs and Volunteers

The North Section is seeking new volunteers to help conduct business for the benefit of its membership. There are a variety of volunteer positions open and available. They range from technical to non-technical, leadership or just participatory. For Society Chapter Chairs, you must be a member of the corresponding IEEE Society.

If you would like to become involved with volunteering in some of these efforts or positions or just become more informed about what is happening at the North Jersey Section, please contact Dr. Chandra Gupta at c.gupta "AT" ieee.org. You are welcome to attend the Section business meeting held the first Wednesday of every month to find out more and other volunteer activities that require some help.

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

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

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

IEEE and North Jersey Section Going Web 2.0, Facebook & Linked-In

If you are reading this article, there is a good chance you are reading this either on a paper newsletter or on a static webpage. Some of that will be changing to provide the reader alternative channels of accessing important information.

This article tries to provide a brief introduction to RSS, Really Simple Syndication, which is the core technology behind Web 2.0 features, applications, and how IEEE is now using it.

There are many detailed descriptions of RSS and how it works (see Wikipedia for a good introduction to RSS and XML), but in the context of Web 2.0, it is an XML (eXtensible markup language) based push technology that allows for moving information from the content producer to the appropriate client software being used to aggregate data from many sources to present to the user.

Many people are already using such client software without actually knowing that it is RSS and XML driving it under the hood. For example, news portal sites like Yahoo utilize RSS, Google Reader is an aggregator that also collects subscribed feeds as diverse as news stories, daily blogs, to audio and video podcasts. Popular social networking sites like Facebook and Linked-In are also powered by this technology and push member's status changes and postings out to email, twitter and SMS.

So what does this have to do with the IEEE? One great example of how the IEEE currently uses Web 2.0 is the individualized myIEEE (http://www.ieee. org/web/membership/myieee.html) portal that every single member has as part of their membership. It allows for customization of products and services of interest to the member as well as notification of IEEE wide events of interest in different categories.

Additionally, a little over a year ago the IEEE introduced a new meeting and event announcement system which allows for publishing feeds of these events to the public. This data is then collected using the subscriber's favorite client aggregator software.

Many people make use of one or more of such technologies and can now integrate their access to local IEEE event notifications. Over the course of the next year the North Jersey Section will roll out all meeting and event notifications using RSS. You can begin to participate now using the following URL:

meetings.vtools.ieee.org/meetings/rss/1/
NORTH%20JERSEY

Paste this address into your RSS reader or aggregator software of choice. You can even use Microsoft Outlook 2007 to collect notifications. Just go to the tools, account settings, RSS feeds tab and paste this URL into the dialog box.

Additionally, if you use Facebook or LinkedIn, the North Jersey Section now has a Facebook fan page that you can become a fan of and all these meeting postings will be notified via the fan page which you can join here:

www.facebook.com/pages/IEEE-North-Jersey-Section/

If you use LinkedIn, you can join the *IEEE North Jersey Section Group* to receive the same event notifications as well. Just go to

www.linkedin.com

and search for IEEE North Jersey Section under the groups menu.
Click through links for both the fan page and group will be available off the main North Jersey Section website at web.njit.edu/~ieeenj. As the process of rolling out better integrated Web 2.0 functionality continues via myIEEE and our Facebook fan page and Linked-In group, the updates will be publicized in future articles. For now, try out RSS feeds and our Fan Page and or Group to see how you can make better use of this information using your notification channel of choice.

Want to host a Leadership Workshop at YOUR Student Branch?

This year, we want to bring the leadership workshop to your branch and hold it individually at your school! The Leadership Workshop is a great way to educate your branch members on some of the details of IEEE, their roles as students in IEEE, what is happening in the section and region, how they can get involved, and most importantly, training for new officers that were just elected or will be elected in the future.

If you would like to hold one at your branch, just contact the organizer at: northjerseysac "AT" ieee.org. We can make arrangements to hold a free workshop at an appropriate date and time.

North Jersey Section Seeks Volunteers to Conduct Business at the Section Level

The NNJ IEEE Section ExCom is seeking new volunteers to help conduct business at the section level for an elected or nominated position for the benefit of its membership in the North Jersey section and surrounding areas. You must be an active IEEE member to hold an elected office at the section level. 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 Dr. Chandra Gupta at c.gupta "AT" ieee.org or Har Dayal at har.dayal "AT" baesystems. com. 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.

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 Dr. Chandra Gupta, c.gupta "AT" ieee.org.

Unemployed? - Did you know?

Unemployed IEEE members are entitled to a 50% dues reduction

IEEE realizes that economic circumstances may impact some members' ability to pay the full amount of IEEE membership dues. For this reason, the following special circumstance categories have been established. Special circumstances are not available to Student members. Only one category may be claimed in any year.

IEEE offers the following special circumstances categories:

- ✤ Minimum Income ✤ Retired
- ✤ Unemployed ✤ Disabled

Minimum Income Provision: Applicants who certify that their prior year's income did not exceed US $12,900 or equivalent are granted a 50% reduction in IEEE dues, regional assessment and dues for one IEEE Society and its optional publications. Please submit written certification with application and payment. Student members are NOT eligible.

Retired Provision: A retired member, not gainfully employed and not qualifying for Life Member Status, on attaining the age of 62 years, may apply for a 50% reduction in dues and assessments. An individual who qualifies for the IEEE Retired Member category may continue any and all Society memberships held for not less than the 5 prior years. Optional publication fees equal those established for Student members.

Unemployed Provision: A 50% reduction in membership dues, Society dues, other subscriptions and assessments are available to a member or applicant who informs the IEEE Operations Center Office that he/she: (1) has become involuntarily unemployed and is seeking reemployment, or (2) has become voluntarily unemployed for reasons of raising children. A statement of continued unemployment shall be provided with each annual dues payment. In the case of voluntary unemployment, the provisions of this Bylaw shall not exceed four years. The reduced payments may not be made in installments.

Permanently Disabled Provision: The IEEE membership dues and assessments, if any, shall be waived for those members who become permanently disabled. "Permanent disability" shall mean a medically determinable physical or mental impairment which (i) renders the individual incapable of performing any substantial gainful employment, (ii) can be expected to be of long-continued and indefinite duration or result in death, and (iii) is evidenced by a certification to this effect by a doctor of medicine approved by the Executive Director. The Executive Director shall determine the date on which the permanent disability shall have occurred if such determination is necessary.

News from IEEE-USA:
IEEE-USA Commends DOE's $2.4 Billion Grants to Accelerate Development of Electric Vehicles, Components

Washington (7 August 2009) - IEEE-USA commends the Department of Energy for awarding $2.4 billion in grants to fund 48 new advanced battery and electric drive projects.

"We welcome these investments, because electrifying transportation addresses two of our greatest needs: reducing our consumption of petroleum and limiting the release of greenhouse gases," IEEE-USA President Gordon Day said.

The grants are the largest single investment in advanced battery technology for hybrid and electric-drive vehicles. When coupled with an expected $2.4 billion in cost share from the grant awardees, they are expected to create thousands of jobs in the U.S. battery and automotive industries. General Motors will receive about $241 million, Ford will get nearly $100 million and Chrysler $70 million.

IEEE-USA called for electrifying the transportation system through widespread deployment of plug-in hybrid electric vehicles in its January "National Energy Policy Recommendations." See http://www.ieeeusa.org/policy/positions/energypolicy.pdf.

The grants were announced by President Barack Obama on Wednesday. See http://www.whitehouse.gov/the_press_office/24-Billion-in-Grants-to-Accelerate-the-Manufacturing-and-Deployment-of-the-Next-Generation-of-US-Batteries-and-Electric-Vehicles/.

IEEE-USA advances the public good and promotes the careers and public policy interests of more than 210,000 engineers, scientists and allied professionals who are U.S. members of IEEE. IEEE-USA is part of IEEE, the world's largest technical professional society with 375,000 members in 160 countries. See http://www.ieeeusa.org.

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

News from IEEE-USA:
Unemployment Survey E-Book Provides Insight into High-Tech Job Loss

Washington (24 July 2009) - With the unemployment rate for U.S. electrical and electronics engineers (EEs) at an all-time high in the second quarter, an IEEE-USA e-book provides insights into the causes -- and remedies -- for job loss among technical professionals.

The e-book is based on a 2008 survey of unemployed U.S. IEEE members.

The jobless rate for EEs increased from 4.1 percent in the first quarter to a record-high 8.6 percent in the second, according to data released in early July by the Department of Labor's Bureau of Labor Statistics. The previous quarterly record was 7 percent, in the first quarter of 2003.

The first section of the e-book reports the percentage distribution or mean response for each of the questions in the survey. The second features the results of selected cross tabulations that focus on age and various aspects of employment status. The third highlights the results of a multivariate analysis that focuses on the impact of age on the duration of unemployment when other factors are held constant. The final section compares some of the current results to those in 1995, 1996, 1998, 2002, 2004 and 2006.

"2008 IEEE-USA Unemployed Members Survey: The Results" can be purchased at

www.ieeeusa.org/communications/ebooks

for $9.95 (IEEE members) or $19.95 (nonmembers).

IEEE members can log in using their IEEE Web account to purchase IEEE-USA e-books at deeply discounted prices and to download free e-books.

IEEE-USA advances the public good and promotes the careers and public policy interests of more than 210,000 engineers, scientists and allied professionals who are U.S. members of IEEE. IEEE-USA is part of IEEE, the world's largest technical professional society with 375,000 members in 160 countries. See http://www.ieeeusa.org.

Contact: Sharon Richardson
IEEE-USA Communications Assistant
(202) 530-8363
s.richardson@ieee.org

Vintage Computer Festival East 6.0

September 12-13, 2009

InfoAge Science Center, 2201 Marconi Rd., Wall, N.J., 07719

Saturday: 10 a.m. – 6 p.m.   ***   Sunday: 10 a.m. – 5 p.m.

Tickets: $10 (1 day), $15 (both days), FREE for 17 and younger

Special events @ VCF:

- Keynote: RCA Computers in the 1950s
- 8-bit live music and visual concert
- PockeTerm Construction Workshop
- BASIC Programming Challenge
- Afternoons: Exhibit hall with live demos
- Technology by-the-pound book sale
- Museum guided tours all weekend long

Details frequently updated at www.vintage.org

Contact: Evan Koblentz, evan@snarc.net / (646) 546-9999

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25–27 September 2009
Crowne Plaza Hotel
White Plains, NY
914-682-0050 or 888-444-0401

Hosted by the New York Section & Co-Sponsored with Region 2

Friday Night Chocolate Buffet/Wine and Cheese
Saturday Evening- Broadway Show (optional)

FULL CONFERENCE $75.00 IEEE members/$90.00 non-IEEE members
SATURDAY ONLY $45.00 IEEE members/$60.00 non-IEEE members
IEEE CEU's available ($15.00 per particpant)
HOTEL $119.00/night

AUTHORIZED IACET PROVIDER

INVITED SPEAKERS

Greg Bradley, VP of HR & Diversity, Metro North

Corinna Cortes, Ph.D, Google

Cathy Dwyer, Ph.D. Pace University

Amy Duncan,

Peter A. Eckstein, IEEE★USA

Constance Knapp, Ph.D. Pace University

Laura Jennings, The Jennings Group

Howard Michel, Ph.D., IEEE Region 1 Director

Karen Panetta, Ph.D, IEEE WIE Committee Chair

Bala Prasanna, IBM

Denise Richardson, GCA

Charles Rubenstein, Ph.D., IEEE Region 1 Director-Elect

Jeff Rude, RSR Solutions

Carol S. Rudman, Ph. D., Rudman Associates Management Training

Ronald Saporita, MTA Office of Construction Oversight

George J Sierchio, Action Business Partners, Inc

Laura Trumbull, Thomson Reuters

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For registration and information: **www.ieee.org/go/wiepds2009** • email: drivera938@ieee.org

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 29, 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 973-386-1156.

_____

IEEE Life Grade Luncheon Registration NJ - October 29, 2009

Name_____

Address_____

Phone _____

IEEE #_____   Life Grade ____Yes

Return to: Ken Oexle
              11 Deerfield Rd
              Whippany, NJ 07981

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

THE INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS, INC.

IEEE NORTH JERSEY SECTION
MTT-Society and AP-Society Joint Chapter

PRESENT

24th ANNUAL SYMPOSIUM AND MINI-SHOW
FOCUS:
SELECTED TOPICS IN RF AND MICROWAVE TECHNOLOGIES FOR COMMERCIAL AND MILITARY APPLICATIONS

DATE: THURSDAY OCTOBER 1, 2009

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.

For further information contact:
CHAIR/EXHIBITION: KIRIT DIXIT (201-669-7599), kdixit "AT" ieee.org
PUBLICITY: ARTHUR GREENBERG, a.h.greenberg "AT" ieee.org
EVENT/ LOCATION CO-ORDINATOR: KEN OEXLE (973-386-1156)
CO-CHAIR– TECHNICAL PROGRAMS : HAR DAYAL (973-633-4618) har.dayal "AT" baesystems.com
CO-CHAIR - TECHNICAL PROGRAM: GEORGE KANNELL (973-386-4170) gkk "AT" lucent.com

THERE IS NO CHARGE TO ATTEND THE SYMPOSIUM OR SHOW

IEEE North Jersey Section Course
C# .NET Programming

Wednesday, October 14, 2009 through December 9, 2009
Eight weekly classes (October 14, 21, 28, November 4, 11, 18, December 2, 9, 2009)
Place: Advanced Technical Marketing, Suite 113, 1719 Route 10, Parsippany, NJ 07054
(Checks should not be mailed to this address)

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

The IEEE North Jersey Section is offering a course entitled "C# .NET Programming". Since 2004, C# .NET has generated significant headway in Fortune 1000 enterprise development systems. Dice.com lists 700+ 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 700+ people in database, Java, WebLogic, XML, and C# .NET courses in 7 organizations.

TOPICS

1. Compare the enterprise development tools using Java to C# .NET
2. Define Visual Studio .NET Version 2005 to 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: Advanced Technical Marketing **ATM** Suite 113, 1719 Route 10, Parsippany, NJ 07054
WHEN: Eight Wednesdays, October 14, 21, 28, November 4, 11, 18, December 2, 9, 2009, 6:30 to 9:00 p.m.
COST: IEEE (& affiliate) members $500; Non-IEEE members $550.
CONTACT: Donald Hsu, yanyou "AT" hotmail.com

REGISTRATION: C# .NET Programming

Please mail the completed registration 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 _____

☐ Non-member

☐ IEEE Member   Member #:_____   Member of _____ technical society

Employer:_____

Employer Address:_____

_____

Home Address:_____

_____

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

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

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

☐ I wish to receive IEEE Completion Certificate   Signature:_____