Springtime Events Focus on Resources, Research, Recognition

March 8: Leadership Training

Officer Orientation Builds Chapter Management Skills

Being a volunteer leader is challenging as well as rewarding. To help you get the job done, the National Capital Area Leadership Training on March 8 will provide a comprehensive overview of chapter management.

The half-day program offers tools, ideas and the experiences of veteran members to help you lead a successful chapter.

The session on planning, publicizing and conducting successful technical meetings is essential for new chapter officers. The techniques you need to run an orderly administrative meeting with Robert's Rules will be covered in an informative and entertaining format. Ideas for meetings and activities will be discussed as well as sources of funds.
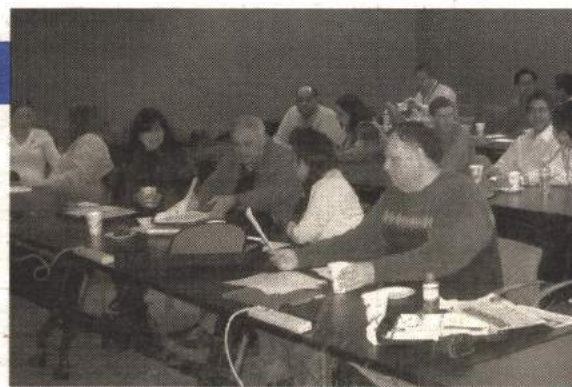
Tools for membership development such as SAMIEEE and e-Notice will also be explained.

Participants will have the opportunity to share ideas with other chapter officers, and to meet section and region leaders.

Every chapter and affinity group should send at least one officer. Student branch officers are encouraged to attend. The program is sponsored by the Northern Virginia and Washington Sections and open to all IEEE members.

Registration is free and a continental breakfast and lunch are included. The workshop will be held at the Mitre facility in McLean, Virginia, and will conclude in the early afternoon.

Preregistration is required for food and materials planning. For details, see the Calendar listing, p. 3.

Leadership Training—*New IEEE officers and volunteers learn from those with more experience. (Photo by Doug Holly, 2007)*

Workshop Topics

- Officer Roles & Responsibilities
- Financial Reporting
- Meeting Management and Robert's Rules
- Running an Effective Chapter
- *Scanner* & eScanner Publicity
- Membership Development
- Student Branches and Pre-College Activities
- Region 2 & IEEE Overview

March 29-30: Capital Science 2008

CapSci08 Brings Together Area's Engineers, Scientists

Members of the Washington and Northern Virginia sections will present their engineering work and research results at Capital Science 2008, the biennial conference of the Washington Academy of Sciences (WAS) on March 29-30.

CapSci08 is being hosted by the National Science Foundation (NSF) at their Arlington facility. All engineers and scientists are welcome to attend.

The IEEE sessions will take place on Saturday, May 29, and will open with a keynote talk by NSF's Frederika Darema on *Dynamic Data Driven Applications Systems: A Transformative Paradigm.* Topics for the IEEE morning sessions include the U.S. National Laboratory on the International Space Station; a pilot program to share information in support of humanitarian assistance and disaster relief; wireless access for vehicular environments; safety-critical real-time embedded software development; and a digital detective for electronic image forensics.

Topics for the IEEE afternoon sessions include high performance silicon nanowire field effect transistors and their application to non-volatile memory; the search for underlying patterns in microsatellite expansion; synthesis of FPGA-based fast Fourier transform (FFT) implementations;

Online Registration

Go to the conference website at *http://washacadsci.org/capsci08/Index.htm* for online registration.

May 10: Technology for the Golden Years

Symposium Looks at Robotics Technology to Help the Elderly Live Independently

The local chapter of the Engineering in Medicine and Biology Society, with the assistance of the Washington and Northern Virginia sections, is hosting a symposium about using robotics and sensor technologies to help the elderly live independently.

"Technology for the Golden Years: Leading an Independent Life in the 21st Century" will be held Saturday, May 10 from 9:00 a.m. to 4:00 p.m. at the Jeong H. Kim Engineering Building, Room 1110, on the University of Maryland College Park campus.

The cost is $25 for IEEE members; $10 for IEEE student members, and $50 for non-members. Life Members may attend free.

Speakers include Dr. Henrik Christensen, Director of Robotics and Intelligent Machines at the Georgia Institute of Technology's College of Computing; and Cindy Crump, President and CEO of AFrame Digital.

Dr. Christensen's presentation, Robotics as a Technology to Elderly Assistance, covers a number of different robot technologies to assist older people in their daily lives, with an emphasis on present methods and how current research will lead to sustainable technologies that allow people to maintain their autonomy as they grow old. A variety of examples from basic assis-

April 12: IEEE Awards Banquet

Technology and National Security on Banquet Keynote Speaker's Plate

The keynote address at the IEEE National Capital Area Awards Banquet on Saturday, April 12 will be delivered by Dr. Linton Wells II, a Distinguished Research Fellow and the Force Transformation Chair at the National Defense University's Center for Technology and National Security Policy.

The awards banquet is being hosted this year by the Washington Section at the Grand Hyatt Washington. (See Calendar, p. 4, and reservation form, p. 8.)

The newly-elected 2008 IEEE Fellows who are members of the Northern Virginia and Washington sections will be recognized at the banquet. Volunteers who made significant contributions to the success of the sections, chapters and affinity groups during 2007 will be thanked, and high school science fair winners will also receive awards.

Dr. Wells will discuss some of the factors that may influence national security policy in the coming years.

Before joining NDU, Dr. Wells was the Principal Deputy Assistant Secretary of Defense (Networks and Information Integration), and from 2004 to 2005, he served as the Acting Assistant Secretary and Chief Information Offi-

Get Involved!

The symposium needs:

- Volunteers to help plan or staff the event
- College students with thesis projects to demonstrate

If you want to participate, please contact Debi Siering at *siering@ieee.org.*

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*Including Washington, Northern Virginia, and Baltimore Sections and Annapolis Subsection

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*.

EDITORIAL POLICIES AND PROCEDURES

Calendar Announcements
   Please submit calendar items in the format used in the Calendar of Events. You can send email to *ncac-scanner@ieee.org*. Events must have an IEEE or affiliate sponsor.
   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.

Articles
   Other contributions, such as reports on chapter events and other member activities, are most welcome. Please submit articles to the managing editor at *ncac-scanner@ieee.org*.

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 observed 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.

May–June issue deadline: April 1, 2008

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Women in Engineering (W/NV)
Ms. Katie Schaffold
katie.schaffold@yahoo.com
www.ieee.org/wie_wash

calendar *of* events

Tuesday, March 4, 2008

Washington Section Administrative Committee Meeting

Time: 6:45 pm

Place: American Association for the Advancement of Science (AAAS), 1200 New York Avenue NW, Washington, DC

Directions: Use the 12th Street entrance. The AAAS building is one block from the Metro Center station (Red, Orange and Blue lines) and approx. six blocks from the Gallery Place Metro station (Red, Yellow and Green lines).

Street parking is free after 6:30 pm (no parking 4:00-6:30 pm). There is a pay parking lot at the intersection of 9th St. and New York Ave., and an underground parking garage at 14th St. and New York Ave. See map at *www.aaas.org/dcwest.pdf.*

More Info: All interested IEEE members are welcome.

Contact: Tim Weil at *trweil@ieee.org* or 301-452-3641.

Saturday, March 8, 2008

National Capital Area Leadership Training

Time: 8:30 am to 1:30 pm

Place: Mitre Corporation, Building 2, Conference Room 1N100, 7515 Colshire Drive, McLean, VA

Directions: See *www.mitre.org/about/locations/mitre2_map.html.*

More Info: See story, p. 1.

Cost: Free

Contact: Please register by Tuesday, March 4 by sending an email to Elsie Grant at *ncac-scanner@ieee.org* with "IEEE Leadership Registration" in the subject line.

Tuesday, March 11, 2008

Daily Main Line Steam Operation

Sponsors: Vehicular Technology Society, Land Transportation Committee; American Society of Mechanical Engineers

Speaker: Karl Berger

Time: 11:30 am

Place: American Public Transportation Assoc., Conference Room, 11th Floor, 1666 K Street NW, Washington, DC

Directions: Take the Metro to Farragut North station (Red Line, use K Street exit) or Farragut West station (Orange & Blue lines, use 17th Street exit).

More Info: All interested persons are invited.

Cost: $15 cash at the door for lunch.

Contact: Please make reservations by 4:00 pm on Friday, March 7 by contacting Ken Briers at *ken.briers@parsons.com* or 202-775-3397, or Karl Berger at *karl.berger@dcm-va.com* or 703-803-7917.

Wednesday, March 12, 2008

Northern Virginia Section Administrative Committee Meeting

Time: 6:30 pm

Place: Olive Garden Restaurant, 8133 Leesburg Pike (Tysons Corner), Vienna, VA

Directions: From I-395 (Beltway), take I-66 West to Rte. 267 (Dulles Toll Rd.). Take the Toll Rd. to Exit 16 (Rte. 7, Leesburg Pike). Turn left to proceed East on Rte. 7. Turn right onto Gallows Rd. at the restaurant.

More Info: All interested IEEE members are invited to attend.

Contact: Chuck Baldi at *cbaldi@ieee.org* or 703-675-0678.

Tuesday, March 25, 2008

◆ Security Clearances: The Straight Scoop

Sponsor: National Capital Area Consultants' Network

Speaker: Dr. Jon Roberts, Roberts Mardula & Wertheim, LLC, Reston

Time: 6:00 pm

Place: Olive Garden Restaurant, 8133 Leesburg Pike (Tysons Corner), Vienna, VA

Directions: From I-395 (Beltway), take I-66 West to Rte. 267 (Dulles Toll Rd.). Take the Toll Rd. to Exit 16 (Rte. 7, Leesburg Pike). Turn left to proceed East on Rte. 7. Turn right onto Gallows Rd. at the restaurant.

More Info: The National Capital Area Technical Consortium (formerly the GSA Schedule Working Group) will give a brief status report. Dr. Roberts' presentation will follow the business meeting and dinner. See Diamond story, p. 4. Please bring a $50 check payable to "IEEE NCA-CN" for 2008 dues.

Cost: $25 cash for dinner.

Contact: Monica Mallini at *m.a.mallini@ieee.org.*

Saturday-Sunday, March 29-30, 2008

Capital Science 2008

Sponsor: Washington Academy of Sciences

Place: National Science Foundation, Conference Center, 4201 Wilson Blvd., Arlington, VA

Directions: NSF is one block south of the Ballston Metro station (Orange line), between Wilson Blvd. and Fairfax Drive. Parking is available at Ballston Common Mall for $1 a day on weekends.

More Info: See story, p. 1.

Cost: $50 for IEEE members, WAS members & affiliates; $100 for non-members; free for students. Register online at *http://washacadsci.org/capsci08/Index.htm.*

Contact: Kiki Ikossi at *ikossi@ieee.org.*

Tuesday, April 1, 2008

Washington Section Administrative Committee Meeting

Time: 6:45 pm

Place: American Association for the Advancement of Science (AAAS), 1200 New York Avenue NW, Washington, DC

Directions: Use the 12th Street entrance. The AAAS building is one block from the Metro Center station (Red, Orange and Blue lines) and approx. six blocks from the Gallery Place Metro station (Red, Yellow and Green lines).

Street parking is free after 6:30 pm (no parking 4:00-6:30 pm). There is a pay parking lot at the intersection of 9th St. and New York Ave., and an underground parking garage at 14th St. and New York Ave. See map at *www.aaas.org/dcwest.pdf.*

More Info: All interested IEEE members are welcome.

Contact: Tim Weil at *trweil@ieee.org* or 301-452-3641.

Friday-Sunday, April 4-6, 2008

Region 2 Student Activities Conference

Sponsor: IEEE Region 2

Place: Pennsylvania College of Technology, Williamsport, PA

More Info: The Saturday conference day consists of several competitions, including brownbag hardware, ethics, student paper, Micromouse and project showcase. The day also includes a leadership workshop, a career fair, and a keynote speaker and award ceremony. See *www.pct.edu/student_orgs/ieee/sac2008/index.asp.*

Contact: Student branches should contact Jerry Gibbon at *j.t.gibbon@ieee.org* for more information.

Tuesday, April 8, 2008

Bi-Level Passenger Coaches

Sponsors: Vehicular Technology Society, Land Transportation Committee; American Society of Mechanical Engineers

Speaker: Brian Scales

Time: 11:30 am

Place: American Public Transportation Assoc., Conference Room, 11th Floor, 1666 K Street NW, Washington, DC

Directions: Take the Metro to Farragut North station (Red Line, use K Street exit) or Farragut West station (Orange & Blue lines, use 17th Street exit).

More Info: All interested persons are invited.

Cost: $15 cash at the door for lunch.

Contact: Please make reservations by 4:00 pm on Friday, April 4 by contacting Ken Briers at *ken.briers@parsons.com* or 202-775-3397, or Karl Berger at *karl.berger@dcm-va.com* or 703-803-7917.

Wednesday, April 9, 2008

Northern Virginia Section Administrative Committee Meeting

Time: 6:30 pm

Place: Olive Garden Restaurant, 8133 Leesburg Pike (Tysons Corner), Vienna, VA

Directions: From I-395 (Beltway), take I-66 West to Rte. 267 (Dulles Toll Rd.). Take the Toll Rd. to Exit 16 (Rte. 7, Leesburg Pike). Turn left to proceed East on Rte. 7. Turn right onto Gallows Rd. at the restaurant.

More Info: All interested IEEE members are invited to attend.

Contact: Chuck Baldi at *cbaldi@ieee.org* or 703-675-0678.

Wednesday, April 9, 2008

Capitol College Graduate School Virtual Open House

Sponsor: Capitol College

Time: 7:00 pm

Place: Online

More Info: Capitol College is an IEEE Education Partner. Learn about its master's degree programs, meet faculty and staff, and experience the online classroom. For information about IEEE tuition discounts, see *www.capitol-college.edu/academicprograms/partnerships/ieee*.

Contact: RSVP required. Please send your name, email address, phone number and program of interest to Laura Broughton at *gradadmit@capitol-college.edu*.

Friday, April 11, 2008

◆ Particle Filtering Methodology in Signal Processing

Sponsor: Signal Processing Society, Washington Chapter

Speaker: Prof. Petar M. Djuric, Dept. of Electrical and Computer Engineering, SUNY Stony Brook

Time: 2:00 pm

Place: University of Maryland, Kim Engineering Building, Room 1110, College Park, MD

Directions: From I-495, exit at Route 1 South, proceed approx. 2 miles, turn right onto Campus Drive, then immediately turn right onto Paint Branch Drive and the Kim Engineering Building will be on the left (after a stop sign). Free parking after 4:00 pm in Lots T and XX. See *www.parking.umd.edu/themap*.

From the College Park Metro Station (Green line), take the free UM campus shuttle, get off at the first stop, walk back a hundred yards to Paint Branch Drive and look for the Kim Engineering Building on the left. See shuttle schedule at *www.transportation.umd.edu/routes/schedules/CollegeParkMetro.pdf*.

More Info: See Diamond story on this page. All are welcome to attend the lecture and reception that follows.

Contact: *teknight@umd.edu* or *washington.sps@ieee.org*.

Saturday, April 12, 2008

IEEE National Capital Area Awards Banquet

Sponsors: Northern Virginia and Washington Sections

Speaker: Dr. Linton Wells II, Center for Technology and National Security Policy, National Defense University

Time: Registration and reception at 6:30 pm; dinner at 7:30 pm; awards presentation at 8:30 pm

Place: Grand Hyatt Washington, 1000 H Street, NW, Washington, DC

Directions: The Grand Hyatt is at the corner of 11th and H Streets NW. There is an entrance to the hotel in the Metro Center station (Red, Orange, Blue lines). For driving directions, see *http://grandwashington.hyatt.com/hyatt/hotels/services/maps/index.jsp*.

More info: See story, p. 1.

Cost: $55 for members, $60 for non members, $25 for students. Corporate sponsorships are $1000 (full table) or $500 (half table) and include acknowledgement in the program and the *Scanner* post-event story.

Contact: Reservations are required by Friday, March 28. Please use the form on p. 8. For information about corporate sponsorships, please contact Kiki Ikossi at 703-960-0261 or *ikossi@ieee.org*.

Wednesday, April 30, 2008

Life Members Meeting

Sponsor: Life Members

Speaker: TBA

Time: 12:00 noon

Place: Dolley Madison Library, 1244 Oak Ridge Ave, McLean, VA

Directions: Take Exit 46 from the Beltway and proceed on Route 123 North to McLean, VA, about 2 miles. After crossing Old Dominion Dr., turn left at the next street, Ingleside Ave., and then left on Oak Ridge Ave. The library is on the left.

More Info: Refreshments will be served.

Contact: Amarjeet Basra at 703-324-2821 or *amarjeet.basra@ieee.org*.

diamond ◆ stories

Tuesday, March 25, 2008

◆ Security Clearances: The Straight Scoop

How does the security clearance process work?
How do you get a clearance?
What do they want to know?
What happens when things go wrong?

Security clearances are extremely important in the Washington area, where billions are spent on defense and homeland security efforts. However, there is a Catch-22 in that you need a clearance to get classified work, but you must have the work to apply for a clearance. This talk will discuss that problem and ways to deal with it, how the clearance process works, what investigators are looking for, various pitfalls and the factors you need know to get a shot at lucrative classified work.

Jon L. Roberts is the senior partner in Roberts Mardula & Wertheim, LLC of Reston, Virginia and managing director of its consulting arm, ROTECH, LLC. Dr. Roberts practices in security clearance law, patents, copyrights, trademarks and litigation related to these areas. He has consulted with Fortune 500 companies on their security clearance needs and has litigated numerous clearance cases for companies and individuals. He has been cleared at various levels for more than 30 years.

Dr. Roberts began his career as an aerial photographer and scientific advisor to the Intelligence and Reconnaissance Division at the Rome Air Development Center, Griffiss Air Force Base, N.Y. Dr. Roberts earned his law degree from George Washington University National Law Center in 1984, his Ph.D. in environmental and resource engineering from Syracuse University in 1979, his M.S. in analytical photogrammetry from Syracuse University in 1974, and his B.S. from the Rochester Institute of Technology in 1970.

Dr. Roberts has had extensive scientific and engineering experience as a senior staff scientist at General Electric and in a variety of research and research management positions in the federal government. He holds numerous U.S. and international patents for communications, health-related, homeland security, and piracy-thwarting inventions.

Friday, April 11, 2008

◆ Particle Filtering Methodology in Signal Processing

Particle filtering is a Monte Carlo-based methodology for sequential signal processing. It is designed for estimation of hidden processes that are dynamic and that can exhibit most severe nonlinearities. Also, it can be applied with equal ease to problems that involve any type of probability distribution. Therefore, it is not surprising that particle filtering has gained immense popularity.

In this talk, first the basics of particle filtering will be provided with description of its essential steps. Then some important topics of the theory will be addressed including Rao-Blackwellization, smoothing, and estimation of constant parameters. Finally, a presentation of most recent advances in the theory will be given. The talk will contain many signal processing examples which will aid in gaining valuable insights about the methodology.

Petar M. Djuric received his B.S. and M.S. degrees in electrical engineering from the University of Belgrade in 1981 and 1986, and his Ph.D. degree in electrical engineering from the University of Rhode Island in 1990. From 1981 to 1986 he was a research associate with the Institute of Nuclear Sciences, Vinca, Belgrade.

Since 1990 he has been with Stony Brook University, where he is a professor in the department of electrical and computer engineering. He works in the area of statistical signal processing, and his primary interests are in the theory of modeling, detection, estimation, and time series analysis and Monte Carlo-based methods for signal processing. He applies the theory to problems that arise in a wide variety of disciplines including wireless communications, sensor networks, medicine, and biology.

Dr. Djuric is an IEEE Fellow and a Distinguished Lecturer of the IEEE Signal Processing Society. In 2007, he received the Best Paper Award from the *IEEE Signal Processing Magazine*. He has served on numerous technical committees and editorial boards of journals.

MTT-S Sponsors Power Amplifier Contest

MTT-5, a committee of the IEEE Microwave Theory and Techniques Society (MTT-S), is sponsoring the fourth High Efficiency Power Amplifier Competition, which will take place at the MTT-S International Microwave Symposium (IMS 2008) in Atlanta in June.

This competition is open to all students and graduate students registered at an educational establishment. The competitors are required to design, construct, and measure a high efficiency power amplifier, at a frequency of their choice above 1 GHz but less than 20 GHz, and having an output power level of at least 5 watts, but less than 100 watts.

For more information about the contest rules, see *http://www.ims2008.org/publications/PA-POSTER08-RevA.pdf.*

The winner will be judged on the design that demonstrates the highest power added efficiency (PAE). The power amplifiers must be brought to IMS 2008 where they will be tested to verify their performance. A representative of the design group must be present at the testing to assist with the evaluation. Support for the testing is being provided by Agilent Technologies.

The winner will receive a prize of $1,000 and will be invited to submit a paper describing the design for the *IEEE Microwave Magazine.*

Contestants must inform the MTT-5 committee of their intention to compete in the contest by notifying Dr. Kiki Ikossi at *ikossi@ieee.org* before April 1. This notification should include information on the university or educational affiliation of the entry, and the power amplifier's approximate power level, dc voltage requirements and frequency of operation. Dr. Ikossi can also provide assistance in obtaining device samples.

EMBS Meeting—*Guest speaker and patent expert Dr. Matthew Latimer (center) is welcomed by (from left) Jeff Poston, Fari Schlake, Paul Otto and Debi Siering.*

Capitol College's IA Curriculum Meets Newest Federal Courseware Standard

Capitol College's Master of Science in information assurance (IA) curriculum has again been recognized for meeting a federal courseware standard.

The National Security Agency announced last year that Capitol College's IA curriculum not only meets all of the elements of the National Information Assurance Training Standard For Risk Analysts (CNSSI-4016, November 2005), but does so at the Advanced level. The achievement was officially recognized at an awards ceremony in Boston during The Colloquium for Information Systems Security Education.

Capitol College and the University of Tulsa are the only two institutions nationwide that meet the most advanced level of professional competencies specified in all six federal standards for information assurance curricula established by the Committee for National Security Systems (CNSS).

Capitol College is one of 86 institutions that meet at least two of the CNSS standards and have been designated as National Centers of Academic Excellence in Information Assurance Education (CAEIAEs) by NSA and the Department of Homeland Security.

The content of Capitol's graduate-level information assurance courses is "mapped," or matched, to the requirements of CNSSI/NSTISSI standards 4011, 4012, 4013A, 4014A, 4015 and 4016A, with the suffix A indicating mapping at the Advanced level for the three standards that include multiple levels. The standards specify the minimum course content for training of information systems security professionals (4011), senior systems managers (4012), system administrators (4013), information systems security officers (4014), systems certifiers (4015) and risk analysts (4016).

"Capitol College continues to offer a comprehensive IA curriculum that provides relevant knowledge and the practical skills that the federal IT profession requires," said Allan Berg, director of the college's Critical Infrastructures and Cyber Protection Center. "We are proud of this recognition of academic excellence and proud of our alumni who work at NSA, DoD, NASA and other organizations, public and private."

Information about Capitol's M.S. in information assurance, which is offered in a live online format, can be found at *www.capitol-college.edu/academicprograms/graduateprograms/msiae*, or at a virtual open house on April 9 (see Calendar, p. 4).

The college's Critical Infrastructures and Cyber Protection Center also offers exam preparation courses for federal IT professionals and others who need CISSP, Security+ or SSCP certification. See *www.capitol-college.edu/cicpc* for more information.

Capitol College is located in Laurel, Maryland.

EMBS Examines Biomedical Patent Issues

The Washington and Northern Virginia Chapter of the Engineering in Medicine and Biology Society held its fourth technical meeting of the year on November 8. The lecture, "Biomedical Intellectual Property (IP) Challenges for Small Business and Government" was presented by Dr. Matthew Latimer, a partner at Latimer, Mayberry & Matthews IP Law LLP.

Dr. Latimer began his illuminating talk with an introduction to what patents are, then discussed their impact on the biomedical community, and concluded with a look at future trends in the patent system.

Fundamentally, patents are a national legal right to exclude others from practicing an invention. This legal protection is a property asset which can be bought or sold, licensed, or used as a platform for new technologies and further patents.

However, for a patent to be effective, it must be enforced. Unfortunately, this enforcement must be weighed against the patent's potential revenue, because it can cost from two to five million dollars to sue for patent infringement.

In the biomedical community this problem is coupled with the need to get FDA approval before the patent expires.

Further, the biomedical field is currently crowded with patents—granted and pending, resulting in part from the ability to patent molecules such as enzymes without having to demonstrate their commercial value.

According to Dr. Latimer, the large number of patents has lead to an anti-applicant climate at the U.S. Patent Office resulting in a drop of the allowance rate and limits on claiming and application filings. However, the future trends of patent review by the public and the combining of the patent and FDA approval to maximize the effective patent term may help to improve this climate.

The meeting was cosponsored by the local chapters of Women in Engineering, the Antennas and Propagation Society, the Engineering Management Society and the Signal Processing Society (Northern Virginia chapter).

For more information, please contact Dr. Latimer at *matthew.latimer@latimerip.com.*

Judges Needed for Montgomery Blair's Senior Research Projects

To My IEEE Colleagues:

This is to invite you to join us on the Washington Academy of Sciences (WAS) judging team to evaluate the Senior Research Projects (SRP) at the Montgomery Blair Science Magnet School.

The event will take place on Monday, March 17, 2008 (8:15 to 11:45 a.m.) at the Montgomery Blair High School (51 University Blvd. East) in Silver Spring, MD right off the I-495 Beltway. Directions will be emailed to participating judges.

This is a major science event at one of the top science Magnet High Schools. The WAS will be judging all the physics and engineering projects and will be offering cash prizes and awards.

The SRP students are mentored by professional researchers and several regularly make the semi-finals of the annual INTEL National Competition. Each student will provide a 15-minute PowerPoint presentation. This will be followed by a Q and A period.

If you will be able to participate as a judge, please confirm with a one-line email to me at *pmhazan@comcast.net* stating, "I will be able to join the WAS team at Montgomery Blair HS on March 17" and include your name, email address, affiliation, and telephone number.

I will then send you directions to the school, and some more information on the Magnet Research Convention. You do NOT need any special preparation. We will go over the evaluation criteria on site.

I hope you will be able to join us, and look forward to an interesting and productive session at this exceptional Science Magnet High School event.

Please do not hesitate to contact me if you have any question or if I can be of assistance.

Sincerely,

Paul Hazan
Vice President for Junior Academy Affairs
Washington Academy of Sciences

A Year in Reflection: Members Strengthen Washington Section's Legacy

By Kiki Ikossi, Ph.D.
Past Chair, Washington Section

It was an honor to serve as chair of the IEEE Washington Section during its 105th year. Our section is one of the most historic and as such, with our professional activities comes a great responsibility for continuing a great heritage.

Our 2007 goals focused on the areas of professional activities, recruiting and diversity. I am very pleased with what we have accomplished and very grateful that we had an outstanding team of volunteers to help make 2007 a most creative and successful year.

Professional Activities

The Washington and the Northern Virginia sections have a long track record of successful collaboration. Today, the capital area has a total of 33 active IEEE technical society chapters and affinity groups that hold periodic meetings free and open to the public. These meetings provide a unique opportunity to be informed of the latest developments in all areas of electrical engineering and they serve as a forum for our members' continuing education.

The Washington Section is the most active participant in the IEEE Professional Activities Committees for Engineers (PACE) program in Region 2. As such I would like to thank the IEEE Region 2 team led by John Dentler for all the help our section received. Many thanks also go to our Washington Section PACE chair Haik Biglari, who was instrumental in securing funding from PACE to support our programs and help our member activities in a multitude of ways.

One needs only to take a look at our bimonthly newsletter, the *Scanner*, to see the extent of activities of our section. Our chapters reported a total of 141 meetings in 2007, including invited talks with IEEE leaders and top researchers presenting their latest work.

New & Revitalized Chapters

Our section encourages the formation of new society chapters. In 2007 Raj Madhavan and Charles Kim served as the first chairs of the Robotics and Automation Society chapter and the Education Society chapter, respectively. In addition, Monica Taysing-Lara and Dev Raheja stepped in as chairs and with great enthusiasm rejuvenated the dormant Antennas and Propagation Society chapter and the Reliability Society chapter, respectively. Also, Ron Ticker is working to form an Instrument and Measurements Society chapter.

Finally, the tireless Amarjeet Basra, assisted by Debi Siering and Janet Lathan, founded the first two IEEE High School Clubs in our section, at McKinley Technology High School and Theodore Roosevelt Senior High School, both in the District of Columbia.

The Washington Section Executive Committee worked throughout the year to promote professional develop-

105 Years Later—*2007 Chair Kiki Ikossi presents the IEEE Washington Section's historic gavel to 2008 Chair Gerard Christman at the January Administrative Committee Meeting. The gavel was used more than a century ago by Alexander Graham Bell, a founding leader of the society that became the Washington Section.*

ment, not only by making the meetings and technical presentations possible but also by helping our members receive recognition for their accomplishments. We continue to help our members upgrade their membership, and as of November, we had 645 Senior Members in our section, the highest in Region 2.

Workshops & Conferences

Many workshops and conferences were organized by our members last year. For example, in June we had the IEEE Magnetism in Nanotechnology & Electronics (IMAGINE) Conference, sponsored by the Magnetics Society and led by Zareh Soghomonian, and in August we had the Performance Metrics for Intelligent Systems (PerMIS'07) Workshop, sponsored by the Robotics and Automation Society and led by Raj Madhavan.

Doug Holly organized the officer training workshop in March, which introduced new officers to the chapter support services IEEE offers. We also collaborated with the Baltimore Section and participated in the first Teacher In-Service Program (TISP) Training Workshop in September, which focused on training IEEE volunteers to present technical subject matter to teachers in professional development settings.

In November, the Washington Section along with the Northern Virginia Section hosted the first IEEE-USA Innovation Forum. Ralph Wyndrum of the IEEE-USA Innovation Institute organized the full-day workshop with presentations from some of the most renowned innovators of our times.

In December, our section co-hosted the 50th anniversary of the Communications Society's Global Telecommunications Conference (IEEE GLOBECOM 2007). The well-attended conference was a huge success thanks to our local IEEE volunteers and officers who contributed their time and talent. The relentless Jerry Gibbon served as General Chair. Doug Holly and Tim Weil were two of the many volunteers from our section.

Finally, every two years the IEEE Washington Section helps the Washington Academy of Sciences organize the Capital Science (CapSci) conference. CapSci08, chaired by Peg Kay, is designed as a showcase of the latest developments in research and development in our region. The Washington Section with myself as its representative has been working throughout the year with representatives of all the scientific organizations in our area to make the conference possible. We look forward to a successful CapSci08 Conference on March 29-30 (see story, p. 1, and Calendar, p. 3).

Recruiting & Diversity

The Washington Section facilitates the recruitment of the next generation of scientists and engineers through individual mentoring and support of students' early involvement in science. Our section also works with IEEE-USA to help young engineers remain professionally active throughout their lives. As the Washington Section Chair, I participated on several committees, and helped select the New Faces of Engineering 2007, sponsored by the National Engineers Week Foundation.

During Engineers Week, many volunteers from our section assisted with IEEE-USA activities for children at the Discover Engineering Family Day at the National Building Museum. Our section also participated in the activities of the District of Columbia Council of Engineering and Architectural Societies (DCCEAS) and supported the Future City Competition.

Through the efforts of volunteers led by Janet Lathan and Debi Siering, we supported high school robotics teams and cosponsored the FIRST Robotics Competition. We also collaborated with the Science and Technology Aptitude Recognition (STAR) program of the Washington Academy of Sciences. With IEEE member Paul Hazan leading the STAR program, our members participated as mentors and judges for science fairs in Washington-area high schools.

Our annual awards banquet provides an opportunity to recognize outstanding achievers in our field at all levels, from student science fair winners to newly-elected IEEE Fellows.

The Washington Section places particular emphasis on helping the IEEE student branches at colleges and universities by supporting their student activities and conferences. In 2007, our section was a proud sponsor of the University of Maryland Solar Decathlon Team. The College Park students designed and built an energy efficient solar house and erected it on the Washington Mall in October. The team won second place in the international competition sponsored by the U.S. Department of Energy.

Among the most active groups in our area are the Women in Engineering and the Life Members. With monthly meetings and seminars, these groups helped members in their professional development and promoted diversity in the electrical engineering profession.

Our members participated in IEEE-USA's Career Fly-In and Congressional Visits Day. These efforts to make our voice heard by legislators and the political establishment help bring changes to improve the status of our profession, increase the diversity among our membership and define the future of our profession.

A New Home

In 2007, with the help of Peg Kay and Gerard Christman, our section found a new home for its meetings at the American Association for the Advancement of Science building at 12th and H Streets N.W., Washington. The outstanding facilities have ample space for committee meetings and auditoriums for seminars and presentations.

I would like to thank the 2007 Executive Committee: Past Chair Haik Biglari, Vice Chair Gerald Christman, Treasurer Richard Benjamin and Secretary Timothy Weil, and our 2007 Directors: James Christian, Doug Holly, Harry Sauberman, Debi Siering, Zareh Soghomonian, Mary Tobin and Steve Weiss. I would also like to thank the *Scanner* team, especially our Managing Editor Elsie Grant, for all its hard work in making the *Scanner* the most read newsletter in IEEE.

From the day Haik handed me Alexander Graham Bell's gavel to the day I handed it to Gerry, time went by like a flash. There are so many things that we accomplished and so many things that we learned and so many things we still need to do. Rest assured that as my term ends my enthusiasm and dedication to our cause remain as strong as ever. I will continue to work relentlessly with all IEEE volunteers to maintain the professional standards gained through years of hard labor and ensure that innovation and the free spirit of creativity will remain vital components of our profession.

Collaboration & Rejuvenation are Washington Section's 2008 Watchwords

By Gerard J. Christman
Chair, Washington Section

It is an honor and a privilege to serve as Chair of the IEEE Washington Section for 2008. Our section's roots go back to the American Institute of Electrical Engineers founded in 1884 by, amongst others, Thomas A. Edison. We are also proud to claim Alexander Graham Bell as one of our past officers.

In light of our notable heritage, we strive to maintain an organization that fosters an interest in the engineering profession for those who are making a career choice and to serve as a professional home for those who have already selected their career.

With nearly fifteen thousand engineers in the greater metropolitan area, we have a wide variety of society chapters to become active in supporting. With the pace of change in the electrical engineering profession as rapid as it is, being active at the society level can assist you in remaining current. So, I encourage you to avail yourself of the activities offered through our section.

For you senior engineers, why not earn recognition for your experience through IEEE Senior Member grade elevation? We will help you through the application process.

Section Officers—We are indeed fortunate to have the support of some of the finest engineers in government, industry and academia such as Past Chair Kiki Ikossi; Vice Chair Richard Benjamin; Treasurer Raj Madhavan and Secretary Timothy Weil. We also enjoy the counsel of our Directors James Christian, Doug Holly, Kiki Ikossi, Harry Sauberman, Fari Schlake, Debi Siering, Mary Tobin and Steve Weiss.

Chapter Activities—The Washington, Northern Virginia, and Baltimore sections of IEEE have a long track record of successful collaboration. We have many joint, active societies with monthly meetings that are open to the general public. These societies provide a unique opportunity to find out about the latest developments in all areas of electrical engineering and serve as a forum for our members' continuing education.

2008 Goals

Our 2008 goals will focus on collaboration with Eta Kappa Nu, the electrical and computer engineering honor society; collaboration with the Washington Academy of Sciences' Capital Science 2008 Conference; rejuvenation of relationships with area colleges and universities through IEEE student branches; rejuvenation of this section's involvement in PACE; and maintenance of the various programs and activities that have been successful in the past such as robotics, science fairs, the Future City competition and the Washington Academy of Sciences' Science and Technology Aptitude Recognition (STAR) program.

We will continue our efforts to recruit the next generation of scientists and engineers and to support them in developing lifelong careers in electrical and electronics engineering. Our section will work with IEEE-USA to help the young engineers remain professionally active and engaged throughout their lives.

The IEEE Washington Section is fortunate to serve an area where technology flourishes. Take the time to attend one of our meetings. Become active in your profession with the technical society of your choice. Remain actively engaged, network with others and stay on top of new developments in your area. I am always open to suggestions and look forward to meeting you at one of our meetings. I can be reached at *gerard.christman@ieee.org*.

IEEE Fellow Jordan Baruch Receives NAE Award

IEEE Fellow Jordan Baruch received the Arthur M. Bueche Award from the National Academy of Engineering in September. The award was presented to Dr. Baruch "for the promotion of innovation and management of science and technology nationally and internationally, thereby enhancing the economy of the U.S. and developing nations."

Dr. Baruch, who is president of Jordan Baruch Associates in Chevy Chase, Md., received $2,500 and a gold medallion in recognition of his statesmanship in U.S. public policy on technology and for promoting ties among academia, industry, and government.

At the Massachusetts Institute of Technology (MIT), he combined studies in electrical engineering, mechanical engineering, and physics to earn a D.Sc. in instrumentation. He soon became an assistant professor at MIT and, over the next decade, taught a wide range of engineering courses.

During these years, Dr. Baruch was also putting his creative mind to use at Bolt Beranek and Newman (now BBN Technologies Inc.), an acoustics and computer software consulting company. Among his early inventions were an affordable multi-loudspeaker system, a colorimeter for pathology laboratories, instruments for cardiac and neurosurgery operating suites, and the country's first multi-station computer system for hospitals.

Dr. Baruch began to develop his ideas about the management of technological innovation while a lecturer at Harvard's Graduate School of Business Administration. His success led him to Dartmouth College, where he held a joint professorship at the Tuck School of Business and the Thayer School of Engineering.

While assistant secretary of commerce for science and technology (1977-1981), Dr. Baruch aimed to foster innovation and competitiveness in the U.S. He led efforts to modernize the Patent and Trademark Office, to transform and expand the Bureau of Standards into the National Institute for Standards and Technology (NIST), and to examine industrial innovation. As part of a U.S.-China diplomatic initiative, Baruch led the establishment of the first Chinese management school on the industrial use of science and technology; its thousands of graduates have been credited with leading Chinese industrial growth over the past 25 years.

Robotics Technology Can Help Elderly

tance to complex use will be presented, along with challenges for the future.

Ms. Crump will talk about next-generation remote health monitoring and alerting. Her company is conducting a DARPA-funded study of non-intrusive health monitoring for post-battle wellness management, and an NIH-funded study of the feasibility of using non-intrusive, wearable monitors to record gait in real-time and detect falls.

Local chapters of the following IEEE technical societies are cosponsoring the event: Antennas and Propagation Society, Communications Society (Washington chapter), Computer Society, Information Theory Society, Nuclear and Plasma Sciences Society, Reliability Society, Robotics and Automation Society, Signal Processing Society (Northern Virginia chapter) and the Society for Social Implications of Technology.

The IEEE Student Branches at Capitol College, George Mason University, and the University of Maryland College Park are also cosponsors.
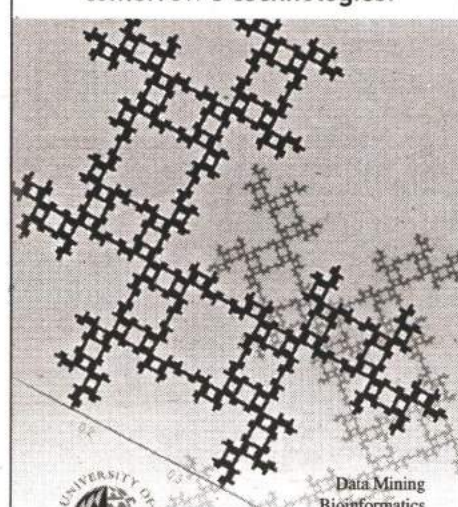
More information will become available at *www.ieee.org/escanner* and the EMBS chapter's website at *http://ewh. ieee.org/r2/no_virginia/embs/*.

IEEE National Capital Area Annual Awards Banquet
Saturday, April 12, 2008

Grand Hyatt Washington
1000 H Street, NW
Washington, DC

Reception: 6:30 p.m.
Dinner: 7:30 p.m.
Awards Presentation: 8:30 p.m.

Reservation Deadline: Friday, March 28

Keynote Speaker:

Dr. Linton Wells II
Distinguished Research Fellow
Center for Technology and National
Security Policy,
National Defense University

Please mail this Reservation Form with the names of all attendees and a check payable to "IEEE Washington Section" to P.O. Box 6814, Woodbridge, VA 22195.

IEEE Awards Banquet Reservation Form

Name: _____

Guest(s): _____

Number of IEEE members: _____ x $55 per person = $ _____

Number of Non-members: _____ x $60 per person = $ _____

Number of Student members: ____ x $25 per person = $ _____

Corporate Sponsorship (please list attendees on separate sheet):

☐ Full Table = $1000   ☐ Half Table = $500

Total Enclosed: $_____

(Please make check payable to "IEEE Washington Section.")

If you wish to be seated with a society chapter or affinity group,

please specify: _____

_____

Number of vegetarian meals requested: _____

Engineers & Scientists Gather at CapSci08

an open-source virtual manufacturing automation competition; and antimonides for high efficiency solar cells.

Members of the University of Maryland Solar Decathalon Team will conclude the IEEE sessions with a presentation about designing and building a successful solar home for the Department of Energy competition.

With more than two dozen WAS affiliates participating in CapSci08, other sessions will include a range of research interests from anthropology to X-rays.

"This is a unique opportunity to be informed on the research being done not only in engineering but in diverse disciplines," said Kiki Ikossi, IEEE's representative on the planning committee, which was chaired by Peg Kay.

The keynote speaker is NSF Director Arden Bement. The speaker for the Saturday lunch meeting is Mario Livio, senior astrophysicist at the Space Telescope Science Institute. The speaker for the Sunday lunch meeting is Dr. Maxine Singer, retired president of the Carnegie Institute and scientist emeritus at the National Cancer Institute.

Plenary Sessions include *Human Tissue Ownership: Ethical, Legal, & Policy Considerations,* led by Dr. William Gardner, executive director of the American Registry of Pathology; *International Polar Research,* led by the Office of Polar Programs, National Science Foundation; and *Science and Engineering in the Courtroom: Ethics and the Expert Witness,* led by Mark S. Frankel of the American Association for the Advancement of Science (AAAS).

Registration is $50 for IEEE members, WAS members and affiliates. Students may attend free.

See the Calendar listing on p. 3 and the conference website at *http://washacadsci.org/capsci08/Index.htm* for more information. A poster may be downloaded at *www.ieee.org/escanner/CapSci08poster.pdf.*

Banquet Speaker to Discuss National Security

cer for the Department of Defense.

He graduated from the U.S. Naval Academy in 1967 with a B.S. in physics and oceanography. He earned a Master of Science in Engineering (mathematical sciences) and a Ph.D. in international relations from Johns Hopkins University.

In 26 years of naval service, Dr. Wells served on a variety of surface ships and acquired a wide range of experience in operations analysis; Pacific, Indian Ocean and Middle East affairs; C3I; and special access program oversight.

Dr. Wells has written widely on security studies in English and Japanese journals. He co-authored *Japanese Cruisers of the Pacific War,* which was published in 1997.