



Celebrating 125 Years
of Engineering the Future

Scanner

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Preserving History—(left to right) Dr. Stanley Onye, Director of UDC's Science and Engineering Center; Dr. Ben Latigo, Dean of UDC's School of Engineering and Applied Science; Dr. Paul Cotae, EE faculty and Vice Chair of the Communications Society Washington Chapter; Dr. Ester Ososanya, Interim Chair of UDC's EE Department; Tim Weil, Chair of the IEEE Washington Section; Dr. Wagdy Mahmoud, Faculty Advisor to the IEEE Student Branch at UDC; and Dr. Sasan Hagani, EE faculty.

UDC Hosts IEEE 125th Anniversary Event, Section Archives

By Tim Weil

Washington Section Chair

A symposium on the history of the AIEE/IEEE Washington Section was hosted this fall at the University of the District of Columbia (UDC). Faculty and students from the electrical engineering and computer science departments attended the presentation, which I had given at the IEEE Conference on the History of Technical Societies in Philadelphia this summer. The interactive discussion offered more insights into our Section's early history. For example, our discussion of the National Bureau of Standards (in 1903) pointed out that UDC's Van Ness campus is located on the site formerly occupied by NBS (now the National Institute of Standards and Technology, or NIST).

A Washington City Paper article noted in 1995 that this site was known as the Dent estate before NBS took it over in 1901. "At the bureau, which sprawled across the slopes where John Adlum had grown grapes, all manner of machine and material was examined,

tested, certified. As the nation's physics lab, the bureau developed a reputation among the city's newshawks as a place of easy pickings for feature fodder—the biggest anchor chain, the platinum yardstick, the latest wind tunnel, the quietest soundproof room. The campus, with its heavy tree cover and clumps of neo-academic buildings, looked like a cross between the University of Virginia and a steel mill, and often raised a racket."

In meeting with the UDC faculty, staff and students we have created a partnership for our Section's history program. As shown in the photo above, our 125th Anniversary poster featuring the first 50 chairs of the Washington AIEE branch was accepted by Dean Ben Latigo and his staff as a permanent part of the UDC electrical engineering exhibits. In addition, UDC offered to host our the Washington Section's permanent archives, which include the 50th year AIEE scrapbook, the Alexander Graham Bell Gavel, and other historical artifacts. This partnership with

UDC will guarantee the availability of these archival records for our membership and Section program.

During the UDC program,

we also introduced the audience to the Section's newly published digital archives on the IEEE Global History Network (see story on p. 5).

Durrani Visits Region 9 as AESS Distinguished Lecturer

By Dr. Sajjad Durrani

Recently, I was invited to speak at several places in Brazil and Argentina, as part of the IEEE Aerospace and Electronic Systems Society's Distinguished Lecturers Program.

The idea for the visit was initiated by the IEEE Student Branch at a university in Brazil, located in Ilha Solteira (Ilha for short), a remote mountain region in the state of Sao Paulo. (Ilha is pronounced as Ilya, and means Island. The town is on a "Solitary Island" in a very wide river.)

The state university system, called UNESP, has 32 campuses; the Ilha campus has about 3,000 students in a city of about 25,000. It is located near a big hydroelectric plant, so their emphasis is on power engineering. However, they hold

an annual conference with a broader range of topics during their Engineering Week in August, with speakers from other states and abroad. Registration and related activities are organized by the Student Branch, with guidance from their Faculty Advisor, Prof. Antonio Pedilha. This year Carlos Beltrame, a final year student of electrical engineering and past chair of the IEEE Student Branch, decided to add a new topic, and asked me if I could speak on satellite communications at the conference.

After I accepted, Carlos informed his counterparts in the other student branches in the state, and two other institutes (not part of UNESP) contacted me. The information also found its way to the IEEE section chairs in Sao Paulo and

Elections

Washington Section

Election will be at the Administrative Committee Meeting on Nov. 3.

N. Virginia Section

Election will be online. Deadline is Nov. 30. See p. 8 for details.

In This Issue

UDC Hosts History Event	1
Region 9 Visit	1
Elections	1
Calendar of Events	3
News Briefs	5
Global History Network	5
Radio Museum	7
Cyberpower Book	8

South Brazil Section, Sao Paulo

The Section Chair, Mr. Alesio Borelli, picked me up at the airport and took me to meet

See REGION 9 VISIT, p. 6

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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.ieee.comunities.org/nca.

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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.

January–February issue deadline: December 1, 2009

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calendar of events

Tuesday, November 3, 2009

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 Metro Center (Red, Orange and Blue 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. Section officers for 2010 will be elected at this meeting. A video link is available at www.ieee.org/washsec/video1.html.
Contact: RSVP to Monica Taysing-Lara at m.taysinglara@ieee.org or 202-725-2225.

Monday, November 9, 2009

◆ SCORE: A Small Business Resource

- Sponsor:** National Capital Area Consultants' Network
Cosponsor: Life Members
Speaker: Ron Paulson, SCORE Counselor
Time: 5:00-7:00 pm
Place: Olive Garden Restaurant, 8133 Leesburg Pike (Tysons Corner), Vienna, VA
Directions: From I-495, take Route 7 West (Exit 47A) toward Tysons Corner. Turn left at Gallows Road. Parking garage is behind the restaurant.
More Info: The Service Corps of Retired Executives (SCORE) is a non-profit volunteer organization that provides free online and face-to-face business counseling, mentoring and training for small business and consultants. Mr. Paulson will give a presentation on SCORE and how it can help you succeed. See Diamond story, p. 4.
Cost: \$25 cash includes dinner and beverage from fixed menu.
Contact: Preregister at http://meetings.vtools.ieee.org/meeting_view/list_meeting/1233. For questions, contact Monica Mallini at m.a.mallini@ieee.org.

Tuesday, November 10, 2009

◆ History at Speed: Operating and Maintaining the Dover Harbor in the 21st Century

- Sponsor:** Land Transportation Committee of the IEEE Vehicular Technology Society and American Society of Mechanical Engineers

- Speaker:** Dean Edmonds, Director at Large, Washington DC Chapter, National Railway Historical Society
Time: Lunch at 11:30 am, presentation at 12:30 pm
Place: Capitol City Brewing Co., 2 Massachusetts Ave. NE, Washington, DC (in the old Post Office next to Union Station)
Directions: Take the Metro to Union Station (Red line). Use Mass. Ave. NE exit. Turn right at front of Union Station, cross 1st St.
More Info: Also at this meeting, Don Hendrickson, IEEE VTS Chair for Membership Development/Chapters, will present an award recognizing the chapter as VTS 2009 Chapter of the Year.
 For more information about the program, see Diamond story, p. 4, and <http://ewh.ieee.org/cmte/asmeltc>. All interested persons are invited. Membership in ASME or IEEE is not required.
Cost: Free (advance reservations required)
Contact: Please make reservations by Wednesday, Nov. 4 with Karl Berger at karl.berger@dcm-va.com or 703-803-7901.

Wednesday, November 11, 2009

Northern Virginia Section Administrative Committee Meeting

- Time:** 6:00-8:00 pm
Place: Olive Garden Restaurant, 8133 Leesburg Pike (Tysons Corner), Vienna, VA
Directions: From I-495, take Route 7 West (Exit 47A) toward Tysons Corner. Turn left at Gallows Road. Parking garage is behind the restaurant.
More Info: All interested IEEE members are invited to attend.
Contact: Jeff Poston at poston@ieee.org or 703-983-7020.

Saturday, November 14, 2009

Fall Fiesta

- Sponsors:** National Capital Area Consultants' Network, Women in Engineering, and Life Members
Time: 2:00-5:00 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). Turn right at top of Metro escalator, then left on the street, proceed two blocks toward Macy's, turn left and walk toward Ballston Commons Mall. Look for Chevy's on the right. Street parking is limited, and underground parking typically costs \$1 for 3 hours.
More Info: This is the fifth anniversary of the popular Fall Fiesta networking event! All IEEE members and guests are welcome. Bring business cards for networking.

- Refreshments will be provided.
Cost: \$10 cash for IEEE members and guests, \$5 for IEEE student members.
Contact: Preregister at http://meetings.vtools.ieee.org/meeting_view/list_meeting/1235.

Tuesday, November 17, 2009

Successfully Engaging in Legislative Affairs

- Sponsor:** Society on Social Implications of Technology
Speaker: Russ Harrison, Legislative Coordinator, IEEE-USA
Time: 5:30-7:00 pm
Place: 5180 Parkstone Dr., Suite 210, Chantilly, VA
Contact: Barry Tilton at barrytilton@ieee.org.

Tuesday, November 17, 2009

Managing the Nation's Weather Satellites

- Sponsor:** Women in Engineering
Speaker: Kathy Kelly, Director, Office of Satellite Operations, National Oceanic and Atmospheric Administration
Time: Networking & food 6:30 pm; presentation 7:00 pm
Place: George Washington University, Phillips Hall, 6th Floor, 801 22nd Street NW, Washington, DC
Directions: Take the Metro to the Foggy Bottom-GWU station (Blue and Orange lines). For driving and parking information, see www.gwu.edu/explore/visitingcampus/campusparkingdirections.
More Info: TBD
Contact: Varetta Huggins at vhuggins@ieee.org.

Tuesday, November 24, 2009

Professional and Ethical Dilemmas in Software Engineering

- Sponsors:** Computer Society, American Society for Quality (ASQ) Section 509 Software SIG, Society for Software Quality (SSQ)
Speaker: Brian Berenbach, Siemens Corporate Research
Time: 6:30 pm
Place: Video teleconference with sites in McLean and Silver Spring. Addresses are provided at the registration link below.
More Info: All interested IEEE members and guests are invited to attend. Pizza and soda will be served.
Cost: Free
Contact: Advance registration is required to enter the facilities. Please register online at www.asq509.org/ht/d/sp/i/2499/pid/2499. If your plans change, please email ankums@mitre.org to cancel your reservation.

See CALENDAR, p. 4

CALENDAR, from p. 3

Tuesday-Friday, December 1-4, 2009**PowerMEMS 2009**

The 9th International Workshop on Micro and Nanotechnology for Power Generation and Energy Conversion Applications

- Sponsors:** University of Maryland, Transducer Research Foundation (TRF)
- Place:** The American Film Institute, Silver Theatre and Cultural Center, Silver Spring, MD, and additional venues
- More Info:** See www.powermems.org/venue.html and the ad on p. 8.
- Contact:** info@powermems.org or 619-232-9499.

Wednesday, December 2, 2009**More than Just GPS: The Global Navigation Satellite System**

- Sponsor:** Signal Processing Society, Northern Virginia chapter
- Speaker:** Dr. Christopher J. Hegarty
- Time:** 6:30 pm
- Place:** MITRE Corp., Building 2, Conference Room 1N100, 7515 Colshire Drive, McLean, VA
- GPS:** Latitude 38.92219 (+38° 55' 19.88")
Longitude -77.20561 (-77° 12' 20.20")
- Directions:** See www.mitre.org/about/locations/va_mclean_mitre2.html. Free parking.
- More Info:** See http://ewh.ieee.org/r2/no_virginia/sps.
- Contact:** RSVPs by Dec. 1 are appreciated, but walk-ins are welcome. Contact Jeff Poston at poston@ieee.org.

Tuesday, December 8, 2009**Land Transportation Committee Meeting**

- Sponsor:** Land Transportation Committee of the IEEE Vehicular Technology Society and American Society of Mechanical Engineers
- Speaker:** TBA
- Time:** 11:30 am
- Place:** American Public Transportation Assoc., 11th Floor Conference Room, 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 and Blue lines, use 17th Street exit).
- More Info:** All interested persons are invited. Membership in ASME or IEEE is not required.
- Cost:** \$20 cash at the door for lunch.
- Contact:** Please make reservations by 4:00 pm, Friday, Dec. 4 with Karl Berger at karl.berger@dcm-va.com or 703-803-7917.

Tuesday, December 15, 2009**Quantifying Software Reliability and Readiness**

- Sponsors:** Computer Society, American Society for Quality (ASQ) Section 509 Software SIG, Society for Software Quality (SSQ)
- Speakers:** Jack Olivieri, MITRE (Bedford); and Abhaya Asthana, Alcatel-Lucent
- Time:** 6:30 pm
- Place:** Video teleconference with sites in McLean and Silver Spring. Addresses

are provided at the registration link below.

- More Info:** All interested IEEE members and guests are invited to attend. Pizza and soda will be served.
- Cost:** Free
- Contact:** Advance registration is required to enter the facilities. Please register online at www.asq509.org/ht/d/sp/i/2499/pid/2499. If your plans change, please email ankums@mitre.org to cancel your reservation.

Saturday, December 19, 2009**Consultants' Network Banquet**

- Sponsor:** National Capital Area Consultants' Network
- Speaker:** Sai Chiang, Creative System Solutions
- Time:** 6:00 pm
- Place:** Northern Virginia venue TBD
- More Info:** The banquet is open to all IEEE members and guests. Mr. Chiang, a past chair of the NCA Consultants' Network, will talk about the deployment of military applications of electro-technology to save lives in Afghanistan. He frequently travels overseas to train soldiers in the use of the technology.
- Cost:** Through Dec. 5: \$37.50 (advance payment); Late registration, Dec. 6-15: \$40 (cash at door).
- Contact:** Register online at http://meetings.vtools.ieee.org/meeting_view/list_meeting/1243 and follow instructions for mailing payment. For questions, contact Monica Mallini at m.a.mallini@ieee.org.

diamond stories

Monday, November 9, 2009**◆ SCORE: A Small Business Resource**

Ron Paulson runs his own advisory and consulting company, Technical Management & Leadership, LLC. He has been a SCORE Counselor since April 2008 with background and experience in technology, management, planning, government contracting, finance and acquisitions. Technology, management and planning are his primary SCORE counseling areas.

Paulson has 35 years of experience in aerospace management, engineering and R&D. He began his career designing munitions at Honeywell Systems and Research, then led electro-optics development in the avionics lab at Wright-Patterson Air Force Base, and held management positions at EDO Corp., Lockheed, and Lockheed Martin. He retired as vice president of engineering at Lockheed Martin corporate headquarters in Bethesda, MD in 2008.

Tuesday, November 10, 2009**◆ History at Speed: Operating and Maintaining the Dover Harbor in the 21st Century**

Dean Edmonds of the National Railway Historical Society will give a presentation about the Dover Harbor, the last Pullman passenger car operating on

American mainline railroads. He will describe the challenges and rewards of operating and maintaining an 86-year old railroad car at current Amtrak standards. If the car is on accessible track, he will walk us to the Dover Harbor and give a tour of this unique and beautiful railroad car.

The Dover Harbor, a restored classic American sleeper-lounge-buffet railroad car, is the only heavy-weight Pullman revenue passenger car still operating in unrestricted train service on the main lines of America. The Dover Harbor is completely Amtrak compatible and is available for lease and charter service, mobile and stationary, at locations anywhere in the U.S. and parts of Canada. The car is rich in history, tradition, and elegance, yet it provides the comforts, convenience, and service you would expect from a fine hotel. It is beautifully restored to its authentic 1930s appearance and meets all current mechanical and safety requirements.

The Dover Harbor was constructed by the Pullman Company of Chicago in July 1923 as a combined baggage-library car named the Maple Shade. The 81 foot car weighed 80 tons and had a four section, twelve-seat lounge, a barber shop, and a twenty-eight foot baggage area. Painted in the Pennsylvania Railroad's standard colors (Tuscan red), it operated in service at the head of that railroad's name trains, including the Broadway Limited and the Spirit of St. Louis for eleven years.

In March, 1934, the Maple Shade was recalled into

the Pullman Company Shops and rebuilt into six double bedrooms, a buffet, and a lounge, and was renamed the Dover Harbor. Air conditioning, which was new to railroad cars at that time, was also installed. After rebuilding it was repainted in the standard Pullman green and gold livery that it wears today.

The Pullman Company assigned the car to service on a succession of railroads until it was retired on October 18, 1965. After passing through a series of private owners, the Washington, D.C. Chapter of the National Railway Historical Society purchased the Dover Harbor on November 30, 1979.

The chapter placed great emphasis on retaining as much of the car's 1934 appearance as possible. The exterior of the Dover Harbor is repainted in Pullman green complete with authentic gold lettering. The beautiful interior of the car appears much as it did in the 1930s, complete with period carpet and furnishings. While maintaining its period appearance, the chapter instituted mechanical improvements which enable the car to meet current standards. Since restoration began, the car has received high-speed roller-bearing trucks and wheel sets, new controlled-slack couplers, retention-toilets, upgraded brake system with anti-lock mechanism, and a self-contained 60 kw diesel generator. The car's electrical system has also been replaced. The Dover Harbor became Amtrak certified on May 21, 1986. It is now the only heavy weight Pullman revenue car fully operational for private use on Amtrak passenger trains.

News Briefs

Land Transportation Committee Named VTS Chapter of the Year

The National Capital Land Transportation Committee has been chosen as the IEEE Vehicular Technology Society Chapter of the Year. Presentation of the award will be made by Don Hendrickson, VTS Chair for Membership Development/Chapters, at the committee's November 10 meeting at Union Station. Also at the luncheon meeting, Dean Edmonds of the National Railway Historical Society will give a presentation on the Dover Harbor, a restored Pullman passenger car still in operation (see Calendar, p. 3).

The Land Transportation Committee is jointly sponsored by the American Society of Mechanical Engineers Rail Transportation Division, and has been regularly meeting since the late 1970s. "The vitality of the group is a tribute to the dedication of the members and officers who value our meetings as a forum to discuss and promote transportation technology," said Karl W. Berger, P.E., chair of the VTS chapter.

Engineering Video Competition

IEEE-USA is sponsoring an online engineering video competition for undergraduate students on "How Engineers Make a World of Difference."

IEEE-USA will award four scholarships totaling \$5,000 to undergraduates who create the most effective 90-second video clips reinforcing for an 11-to-13-year-old audience how engineers improve the world.

Video entries must be submitted through YouTube by Friday, January 15, 2010. Winning entries will be announced and shown during Engineers Week, February 14-20.

First prize is \$2,000, plus up to \$1,000 to cover travel expenses to the IEEE-USA Annual Meeting in Nashville, Tenn. on March 6.

Entries should provide an individual profile of an engineer and how he or she makes "a world of difference." Entries will be judged on their effectiveness in reaching the target audience by portraying engineers as "real people" who seek to make life better, as well as on their originality, creativity and en-

tertainment value.

For more information, see www.ieeeusa.org/communications/video_competition.

Future City DC Region Seeks Engineers to Serve as Mentors

The Washington, DC Future City Region, which also includes Maryland and Northern Virginia, is in need of mentors for several of the schools that have registered already for this year's National Engineers Week Future City Competition.

Mentors are engineers (or engineering students) who serve as advisors to the students, usually a team of three. The engineer is involved in all phases of the competition and provides input and technical assistance, integrating real life engineering experiences as the students work on the competition. The students do all the actual work, such as the computer design of the city, building of the tabletop model, writing the essay and presenting the project during the competition.

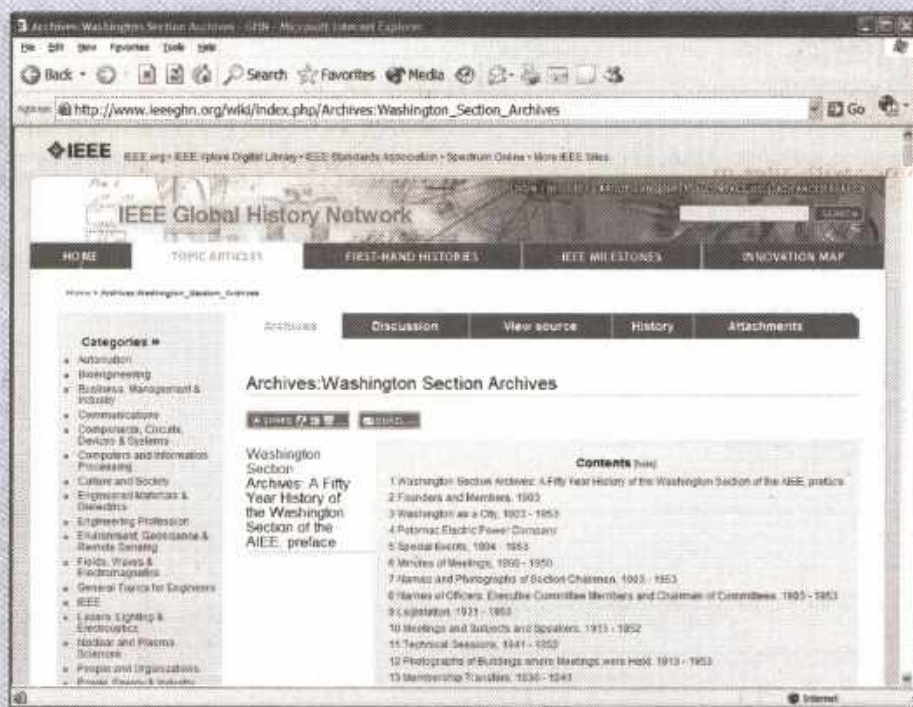
Typical time commitment is one or two hours per week. Volunteers may register at www.futurecity.org/register/engineer.asp or contact Alex Underwood for more information at alexunderwood@futurecity.org.

Capital Science 2010

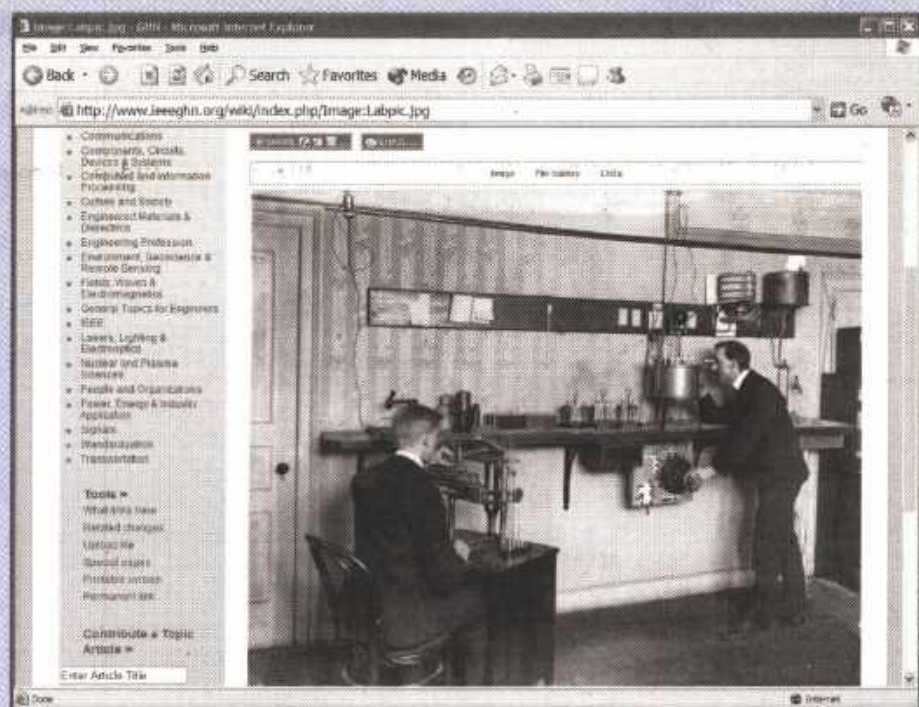
The Washington Academy of Sciences will hold its fourth biennial conference, Capital Science 2010, at NSF on March 27-28.

The conference which will showcase the variety and the excellence of scientific investigation in the Washington area, through scientific presentations, seminars, tutorials and talks by members of the academy's affiliated societies and institutions. Dr. Arden Bement, Director of NSF, will be the keynote speaker.

Abstracts may be submitted to Dr. Raj Madhavan at raj.madhavan@nist.gov. See www.washacadsci.org for more information as it becomes available, and after December 1 for online registration. Students are encouraged to attend and participate.



Washington Section Archives—The table of contents page is located at www.ieeeahn.org/wiki/index.php/Archives:Washington_Section_Archives.



A History Challenge—What is the first AIEE branch chair is doing in his 1903 lab? View the image at www.ieeeahn.org/wiki/index.php/Image:Labpic.jpg.

Washington Section Adds Historical Items to IEEE Global History Network

By Tim Weil
Washington Section Chair

The IEEE Global History Network (GHN) was launched in September 2008 and has grown rapidly. Last winter at the IEEE-USA annual meeting, I saw a demonstration of the GHN's Wiki editing process by Dr. John Vardalas, Outreach Historian for the IEEE History Center. Soon I was adding content to GHN, and talking with Washington Section officers about a larger project worthy of IEEE's 125th Anniversary year.

Working with Dr. Vardalas, we created an online digital archive of the Washington Section's 50th Anniver-

sary volume, which traces the early history of the Washington branch of the American Institute of Electrical Engineers (AIEE).

The result is an extensive online archive of the AIEE Washington Section from 1902 to 1953.

The Washington Section Archives homepage with a table of contents (shown above) is located at www.ieeeahn.org/wiki/index.php/Archives:Washington_Section_Archives. From this page, users can navigate to digital images and PDF files scanned from the AIEE Washington branch's 50th Anniversary scrapbook.

The Section's 125th Anniver-

ry poster depicting the first 50 AIEE chairs (see photo, p. 1) is also available in the GHN archives. The lineage of Washington Section Officers dates back to Dr. F. A. Wolff, who chaired the AIEE branch in 1903-04. The annual succession of leadership includes the passing of the Alexander Graham Bell Gavel, a tradition maintained for more than 100 years.

We are expecting that the release of these digital archives will generate interest and enthusiasm among our members. A contest on the Section's history will be announced later this year with the opportunity for our student branches and members to re-

search and publish an IEEE paper on a topic related to our 125 years of engineering achievement and organizational programs.

A History Challenge

The photograph displayed above was taken at the National Bureau of Standards in 1903. It shows the first AIEE branch chair, Dr. F. A. Wolff (right), and his colleague performing laboratory experiments. An award will be presented to the IEEE member who can identify the equipment being used and the research project that may be depicted. Please send your answers or ideas to me at trweil@ieee.org.

Durrani Gives Satellite Communications Lectures, Promotes AESS in Brazil and Argentina

REGION 9 VISIT, from p. 1

some of his colleagues in the Polytechnic where he teaches. He arranged my talk at a Section meeting on August 24, and it was attended by about 40 people. After the talk and a break for refreshments, we met again to discuss the benefits of joining IEEE and AESS.

I also gave a slide show about how NASA prepares to launch a Space Shuttle to take cargo to the Space Station, since such a launch was scheduled during that week (and I used to work for NASA). The same pattern—talk on satellite communications, break for refreshments, discussion about IEEE, and Space Shuttle slide show—was followed in my visits to other places, and was well-received, with many people expressing an interest in joining AESS.

Ilha Solteira

The Engineering Conference extended over four days and my talk was set for its concluding session on August 28. The Conference was very well attended, and more than 130 people came to my talk.

A big surprise was that the mayor of the city (accompanied by the university's Rector) showed up before the session to welcome me as an AESS Distinguished Lecturer, and proclaim me as the city's official guest that day. Thus the IEEE and AESS got some official recognition out of this visit!

Carlos Beltrame, the student who invited me to the conference, has a lot of



Hydro Power—(left to right) Carlos Beltrame, Dr. Durrani, and Prof. Anna Plasencia Lotufo at the hydroelectric plant in Ilha Solteira, Brazil. The plant has a capacity of 3,444 MW, and combined with a neighboring plant, it is the sixth largest in the world.

initiative and organizational skills, and is active at the national and regional levels. He intends to join IEEE's Graduates of the Last Decade (GOLD) after graduation, and hopefully will motivate others to become active in IEEE.

ITA

The Institute of Aeronautic Technology (ITA) is a highly regarded institute with a competitively selected small student body, located on a huge campus about three hours drive from Sao Paulo. One of their professors, Dr. David Fernandez, scheduled my talk on August 31; it was attended by more than 40 students and faculty members. Dr. Fernandez also took me to see the National Institute of Space Research nearby, which has state of the art facilities. Sev-

eral faculty members of both institutes belong to the IEEE, and some of them said they would look into forming an AESS Chapter.

UFABC

UFABC is a relatively new Federal University, comprising three boroughs (with initials A, B and C), not far from Sao Paulo. Their IEEE Student Branch, led by Rodrigo Enju, arranged the talk on September 1; several faculty members and about 50 students showed up. Here also, I discussed IEEE and AESS following the main talk, and several attendees expressed an interest in joining the two organizations.

Argentina Section, Buenos Aires

The Argentina Section has an office in Buenos Aires, but their officers are

located in other parts of the country as well. The current Chair, Mr. Guillermo Kalocai, lives in a city about 600 km from Buenos Aires. Two of their very active members—Mr. Valentino Trainotti and Mr. Luis Remez—live in Buenos Aires and acted as my hosts. Mr. Kalocai joined us just for the Section meeting on September 3, taking a nine-hour overnight bus trip each way, which shows his dedication to IEEE!

Summary

My visit showed once again that the IEEE is a truly international organization, and that many of its members are willing to spend their time and effort in its service. The IEEE officers in both countries were very hospitable and made me feel like old friends. The visit generated interest in the AESS, and may lead to the formation of chapters in Brazil and Argentina. It also shows how student branches can take the initiative to organize conferences and enroll new members. Washington and Northern Virginia Sections have several student branches, and hopefully some of them will be motivated by the examples of their Brazilian counterparts.

Dr. Sajjad Durrani was Chair of the Washington Section in 1980-81, President of the AES Society (1982, 1983), and a member of the IEEE Board of Directors (1984, 1985). He served as Chair of the National Capital Area Council in 2002, and represented the Washington Section in the Washington Academy of Sciences and the DC Council of Engineering and Architectural Societies (DC-CEAS) for several years. He is also a volunteer in Montgomery County, MD and was recently appointed a member of the County's Human Rights Commission.

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Virginia Tech Advanced Research Institute (ARI) and the Bradley Department of Electrical and Computer Engineering invite applications for a Postdoctoral Associate. The applicant will mainly work on proposal writing, conducting research and assisting graduate students with research in the areas of electric power, alternate energy, smart grid and cyber-physical systems focused on energy domains. The successful candidate will support the director of ARI's Center for Energy and the Global Environment with coordination of related research efforts at partner institutions, as well as supporting program development and identification of new research funding opportunities. Please visit www.ari.vt.edu for further information.

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Museum curator Geoffrey Bourne is standing behind the counter of a 1920s radio store replica. He is also president of the Antique Wireless Association.



An assortment of radio paraphernalia includes a working spark transmitter and coherer receiver.

Museum of Radio and Technology Preserves Past in Huntington, WV



A 1930s remote-tuned radio. The object resting on the console is a remote tuner meant to be set on the floor away from the console. No matter to what station it was tuned, it put out a signal centered on 1 megahertz to the console.

By Pete Sypher
Scanner Editor-in-Chief

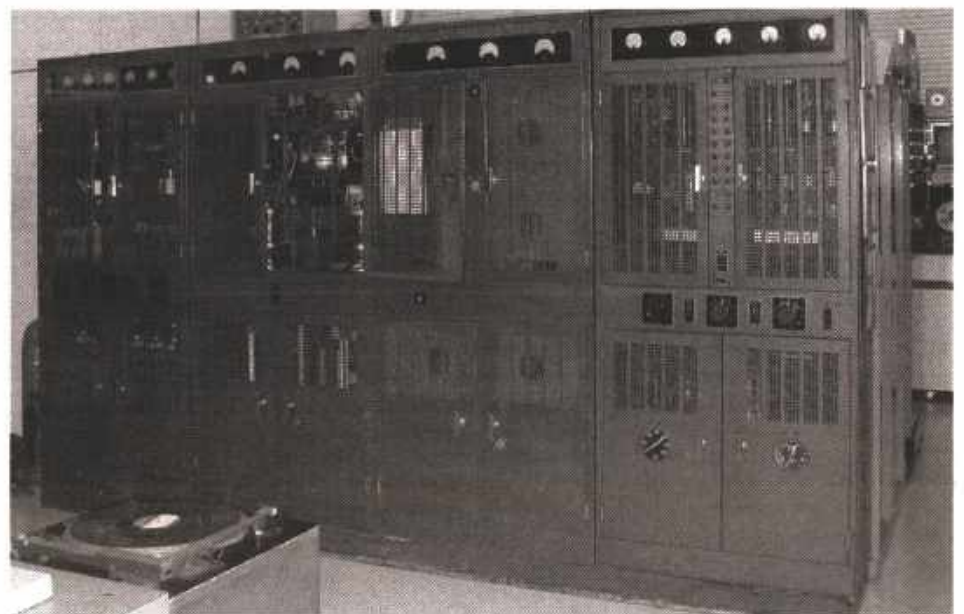
Eight hours' driving west of Washington takes you to the city of Huntington, West Virginia, on the south bank of the Ohio River, where the Museum of Radio and Technology is located.

The museum occupies an old school building, with about 2,000 artifacts in an area of about 10,000 square feet. The photos on this page show a small fraction of the total exhibits. More photos are on the museum website at <http://oak.cats.ohiou.edu/~postr/MRT>, which also has links to other museums.

A group of dedicated volunteers started the museum in 1991. The museum has a membership of about 200, with a core group of two dozen drawn together by an interest in electronics.

The museum is open from 10:00 a.m. to 4:00 p.m. on Saturdays and 1:00 p.m. to 4:00 p.m. on Sundays year round, and from 10:00 a.m. to 4:00 p.m. on most Fridays from April through October. Admission is free.

From suburban Maryland, the fastest route to Huntington is I-70 to I-68 to I-79 south to I-64 west, to the US Route 52 exit. The museum's address

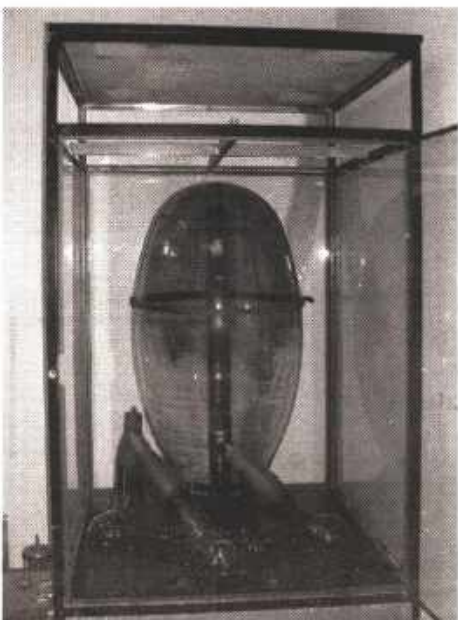


This 1938 Western Electric 5 kw AM broadcast transmitter is water cooled.

is 1640 Florence Ave., Huntington WV 25701. (GPS Users: 38° 24' 05" N, 82° 28' 25" W.)

There are other attractions in and near Huntington: the Huntington Museum of Art, Marshall University, Camden Park, Pullman Square, and dinner-riverboat rides. Not far from Huntington are Blenko Glass Company and Gibson Glass Company in Milton, WV. Blenko offers factory tours. Camden Park is a 1950s-style amusement park open from May through October. (The days the park is open are shown

at www.camdenpark.com.) Pullman Square, a few blocks from Marshall University, offers shopping and dining that is not very expensive.



A 3-phase mercury vapor rectifier tube.



The museum has a well-equipped operational amateur radio station.

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Christman Contributes Chapter to Cyberpower Book

Gerard Christman, Chair of IEEE Region 2 South Area and Past Chair of the Washington Section, has authored a chapter in the book, *Cyberpower and National Security*.

His chapter, "Facilitating Stability Operations with Cyberpower," represents the culmination of an 18 month collaboration with the Center for Technology and National Security Policy of the National Defense University.

Christman, a doctoral candidate in information systems at Nova Southeastern University, collaborated with other researchers on the NDU staff to hone the message of the chapter. "In addition to providing my own content, I continued to mine open source information to provide potential content for other authors to consider for their respective pieces," Christman said. He also helped edit the material of all the authors before it was sent to the publisher's editorial staff.

Cyberpower and National Security was published by Potomac Books in April 2009, and is already in its second printing and is being translated into several foreign languages. The book is intended to help create a coherent framework for understanding and utilizing cyberpower to support national security.

Christman is a Program Manager with Femme Comp Incorporated (FCI) supporting the U.S. Assistant Secretary of Defense for Networks and Information Integration. He served 23 years as an officer in the U.S. Army Signal Corps before joining FCI in 2003.

For more information about the book, see www.potomacbooksinc.com/books/recent.aspx.

Northern Virginia Section Election

The Northern Virginia Section will participate in IEEE's online voting pilot project for its annual election. All Northern Virginia Section members who have opted in for e-notices will be notified by email when the ballot is posted around November 1. Election information will also be available on the eScanner website at www.ieee.org/escanner. The deadline for voting online will be Nov. 30.

Senior Members

Congratulations to the following new Senior Members in the Northern Virginia (NV) and Washington (W) Sections:

Zaihan Jiang (NV)	James Reis (W)
Xiaokun Li (W)	Steven Wear (NV)
Elena Messina (W)	Bin Yang (W)
Yaw Obeng (W)	

If you are interested in becoming a Senior Member, please see www.ieee.org/seniormember for qualification requirements.

For assistance with references, Northern Virginia Section members may contact Monica Mallini at m.a.mallini@ieee.org and Washington Section members may contact Raj Madhavan at raj.madhavan@ieee.org.

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- ▶ Biologically-inspired energy conversion and cooling
- ▶ Micro heat engines for power generation and propulsion
- ▶ Micro and nanofabrication for energy applications
- ▶ Micro coolers and other thermal management technologies

SPEAKERS

PLENARY

NICHOLAS NEGROPONTE
Massachusetts Institute of Technology, USA

INVITED

ANGELA BELCHER
Massachusetts Institute of Technology, USA

SANG BOK LEE
University of Maryland, USA


MARK SHANNON
University of Illinois, Urbana-Champaign, USA

KIYOTAKA WASA
Kyoto University, JAPAN

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