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Upgrades to Go—Volunteers at the Spring Career Festival in June helped about 50 IEEE members apply for Senior Member status. (Photo: M. Mallini)

A Bunch of Upgrades, But No Free Lunch

By Wally Lee

On June 3, the National Capital Area Consultants' Network hosted the IEEE Spring Career Festival. There has been a lot of interest lately in helping members upgrade to the Senior Member level, so our chair, Monica Mallini, said we would include this little activity.

Sounds easy, right? We will spring for some food and people will show up to get upgraded. Monica, being the optimist, thought about 50 people would show up. Being a realist, I thought we would be lucky to get 30. After all, it was on Saturday and people with real lives have many more fun things to do. Personally, I thought I might get a free lunch out of it.

The doors opened at 11:00 a.m. and a few people drifted in. Then a lot more people showed up. And more. And even more. I think the final total was about 120. I guess free food is the answer to getting people to come to an IEEE event on a Saturday.

Faced with double the attendance we had planned for, we finally realized that giving our email addresses to people and asking them to send us their resumes was the only reasonable way to pull this off.

So we all manned our laptops and got the member upgrade process start-

UPGRADES
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Peter Winokur and Dennis Brown Receive Awards at NSREC 2006

Local IEEE members Peter Winokur and Dennis Brown were recognized for their contributions to the radiation effects community at the recently concluded 2006 IEEE Nuclear and Space Radiation Effects Conference (NSREC) held at Ponte Vedra Beach, Florida.

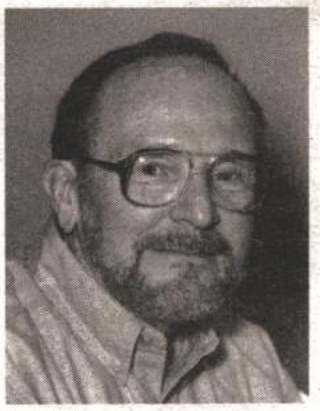
Peter Winokur

Peter Winokur, an IEEE Fellow, was recognized for career achievements in radiation effects research as the 2006 recipient of the IEEE Nuclear and Plasma Sciences Society Merit Award.

Dr. Winokur currently serves with the National Nuclear Security Administration (NNSA) as a liaison to Congress on a broad range of Department of Energy policy, legislative, and budget issues. He works with Congress to promote NNSA programs in nuclear weapons and energy, nuclear nonproliferation, and research.

Dr. Winokur made pioneering contributions to the field of radiation effects on semiconductors during his career at Harry Diamond Laboratories (now Army Research Laboratory) and at Sandia National Laboratories. He has authored more than 100 technical publications in the IEEE *Transactions on Nuclear Sciences* journal and has been the recipient of the Outstanding Paper Award at NSREC seven times. Dr. Winokur also served as an IEEE-USA Congressional Fellow and as president of the IEEE Nuclear and Plasma Sciences Society (NPSS).

Dr. Winokur's citation reads, "For contributions to the development of radiation hardened microelectronics and radiation hardness assurance test methods."



Dennis Brown

The 2006 Radiation Effects Award was presented to Dennis Brown from the National Reconnaissance Office. Dennis Brown has made many important contributions to the radiation effects community, and has done important work in areas such as time and energy dependence of radiation effects, radiation dose enhancement, kinetics of radiation induced interface state generation, annealing of radiation induced trapped charge, and the mechanisms of low dose rate effects in bipolar semiconductor devices.

He has been active in NSREC and served as an author, reviewer, session chair, short course presenter, short course chairman, technical program chairman, general chairman, member of the Radiation Effects Steering Group, and most recently as an administrative committee representative for the NPSS Radiation Effects Committee from 2002 to 2005.

Mr. Brown's citation reads, "For contributions to the dissemination and advancement of radiation effects research and by his leadership in all aspects of the IEEE Nuclear and Space Radiation Effects Conference and the Radiation Effects Steering Group."

General Sutten Gives Firsthand Account of Evolution of Military Communications

By Dr. Dennis Moen, Chair
Communications Society,
Northern Virginia Chapter

Maj. Gen. Charles G. Sutten, Jr., U.S. Army (Ret.), was the guest speaker at the July meeting of the Northern Virginia chapter of the Communications Society. The Women in Engineering affinity group cosponsored the meeting.

General Sutten provided a very special discussion of how military communications have evolved over the last 45 years, spanning Vietnam to the current war on terrorism. He spoke with authority, providing his personal account of various technologies and their limitations, capabilities and impact on the conduct of military operations.

He gave vivid examples of the sometimes poor match between the technologies and equipment available and the challenges of combat operations of the period. His reference to specific operations using tactical maps brought the discussion to life and stimulated a discussion of the importance of applying system engineering, not just technology, to the problems of communications supporting combat operations.

He also expressed his thoughts on the problem of requirements growth continuously outstripping the ability of technology to deliver network capacity on the battlefield. He challenged the community to think about the need to discover new concepts in communications theory in order to meet the continual demand.

General Sutten is one of our own, a member of the Northern Virginia chapter of the Communications Society. He graduated from West Point, earned a master's degree in electrical engineering at Stanford University, and served as a professor of electrical engineering at West Point. During many years of military service, he had operational communications experience at many levels of command from infantry battalion to strategic levels, including assignments with the White House Communications Agency.

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Calendar Items and Announcements
Please submit calendar items in the format used in the Calendar of Events. You can send email to ncac-scanner@ieee.org. If possible, include a synopsis of the event and a biographical sketch of the presenter including academic background, current position, notable achievements, and IEEE and other professional affiliations.

Other contributions, such as reports on chapter events and other member activities, reviews of books by or of interest to members, are most welcome. Please submit them to the managing editor, electronically if possible, at ncac-scanner@ieee.org.

On the Web

eSCANNER Calendar of Events
The calendar is available at **www.ieee.org/escanner**. Check here for events submitted too late for print publication.

IEEE National Capital Area Virtual Community
Exchange ideas and participate in discussions with local IEEE members at **www.ieeecommunities.org/nca**.

Advertising
Contact the advertising manager about ad rates and to place advertising orders. Ads must be submitted by the deadline below.

Deadlines
The editor reserves the right to set policies and procedures necessary to provide members with a newsletter that is informative and timely. Deadlines must be strictly adhered to to keep the publication on schedule. If you are planning an event and have insufficient information by the deadline, please contact the managing editor.

The deadline for the upcoming issue will always be published on this page.

The deadline for the November–December issue is October 1, 2006

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CALENDAR OF *events*

Tuesday, September 5, 2006
Washington Section Administrative Committee Meeting

Time: Dinner at 6:00 pm; meeting at 6:30 pm
Place: **Please note the new location:** 6711 Democracy Blvd., Bethesda, MD
More Info: All interested IEEE members are welcome to attend.
Contact: Debra Meale at 703-492-0047 or nca-admin@ieee.org. Please include the term IEEE in the subject line of your email.

Friday, September 8, 2006
Women in Engineering Meeting

Sponsor: Women in Engineering
Time: 7:00 pm
Place: TBD (please see www.ieee.org/escanner for updates)
More Info: This will be a social and planning meeting.
Contact: Please RSVP by Sept. 6 to Debi Siering at siering@ieee.org.

Tuesday, September 12, 2006
◆ Design and Performance of Microwave and Millimeter-wave High Efficiency Power Amplifiers

Sponsor: Microwave Theory and Techniques Society
Speaker: Dr. James J. Komiak, BAE Systems, Nashua, NH
Time: Social period at 5:30 pm, dinner at 6:00 pm, lecture at 7:00 pm
Place: TBD (please see www.ieee.org/escanner for updates)
More Info: This is the first lecture in the Microwave Theory and Techniques Society series for 2006-07. All are welcome to attend. For additional details see Diamond story, p. 4, and www.ieee.org/mtt-wnva.
Cost: $15. Cash and check will be collected after dinner.
Contact: Dinner reservations are required for the catered buffet. Please RSVP by COB Friday, Sept. 8 to Roger Kaul at r.kaul@ieee.org or 301-394-4775.

Wednesday, September 13, 2006
Northern Virginia Section Administrative Committee Meeting

Time: 6:30 pm
Place: Wickers Cafe, Tysons Corner Holiday Inn, 1960 Chain Bridge Road, McLean, VA
Directions: From I-495 or I-66, take Route 267 West. Exit at Route 123 West (Chain Bridge Road). Turn right on International Drive, then left on Greensboro Drive. Look for the Holiday Inn entrance on the left. Free parking.
More Info: All interested IEEE members are invited to attend.
Contact: Debra Meale at 703-492-0047 or nca-admin@ieee.org. Please include the term IEEE in the subject line of your email.

Tuesday, September 19, 2006
Open Source and Free Tools for Engineers

Sponsor: National Capital Area Consultant's Network
Time: 6:00 pm
Place: Chevy's Fresh Mex Restaurant, Ballston Common Mall, 4238 Wilson Blvd., Arlington, VA
Directions: Ballston Common is two blocks south of Ballston Metro station (Orange line).
More Info: Members will demonstrate their favorite "free" software programs and discuss the usefulness and limitations of each. See www.ieee.org/escanner for details.
Contact: Rick Cunningham at rick@corridor-rd.com.

Thursday, September 21, 2006
When the Lights are On But Nobody's Home...

Sponsors: Power Engineering Society, Industry Applications Society
Speaker: John Berry and Mike Kociolek
Time: 6:00-8:00 pm
Place: Virginia Tech Advanced Research Institute, 4300 Wilson Blvd., Suite 750, Arlington, VA
Directions: From Ballston Metro Station (Orange line), turn right at top of escalator then left on the street. Proceed two blocks toward Hecht's, turn right and walk one block to Ballston Point at the intersection of Wilson Blvd. and Glebe Rd. ARI is on the 7th floor. If driving, see www.ari.vt.edu/ari_directions.htm.
More Info: A light dinner buffet will be served, followed by the program. The speakers will discuss lighting control, applications and benefits, and considerations of changes to EPAct, IECC and NEC. See www.ieee.org/escanner for details.
Cost: Free for IEEE members; $10 for non-members.
Contact: Monica Mallini at 703-387-6021 or m.a.mallini@ieee.org.

September 25–28, 2006
Third Annual Conference on Sensor, Mesh and Ad Hoc Communications and Networks (SECON)

Sponsor: IEEE Communications Society
Place: Hyatt Regency, 1800 Presidents Street, Reston, VA
More Info: See story on p. 7 and www.ieee-secon.org/2006.
Contact: Krishna Sivalingam at krishna@umbc.edu or 410-455-3961.

Tuesday, September 26, 2006
◆ The Essence of a Theory for Wireless Networking

Sponsors: Communications Society (Northern Virginia, Washington chapters), Women in Engineering
Speaker: Dr. Anthony Ephremides, University of Maryland
Time: Dinner at 6:00 pm; speaker at 6:45 pm
Place: Mitre Corporation, Conference Auditorium, Building 1 (back entrance), 7525 Colshire Drive, McLean, VA
Directions: See www.mitre.org/about/locations/mitre1_map.html.
More Info: See Diamond story, p. 4.
Cost: Free for IEEE members.
Contract: Please RSVP to Fred Seelig at fred.seelig@ieee.org.

Thursday, September 28, 2006
◆ Image Information Mining: The Semantic Gap

Sponsor: Geoscience and Remote Sensing Society
Speakers: Dr. Mihai Datcu, German Aerospace Center, DLR, Oberpfaffenhofen, Germany; and Dr. Klaus Seidel, Swiss Federal Institute of Technology, ETH, Zurich, Switzerland
Time: 3:00 pm
Place: George Mason University (room and building TBD, please see www.ieee.org/escanner for updates)
More Info: See Diamond story, p. 4. A related presentation by Dr. Seidel and Dr. Datcu at NASA Goddard Space Flight Center on September 27 will be hosted by the Information Science and Technology Colloquium Series at NASA Goddard and cosponsored by the GRSS chapter. See http://ewh.ieee.org/r2/no_virginia/grss for more information.
Contact: James C. Tilton at james.c.tilton@nasa.gov.

Thursday, September 28, 2006
◆ Security Protocols and Their Impact on QoS in Tele-Medicine Communications

Sponsor: Engineering in Medicine and Biology Society
Cosponsors: Women in Engineering, Consultants' Network, Aerospace and Electronic Systems Society, Communications Society, Signal Processing Society, Computer Society, Oceanic Engineering Society
Speaker: Fari Schlake
Time: 7:00 pm
Place: Mitre Corporation, Building 1, 7525 Colshire Drive, McLean, VA
Directions: See www.mitre.org/about/locations/mitre1_map.html.
More Info: See Diamond story, p. 6. Refreshments will be provided.
Contact: Please RSVP to Debi Siering at siering@ieee.org.

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Tuesday, October 3, 2006

Washington Section Administrative Committee Meeting

Time: Dinner at 6:00 pm; meeting at 6:30 pm
Place: **Please note the new location:** 6711 Democracy Blvd., Bethesda, MD
More Info: All interested IEEE members are welcome to attend.
Contact: Debra Meale at 703-492-0047 or nca-admin@ieee.org. Please include the term IEEE in the subject line of your email.

Wednesday, October 11, 2006

Northern Virginia Section Administrative Committee Meeting

Time: 6:30 pm
Place: Wickers Cafe, Tysons Corner Holiday Inn, 1960 Chain Bridge Road, McLean, VA
Directions: From I-495 or I-66, take Route 267 West. Exit at Route 123 West (Chain Bridge Road). Turn right on International Drive, then left on Greensboro Drive. Look for the Holiday Inn entrance on the left. Free parking.
More Info: All interested IEEE members are invited to attend.
Contact: Debra Meale at 703-492-0047 or nca-admin@ieee.org. Please include the term IEEE in the subject line of your email.

Friday, October 13, 2006

Fall Power Fiesta

Sponsors: National Capital Area Consultants' Network, Women in Engineering, Graduates of the Last Decade, Power Engineering Society, Industry Applications Society, Life Members
Time: 5:00-8:00 pm
Place: Chevy's Fresh Mex Restaurant, Ballston Common Mall, 4238 Wilson Blvd., Arlington, VA
Directions: Ballston Common is two blocks south of Ballston Metro station (Orange line).
More Info: Networking, food and fun. Bring business cards.
Cost: Free for IEEE members and student members; $10 for guests.
Contact: Please RSVP to Monica Mallini at m.a.mallini@ieee.org.

October 14–15, 2006

MPAC-WIE Conference

Sponsors: IEEE Region 2; Baltimore, Washington, Northern Virginia and Southern New Jersey sections; Women in Engineering
Time: Saturday, 12 noon to 9 pm; Sunday, 9 am to 12 noon
Place: Embassy Suites Hotel, BWI Airport
More Info: See www.ieee.org/escanner.
Contact: Danielle Obuchon at dobuchon@gmail.com.

IEEE-USA Awards

Three local members have been recognized with IEEE-USA Citation of Honor awards:

Clifford Lau, for educating congressional staff about technology issues in legislation through the Congressional Research and Development Caucus.

Thomas F. Rogers, for contributions to the IEEE-USA Committee on Transportation and Aerospace Technology, and for implementing IEEE-USA's federal advocacy effort in space and aerospace policy.

Martin M. Sokoloski, for long-term efforts on behalf of IEEE-USA, and for development of the Congressional Research and Development Caucus.

DIAMOND STORIES

Tuesday, September 12, 2006

Design and Performance of Microwave and Millimeter-wave High Efficiency Power Amplifiers

Dr. James J. Komiak, BAE Systems, will describe solid-state power amplifiers covering L-band through W-band including state-of-the-art benchmarks. The principles of operation, device and circuit structures and operating characteristics will be addressed. The device technologies include Si BJT, MESFET, HBT, PHEMT, InP, MHEMT, and Wide Bandgap (SiC, GaN).

Dr. Komiak received his Ph.D. in electrical engineering from Cornell University in 1978. His Ph.D. research was directed towards a novel broadband matching technique for arbitrary loads using measured data directly, the "Real Frequency Technique."

He is an engineering/scientific fellow in the Microwave Electronics Group at BAE Systems. His current activities are in MMIC, module, and subsystem design for EW, communication, and radar system applications. Principally known for his work in power, Dr. Komiak has designed over 100 MMICs achieving state of the art results. Prior to consolidation at Sanders and the subsequent sale to BAE Systems, he was with the Lockheed Martin/Martin Marietta/General Electric Electronics Laboratory.

Dr. Komiak became an IEEE Fellow in 2005 for contributions to "monolithic microwave integrated circuits, high power amplifiers, and transmit/receive modules."

Tuesday, September 26, 2006

The Essence of a Theory for Wireless Networking

This talk will describe the extension of conventional theories on wireline networks to those on wireless networks. Essential aspects of wireless networking will be reviewed, including interaction between physical layers and upper layers, need for energy efficiency, graph models and cross-layer dependencies. It will also identify major issues and technical challenges, as well as new concepts and promising techniques.

Anthony Ephremides holds the Cynthia Kim Eminent Professorship Chair of Information Technology at the University of Maryland. He is a founding member of Institute for Systems Research at UM, and a member and former co-director of Maryland Hybrid Networks Center (HyNET). He received his Ph.D. from Princeton University in 1971.

Dr. Ephremides was president of the IEEE Information Theory Society in 1987 and served on the IEEE Board of Directors in 1989 and 1990. He has been general chair and technical program chair of major conferences including IEEE Infocom 1999 and ACM Mobihoc 2003. He also has served on the editorial board of numerous journals. His visiting positions include those at MIT, UC Berkeley and ETH Zurich. Dr. Ephremides has received numerous awards, including the first ACM Achievement Award for Contributions to Wireless Networking in 1996. He is the author of hundreds of papers, conference presentations and patents.

Thursday, September 28, 2006

Image Information Mining: The Semantic Gap

The widespread availability of high resolution Earth Observation (EO) imagery gives rise to volumes of data, but also brings orders of magnitude of image detail and enormously increased information content. Heterogeneous data supporting the interpretation of EO imagery, e.g., multimedia, scientific and engineering measurements, is also continuously generated and stored. However, communicating the information content of such data to people for use in practical applications is still limited by current data processing concepts and technologies.

The speakers will explore novel methods for making inferences using EO imagery by objectively and systematically identifying specified characteristics of images and implementing these algorithms in a new concept for knowledge-driven image information mining and scene understanding. The concept enables the communication of information from a very large image repository of data to users. The communication is at a semantic level of representation and is adapted to the user's conjecture by storing data in form of text that has implicit meaning (i.e., semantic significance).

Novel theoretical concepts and collaborative methods will be presented for:

- Extraction and exploration of the content of large volumes of high resolution images.
- Establishing the link between the user needs and knowledge and the information content of images.
- Communicating at a high semantic abstraction between heterogeneous sources of information and users with a very broad range of interests.
- Accessing intelligently and effectively the information content in large EO data repositories.
- Improved exploration and understanding of Earth structures and processes.
- Increasing the accessibility and utility of EO data.

The presentation provides a new perspective on methods for information extraction, sensor and information fusion, machine learning, understanding of user conjecture, and related supporting

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Candidates for Region 2 Delegate-Elect

The following individuals are candidates for Region 2 (Eastern USA) Delegate-Elect/ Director-Elect, 2007-2008 and thus for Region Delegate/Director, 2009-2010, Region 2:

Amarjeet S. Basra, P.E.
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(Nominated by Region 2)

I was educated at Panjab University, London University, Howard University (BSEE 1967), Marquette University (MSEE 1973), and registered as a Professional Engineer (Wisconsin-1978, Virginia-2001.) I joined Allis-Chalmers Corporation in Washington, D.C. in 1963 as Assistant Engineer, LaCrosse Boiling Water Reactor Project, and moved to Wisconsin in 1967 as Hydrogenerator Development Engineer and progressed as Design Engineer, EHV & Large Power Transformers, Senior Engineer/Section Leader, Cost Estimating & Manufacturing Planning, and Senior Project Estimator, Cement & Mining Systems Division. In 1977, I joined Foster Wheeler Corporation in Livingston, New Jersey in the Process Plants Division, and worked in Korea supervising the construction of KIPCO (Korea Iran Petroleum Company) Oil Refinery. I owned and operated an Electroplating Plant in New Jersey (1982-95). During 1996-97, I worked at the Plan Source Consulting Engineers, Manassas, Virginia. Since 1998, I have been with the Fairfax County Facilities Management Department, currently as Chief Electrical Engineer.

IEEE Activities – (S'66-M'71-SM'03-LS'05) ***Committee/Board:*** Admission and Advancement Committee Member, 2005. ***Region:*** Eastern USA - Region 2 Assistant, 2006; Pre-College Education Committee, Region 2 Representative, 2006. ***Sections:*** Northern Virginia Section: Nominations and Appointments Chair, 2005; Professional Activities Committee Chair, 2005-06; Awards and Recognition Committee Chair, 2005; Educational Activities Committee Chair, 2002, 2005; Section Chair, 2004; Section Vice Chair, 2003; Science Fair Judge, 2002-06; Student Activities Committee Chair, 2002-03, 2006; Director, 2001-02; Section Chair-Elect, 2003; Past Section Chair, 2005; PACE Chair, 2005-06; Director, 2006; Milwaukee Section: Program Chair, 1972-73; Publicity Chair, 1973-75; Newsletter Editor, 1973-77; Director, 1975-77; Science Fair Judge, 1977. ***Chapters:*** Life Member Affinity Group Chair, 2006. ***Societies:*** Power Engineering Society, Washington/Northern Virginia Chapter Chair, 2002-03; Industry Applications Society, Washington/Northern Virginia Chapter Chair, 2004-05. ***Conference:*** Sections Congress 2003, Alternate Delegate. ***Awards:*** RAB Achievement Award, 2005; Northern Virginia Section Volunteer of the Year, 2003.

Statement – I am honored to be nominated as one of the two candidates. If elected, I shall visit the different sections (33,000+ members) regularly and speak and listen at chapter, affinity group, and

AMARJEET S. BASRA, P.E.
continues on page 6

William P. Walsh, Jr.
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Basic Commerce & Industries, Inc.
Egg Harbor Township, NJ
http://home.comcast.net/~BillWalshR2

(Nominated by Region 2)

A native of Philadelphia, Bill attended Drexel University, earning a BSEE degree. Graduate work focused on systems engineering. Since 1996, Bill has been a Systems Engineer/Program Manager for BCI, Inc., with responsibilities leading projects for FAA and DHS customers. Projects focus on development and implementation of security system architectures.

Bill has been actively involved in IEEE since he was a student in 1980, and was elevated to Senior Member in 2003. As Section Chair in Southern New Jersey, Bill led the effort to promote the Section Awards Banquet, which continues to be successful every year.

Bill has been married to Susanne for 22 years, and they have two sons. When not performing his engineering duties, he can usually be found umpiring baseball, working on his house projects or pursuing his musical activities, which include playing saxophone in several bands, including performing with the Atlantic Pops Community Band.

IEEE Activities – (S'80-M'81-SM'03) ***Committees/ Boards:*** RAB Liaison to Standards Association, 2005-06; IEEE-USA PACE Committee, Region 2 Representative, 2005-06; RAB Membership Task Force Subcommittee, Member - Industry Relations, 2005; RAB Membership Development Committee, Region 2 Representative, 2003-04; RAB Industry Relations Committee, Member, 2002-04. ***Region:*** Region 2: Professional Activities Coordinator, 2005-06; Membership Development Chair, 2003-04; Industry Relations Chair, 2001-02. ***Section:*** Southern New Jersey Section: Executive Committee Member, 2001-06; Section Chair, 1998-2000; PACE Chair, 2000; Treasurer, 1997-98; Newsletter Editor, 1997-2000. ***Chapter:*** Southern New Jersey Chapter, Computer Society, Chapter Chair, 2000-01. ***Conferences:*** IEEE-USA Leadership Workshop, Tucson, AZ, Region 2 Coordinator, 2005; IEEE-USA Leadership Workshop, St. Louis, MO, Region 2 Coordinator, 2006.

Statement – It is an honor to be a candidate for Delegate-Elect/Director-Elect in Region 2. Since 1999, I have been active in various Region activities, specifically Industry Relations, Membership, and Professional Activities. As Director, I would use my experience and understanding of these related topics to provide a practical direction as we develop relationships designed to improve member benefits and address education at all levels, with the industry of our Eastern US Region.

Additionally, I would establish Region-wide professional and technical workshops that would attract

WILLIAM P. WALSH, JR.
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IEEE Mentoring Program

In July, IEEE introduced an online program to help establish mentoring partnerships between IEEE members. By volunteering as a mentor, individuals use their career and life experiences to help other IEEE members in their professional development. As a mentee, you lead your partnership by selecting your mentoring partner from among those who have volunteered to serve in this capacity.

Participation in the program is open to all IEEE members above the grade of Student Member. If you are interested, please go to http://www.ieee.org/mentoring for information on the program, the roles and responsibilities of each mentoring partner, and time and effort commitments.

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DIAMOND STORIES

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technologies, e.g. semantic image indexing, categories and ontology generation, etc. The presentation will include examples and online demos using a broad variety of data.

Mihai Datcu received the M.S. and Ph.D. degrees in electronics and telecommunications from the University "Politechnica" of Bucharest (UPB), Romania, in 1978 and 1986. In 1999, he received the title "Habilitation à diriger des recherches" from Université Louis Pasteur, Strasbourg, France. He has held a professorship in electronics and telecommunications with UPB since 1981. Since 1993, he has been a scientist with the German Aerospace Center (DLR), Oberpfaffenhofen. He is developing algorithms for model based information retrieval from high complexity signals and methods for scene understanding from synthetic aperture radar (SAR) and interferometric SAR data.

Currently, Dr. Datcu is senior scientist and image analysis research group leader with the Remote Sensing Technology Institute (IMF) of DLR, coordinator of the CNES-DLR-ENST Competence Centre on Information Extraction and Image Understanding for Earth Observation, and a professor at ENST Paris.

Klaus Seidel received his B.S. degree in experimental physics in 1965 and the Ph.D. degree in 1971, both from the Swiss Federal Institute of Technology (ETHZ). He was with the Computer Vision Lab at ETHZ and head of the remote sensing group until 2002. Beginning in 1987, Dr. Seidel was a Swiss Delegate and Expert in various working groups of the European Space Agency (ESA) and at the same time functioning as the National Point of Contact for Switzerland.

Dr. Seidel is a consultant for ESA projects specialized in image information mining related to remote sensing archives. He has also taught courses in digital processing of satellite images and has published several papers concerning snow cover monitoring, geometric correction and multispectral analysis of satellite images, and remote sensing image archiving. Recently, he published a book, *Remote Sensing in Snow Hydrology*, with J. Martinec.

AMARJEET S. BASRA, P.E.

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student branch meetings. During my 2003-05 tenure as elected leader of Northern Virginia Section (6,200+ members) I re-established Joint Washington/Northern Virginia Chapters of Power Engineering and Industry Application Societies. I chartered the first Section Student Club in Region 2 as a pilot project. Two additional clubs have since been chartered.

As Region 2 Delegate-Elect/Director-Elect I shall devote my time and energy towards accomplishing the following goals:

- Revitalize growth in dues paying membership through improved service delivery.
- Identify supplemental income streams other than dues assessment.
- Improve relationship between local sections and their student branches for increasing retention of graduating student members.
- Increase value to our members by providing more activities that assist in preparation for Professional Licensing.
- Expand IEEE Student Clubs at the Pre-University level for capturing students studying math and science entering into Engineering and Technology programs.

WILLIAM P. WALSH, JR.

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inter-Section participation. Objectives include:

- Exposing a broader range of IEEE professional and technical resources to our Sections,
- Getting more members active in both the Sections and the Region,
- Improving and strengthening personnel networking,
- Developing increased recognition of Section leaders and volunteers.

While maintaining a healthy financial picture and solid communications with our Sections, I feel that with my experience as an effective engineer and manager, I am best qualified to represent the Region, its Sections and all of its members on the national and international levels of IEEE.

Thursday, September 28, 2006

Security Protocols and Their Impact on QoS in Tele-Medicine Communications

Sensitive tele-medicine communications claim high demand on network security, reliability and efficiency. Regardless of the type of communications, whether real-time remote operations or regular transfer of patients' privacy sensitive information, the network must provide the required reliability. Different security mechanisms may degrade the guaranteed Quality of Service (QoS) through additional delays, error propagations and throughput limitations. This presentation provides insight and analysis into this problem as result of research work done to overcome these negative influences. As an example solution, a new adaptive security protocol for broadband ATM networks – the preferred network for broadband communications in the existing hybrid landscape – is introduced. It provides the simultaneous capability of implementing required security services, while still offering the user-requested QoS parameters during a broadband connection. This way, only security mechanisms are selected, which fit into the QoS range requested. The communication stays safe and uninterrupted. The necessity for the implementation of these protocols in the modern tele-medicine communications will be emphasized through the analysis of a real-life and presently in-use example of a medical network. The presentation will also include a brief demonstration of a developed simulation software to illustrate the proposed protocol.

Fari Schlake is the president and co-founder of Stravigant, an innovation management and technical consulting firm. She has worked with and for companies like CACI Federal, Lockheed Martin, IBM, Loral Federal, Bell Atlantic and MCI (now Verizon) in the U.S. and Siemens AG in Germany.

She has a B.S. in electrical engineering in telecommunications from the Darmstadt University of Applied Sciences. She earned her M.S. in electrical engineering internationally, in combined studies at the George Washington University, University of Duisburg and University of Siegen. Currently at the late stage of her Ph.D. research work, she has finished her dissertation, "Adaptive Security Protocols in Broadband Networks."

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Sensors, Mesh, Ad Hoc Networks to be Discussed at SECON 2006

By Fred Bauer
SECON Chair

IEEE SECON 2006, the Third IEEE International Conference on Sensors, Mesh and Ad Hoc Communications and Networks, will be held at the Hyatt Regency in Reston, Virginia from September 25 to 28.

The conference, which is sponsored by the IEEE Communications Society (www.comsoc.org) and technically co-sponsored by the Armed Forces Communications and Electronics Association (www.afcea.org), will include two workshops, a tutorial, a poster session, a demo session, three panel sessions, a keynote talk and more than 70 technical papers.

SECON provides a unique forum to exchange ideas, techniques and applications, discuss best practices, raise awareness, and share experiences among researchers, practitioners, standard developers and policy makers. The conference grew out of IEEE InfoCom (www.ieee-infocom.org) in 2004, creating an event that focused on the important and exciting topics of sensor, mesh and ad hoc communications and networks.

The technical program consists of papers presenting research that addresses the communications, networking, applications, systems and algorithmic aspects of ad hoc, mesh and sensor networks, as well as practical deployment and implementation experiences. The conference will also include poster and demonstration sessions that will provide a forum for the presentation and discussion of works in progress, industry demonstrations of new applications and techniques, practical implementations, industrial and commercial developments, research test beds and demonstrations, recent research and implementation results, and upcoming research challenges. To engage participants in discussions of practical issues in deploying sensor, mesh and ad hoc networks, several panel sessions will be led by experts from industry and academia.

In addition to the conference program, SECON will host the following two workshops: the Second IEEE Workshop on Wireless Mesh Networks and the First IEEE Workshop on Networking Technologies for Software Defined Radio Networks. A tutorial, "802.11s: Wireless Local Area Mesh Networking Standard," will also be offered.

The conference is organized to provide time for collegiality and continuity in the discussions of the various topics among participants from the industrial, governmental and academic sectors. We hope you will join us for this exciting program.

For more information on the conference, including online hotel and conference registration, please visit www.ieee-secon.org/2006.

Senior Members

Congratulations to the following new Senior Members:

Chagaan Baatar (NV)
Thomas Bronez (NV)
Robert Carritte (NV)
Bryan Copas (NV)
Mary Copas (NV)
Liping Di (W)
Philip Garrant (NV)
Roger Hardwicke (W)
Cyrus John (NV)
Bin Li (NV)
David Mazel (W)
M. Pehosh (NV)
Harold Rice (NV)
William J. Roberts (W)
Mohammed Sarhan (NV)
Martin Schulman (NV)
Zareh Soghomonian (NV)
Ludong Wang (W)
Hongbing Zhang (NV)

Applications initiated at the Spring Career Festival are still being processed by IEEE.

If you are interested in becoming a Senior Member, please consult www.ieee.org/seniormember for qualification requirements. For help with references, contact Michael Cardinale at cardinal@ieee.org for Northern Virginia (NV) Section members, or Howard Needham at howardn@ieee.org for Washington (W) Section members.

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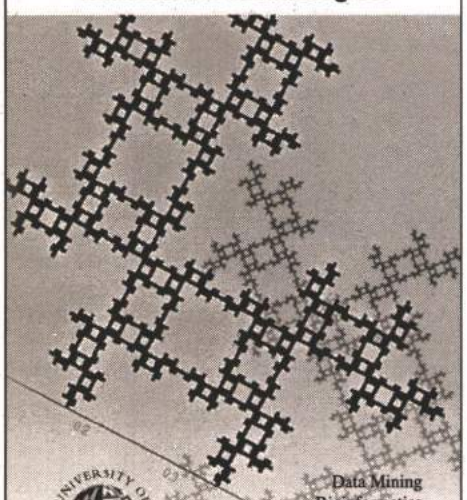

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IEEE Members Have Opportunity to Serve as Science Fair Judges

By Paul Hazan

In the 2005-06 academic year, IEEE was a major contributor to the success of the Washington Academy of Sciences "STARS" (Science and Technology Aptitude Recognition for Schools) youth-in-science program.

IEEE is one of the largest of the 60 Affiliates of the WAS. Not only did we provide a grant for student awards, but IEEE importantly also supplied many of the professionals to evaluate the scientific and technical projects by the over 1400 students who participated in the eight major STARS events.

The program included participation in senior high school science fairs (e.g. Eleanor Roosevelt H.S. and the Washington Math, Science, and Technology H.S.), as well as science events at elementary schools, (e.g. Burning Tree in Maryland and St. Charles in Arlington). It also included judging more than 80 outstanding mentored student projects for the Montgomery Blair Magnet Research Convention. Several of these students made the semifinal list in the Intel National Science Competition.

In the 2006-07 school year, we plan to expand our activities to include a major High School Science Expo. We are allocating a large number of awards (cash prizes, challenge cups, plaques, certificates, etc.) to secondary school students as well as recognizing outstanding teachers. Award winning student projects will also be recognized in the Washington Academy of Sciences Journal and website.

Our biggest asset is your expertise and dedication and that of your fellow professionals. I am writing to offer you the opportunity to participate as a judge in a school Science Fair. You will not need any special preparation and everything you need will be provided at the school.

Typically this will involve about a four-hour commitment of your time at a participating school sometime in the December to April time frame. The number of schools and students benefiting from the STARS program depends directly on your commitment to participate.

If you are interested, please send a one-line e-mail to pmhazan@comcast.net saying: "I would like to be included in the WAS Judges' Roster" and include your name, e-mail, affiliation, address, and telephone number.

I believe you would find your interaction with fellow judges, the schools, and those enthusiastic students to be a worthwhile, rewarding, and fun experience and look forward to your joining us in this exciting 2007 educational initiative.

Paul Hazan is vice president for the WAS Junior Academy.

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Leonard E. Miller, NIST Engineer

Dr. Leonard E. Miller, 64, of the Wireless Communication Technologies Group at the National Institute of Standards and Technology (NIST) died suddenly at work on June 7. He had been at NIST since 2000. From 1978 to 2000, he was with J. S. Lee Associates, Inc. His work there centered around design and performance analysis of wireless communication systems and electronic warfare technologies.

From 1964 to 1978, Dr. Miller was with the White Oak Laboratory of the Naval Surface Weapons Center, where he worked on sonar and calculated magnetic fields due to ship's hulls.

He received B.S., M.S., and Ph.D. degrees in electrical engineering from Rensselaer Polytechnic Institute, Purdue University, and The Catholic University of America, respectively.

Dr. Miller was active as a Senior Member of the IEEE. While at NIST, he served as secretary of the IEEE 802.15 Task Group 3q, developing a standard for ultra wideband communications. He co-edited an IEEE *Communications Magazine* special section on public safety communications.

His recent assignments at NIST involved technology for first responders, a low-cost tracker that would enable first responders to navigate inside buildings and have their positions known to commanders, and a multihop radio communication scheme for public safety applications.

According to Nader Moayeri, manager of Wireless Communication Technologies Group at NIST, Dr. Miller was a diligent, conscientious engineer and scientist who was exceptionally kind and caring about others. He was a representative of the Combined Federal Campaign.

Dr. Miller is survived by his wife Frances of Kensington, Maryland, four children and one grandchild.

UPGRADES

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ed. We may be slow at the start, but we catch on quickly. Came the dawn and I had ten members to recommend. After some email conversations, I got my candidates submitted to IEEE's Senior Member site. All the other volunteers did the same thing, so we had a bunch of upgrades.

Every time I recommended someone, I urged them to get involved in IEEE activities and do something besides reading the magazines and forgetting that volunteers are what keep us running.

Helpers at this event included Marc Apter, Amarjeet Basra, Sai Chiang, Rick Cunningham, Mark Pittelkau, Saifur Rahman, Debi Siering, Yonael Teklu and Tom Tullia.

I never did get my free lunch. Maybe next time.

Wally Lee is an IEEE Senior Member and is active in the National Capital Area Consultants' Network affinity group.

Northern Virginia Section Ballot

(for 2007 Administrative Committee)

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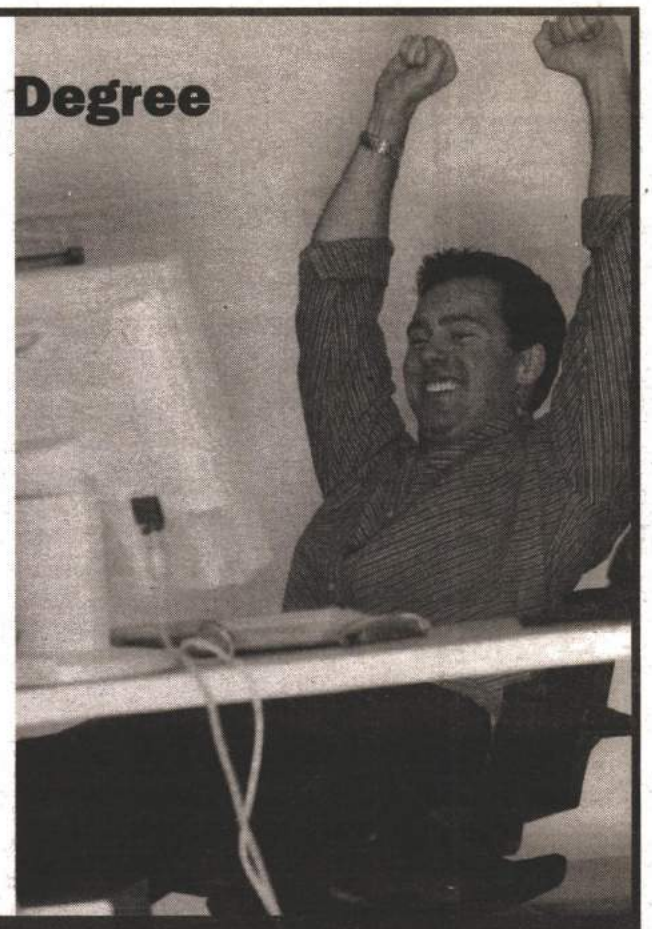

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