"Stuff You Don't Learn in Engineering School" Offered Free This Fall

By Wally Lee
Washington Section Editor

IEEE members have an excellent opportunity to take advantage of a free presentation in October of two modules from the IEEE Expert Now course, *Stuff you Don't Learn in Engineering School: Skills for Success in the Real World*. The course is authored by business planning consultant Carl Selinger and is based on the nontechnical soft skills covered in his book of the same title published by Wiley-IEEE Press in 2004.

Module 2, *Communicating Effectively*, and Module 3, *Management Skills*, will be offered on Saturday, October 4. This presentation of the interactive course is free for members of the Northern Virginia and Washington sections but space is limited.

Thirty members from as far away as West Virginia attended the presenta-

Elections

IEEE Annual Election

Ballots must be received by noon on Wednesday, October 1, 2008. Members may return their ballots received in the mail or vote online at *https://www.directvote.net/ieee*.

Information about candidates for Region 2 Delegate-Elect/Director-Elect appears on p. 5.

See *www.ieee.org/escanner* or *www.ieee.org/elections* for more annual election information.

Northern Virginia Election

IEEE Northern Virginia Section members may use the ballot on p. 7 to vote for section officers and directors for 2009.

Washington Election

Nominations are being sought for the IEEE Washington Section election to be held in November. Contact Katie Schaffold at *katie.schaffold@ieee.org* to nominate candidates for Secretary, Treasurer, Vice Chair or a Director position.

Promoting IEEE Region 2—*Members who attended the IEEE-USA Annual Meeting in Indianapolis in April included (from left) Holly Cyrus, Region 2 Women in Engineering Coordinator; Monica Mallini (seated), Northern Virginia Section Vice Chair; Carole Carey, Region 2 PACE Chair; Vil Arafiles, Region 2 Treasurer; Murty Polavarapu (seated), Region 2 South Area Chair; and Wally Lee, Washington Section Editor for the* Scanner. *(Photo by Carole Carey)*

tion of Module 1, *Basic Skills*, on Saturday, August 2. Several participants said the discussion after the slides was as valuable as the presentation itself.

This is an excellent opportunity to take the interactive course without having to purchase it (the online price is $69.95 per module). Attendees who complete a feedback survey can receive CEU credit from IEEE.

Student members are especially encouraged to attend. Registration opens on September 1. See the Calendar, p. 4, for registration information. The course location is to be determined; please check the online calendar at *www.ieee.org/eScanner* for an update.

The discussion after the slides was as valuable as the presentation itself.

For a limited time, sections may offer presentations of IEEE Expert Now courses to their members at no cost. I learned about this program at the June meeting in Denver of the Section Educational Outreach Committee (SEOC) of the IEEE Educational Activities Board (EAB), and I immediately scheduled and publicized the first session in August.

Facilitators Monica Mallini, Katie Schaffold, Tim Settle and Monica Taysing-Lara aided me in the presentation.

Sponsors include the National Capital Area Consultants' Network, Graduates of the Last Decade, Women in Engineering, and the Life Members.

Univ. of Maryland ECE Centennial Weekend Features Dean Kamen, September 26-27

The Department of Electrical and Computer Engineering (ECE) at the University of Maryland's A. James Clark School of Engineering will celebrate its 100th anniversary (1908-2008) with a special Centennial Weekend of events on September 26-27. IEEE members and University of Maryland alumni and friends are welcome to register for this special event.

The ECE Centennial Weekend will include an alumni reception on the evening of Friday, September 26; a luncheon and pair of daytime forum events featuring experts from across the country speaking about "The Future of Information Systems and Communications" and "The Future of Energy" on Saturday, September 27; and a dinner and gala event on Saturday evening that will include a talk by inventor Dean Kamen. A complete program schedule is available at *www.ece.umd.edu/centennial*.

Dean Kamen is an inventor, entrepreneur, and a tireless advocate for science and technology. He is the founder of DEKA Research & Development Corporation, where he develops internally generated inventions and provides research and development for major corporate clients. He holds more than 440 U.S. and foreign patents for innovative devices that have expanded the frontiers of health care worldwide. Some of his notable inventions include

IEEE GLOBECOM 2007 Committee Closes its Books at ICC 2008 in Beijing

By Tim Weil
Vice Chair, Washington Section

Mission accomplished! After five years of planning, 18 months of activity organization, dozens of volunteer meetings and one week of record-setting attendance for our Fall 2007 program, the IEEE Global Communications Conference (GLOBECOM 2007) committee has closed its books.

On behalf of the GLOBECOM 2007 Executive Committee, I traveled to Beijing this summer to report on our successes in hosting the flagship conference of the IEEE Communications Society (COMSOC).

To present our final closing report, I was privileged to attend the International Communications Conference (ICC 2008) in Beijing to meet with the COMSOC committee responsible for conference management (the GLOBECOM/ICC Management and Strategy Committee, or GIMS).

As a conference volunteer I also staffed a GLOBECOM 2009 booth at the conference exhibition and met with attendees interested in next year's event. This trip ranks at the top of my list for IEEE professional networking opportunities and global communications industry experience.

By the numbers, GLOBECOM 2007 in Washington was a complete success and exceeded everyone's expectations. Our program attracted over 2,200 attendees and over 900 authors were selected from more than 2,000 submitted technical papers.

Our Expo program featured over 20 international companies and organizations and our Patron program attracted many industry sponsors to our event. The fantastic IEEE Pavilion effort assembled 12 different exhibitors ranging from the National Capital Area Consultants' Network and the local hosting

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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.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.

November-December issue deadline: October 1, 2008

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   nova/wie

calendar *of* events

Tuesday, September 2, 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 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.

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

Tuesday, September 9, 2008

♦ The Economics of Coal as a Locomotive Fuel

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

Speaker: John T. Rhodes, Transportation Analyst, R.L. Banks & Associates

Time: Lunch 11:30 am, presentation 12:00 noon

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: See Diamond story, p. 4. All interested persons are invited. Membership in ASME or IEEE is not required.

Cost: $15 cash at the door for lunch.

Contact: RSVP by 4:00 pm Friday, Sept. 5 to Karl Berger at *karl.berger@dcm-va.com* or 703-803-7917 or Ken Briers at *ken.briers@parsons.com* or 202-775-3397.

Wednesday, September 10, 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-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: Chuck Baldi at *cbaldi@ieee.org* or 703-675-0678.

Friday-Saturday, September 12-13, 2008

Fundamentals of Intrusion Detection

(DC ACM Fall 2008 Professional Development Seminar)

Sponsor: Association for Computing Machinery, Washington DC Chapter

Cosponsor: Computer Society

Place: George Washington University, Washington, DC

More Info: This two-day course will be held in a GWU computer lab, so space is limited. A six-page brochure, detailed information and online registration are available at *www.dcacm.org/pd.*

Contact: Tom Starai at *starai@ieee.org.*

Monday, September 15, 2008

Communications Society Washington Chapter Executive Committee Meeting

Time: 7:00 pm

Place: Virtual meeting

More Info: The Washington Chapter of the Communications Society wants to expand its executive committee to support more events and activities in the Washington area. This meeting is open to any Communications Society or IEEE member who wants to get involved at the local level.

Contact: To attend this virtual meeting, RSVP to Debi Siering at *siering@ieee.org* 48 hours before the meeting. You will receive instructions for the website and a teleconference number for the meeting. Virtual capacity is limited to 20.

Tuesday, September 16, 2008

NASA Technical Tour

Sponsors: Geoscience and Remote Sensing Society, Aerospace and Electronic Systems Society

Time: 10:00 am

Place: NASA Goddard Space Flight Center, Greenbelt, MD

Directions: Attendees must check in at the Visitor Center (not at the main gate). A shuttle bus will transport the group into NASA. From the Capital Beltway (I-95), take Exit 22A North (Rt. 295, Baltimore-Washington Pkwy.). Exit at Rt. 193 East (Greenbelt Rd.) and go approx. 2.5 miles. Turn left onto IceSat Rd., then turn left to reach the Visitor Center.

More Info: This tour includes NASA's *Science on a Sphere* (SOS) presentation and an overview of how NASA builds, tests and prepares for satellite missions. The SOS presentation illustrates NASA's Earth Science studies on a large spherical ball simulating the Earth. The rest of the tour is a walk-through of the integration and test facility, including the Hubble Clean Room. Space is limited.

Contact: Register before Tuesday, Sept. 9 with Roger Oliva at *roger.oliva@ieee.org.*

Late registrations will be permitted as long as space exists. (Note: foreign visitors must have registered by Aug. 19.)

Thursday, September 18, 2008

♦ Arc Flash Hazards: A Reality Check

Sponsors: Power Engineering Society, Industry Applications Society

Speaker: Kanu R. Shah, P.E., Chief Engineer, Shah & Associates, Inc.

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 Macy's, turn right and walk one block to Ballston Point at the intersection of Wilson Blvd. and Glebe Rd.

If driving, see *www.ari.vt.edu/ari_directions.htm.* There is a parking garage in the building with a $1 charge for 3 hours. After 6:00 pm, there is limited free street parking.

More Info: See Diamond story, p. 4. A light dinner buffet will be served, followed by the program. All interested persons are invited.

Cost: Free for IEEE members; $10 for non-members.

Contact: Fred A. Pearson III at *fred.pearson@unisys.com* or 571-227-3259.

Friday-Saturday, September 26-27, 2008

Intermediate Intrusion Detection

(DC ACM Fall 2008 Professional Development Seminar)

Sponsor: Association for Computing Machinery, Washington DC Chapter

Cosponsor: Computer Society

Place: George Washington University, Washington, DC

More Info: This two-day course will be held in a GWU computer lab, so space is limited. A six-page brochure, detailed information and online registration are available at *www.dcacm.org/pd.*

Contact: Tom Starai at *starai@ieee.org.*

Friday-Sunday, September 26-28, 2008

University of Maryland ECE Centennial Weekend

Sponsor: Electrical and Computer Engineering (ECE) Department, University of Maryland College Park

More Info: See story, p. 1. For more details or to register, see *www.ece.umd.edu/centennial.* IEEE members, alumni and friends are welcome to register for the ECE Centennial Weekend events. Limited seats are available for the forum events and gala.

Contact: Ted Knight at *teknight@umd.edu* or 301-405-3596.

Wednesday, October 1, 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.*

Saturday, October 4, 2008

IEEE Expert Now Course: Skills for Success in the Real World

Sponsors: National Capital Area Consultants', Network, Graduates of the Last Decade, Women in Engineering, Life Members
Time: 11:00 am to 3:00 pm
Place: TBA (see *www.ieee.org/escanner*)
More Info: See story, p. 1. This session includes Module 2, *Communicating Effectively,* and Module 3, *Management Skills.* Refreshments will be provided. IEEE offers CEU credit at no cost to attendees who fill out a course feedback form. For more information about Expert Now courses, see *www.ieee.org/web/ education/Expert_Now_IEEE.*
Cost: Free for IEEE members. Space is limited; register early!
Contact: Register between Sept. 1 and 30 with Wally Lee at *w.h.lee@ieee.org.* Please put "Professional Development" in the subject line and include your name, address, phone number and IEEE member number.

Tuesday, October 7, 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 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.
Contact: RSVP to Tim Weil at *trweil@ieee.org* or 301-452-3641.

Wednesday, October 8, 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-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: Chuck Baldi at *cbaldi@ieee.org* or 703-675-0678.

Tuesday, October 14, 2008

Positive Train Control

Sponsor: Land Transportation Committee of the IEEE Vehicular Technology Society and American Society of Mechanical Engineers
Speaker: Michael Smith
Time: Lunch 11:30 am, presentation 12:00 noon
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: $15 cash at the door for lunch.
Contact: Karl Berger at *karl.berger@dcm-va.com* or 703-803-7917.

Tuesday, October 28, 2008

Root Cause Analysis for Customer Reported Problems

Sponsors: IEEE Computer Society; American Society for Quality (ASQ) Section 509 Software SIG; and the Society for Software Quality (SSQ)
Time: 6:30 pm
Speakers: Steve Rakitin, Software Quality Consulting, Inc.
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.

diamond ◆ stories

Tuesday, September 9, 2008

◆ The Economics of Coal as a Locomotive Fuel

A modern coal burning steam locomotive could reduce U.S. Class I railroad fuel cost by over 65 percent. In 2006, U.S. Class I railroads burned 4.2 billion gallons of diesel fuel, costing $8.1 billion. The dollar value of coal that would accomplish the same amount of work is less $3.0 billion. This is a cost savings of more than $5 billion per year. If the U.S. Class I railroads converted to steam locomotives, the cost savings would pay for the locomotives and servicing facilities in as little as five years.

The modern steam locomotive would be a reciprocating steam locomotive but would be vastly different and improved from the types of steam locomotives used by the railroads in years past. This presentation will focus on the changes in technology, the use characteristics of the new type of locomotives, and the economics.

John T. Rhodes is a transportation analyst for R.L. Banks & Associates in Arlington, VA. Before joining RLBA in April 2007, he was a transportation aide for the Fairfax Connector Bus Systems. He supported the service planning function with ridership data and schedule adherence analysis.

Rhodes travelled extensively by rail with his parents in his youth. This developed into a lifelong interest in trains and transportation. He received a Bachelor of Professional Studies from the Culinary Institute in 2003, and is now pursuing a master's degree in transportation policy, operations, and logistics at George Mason University. This presentation is based on his thesis topic.

Thursday, September 18, 2008

◆ Arc Flash Hazards: A Reality Check

In the U.S., more than 2,000 workers receive electrical burns every year. Even though NFPA 70E in 1995 and NEC in 2002 required protection of workers working on or in close proximity of energized conductors and equipment, only in the past few years have most of the practicing electrical engineers begun performing arc flash analysis and designing electrical facilities to protect workers against arc flash hazards.

The presentation will discuss regulatory and technical requirements and means and methods to reduce arc flash hazards. The presentation will conclude that arc flash hazard to personnel responsible for operation, maintenance, and testing of electrical facilities is real, and is going to be a major design consideration in the design of electrical facilities.

Kanu R. Shah founded Shah & Associates, Inc. in 1977 and served as president until 2002. He is now the chief engineer responsible for both technical and management aspects of all the projects undertaken by the firm. He has more than 40 years of experience in teaching, research, and design of electrical facilities throughout the world.

Dr. Shah is a Registered Professional Engineer in Maryland, Michigan, Virginia, Florida, Pennsylvania and the District of Columbia. He has published more than 45 technical papers. In 1993, one of his papers, *Grounding Transformer Applications and Associated Protection Schemes,* was awarded the Ralph H. Lee First Paper Prize Award by the IEEE Industry Applications Society.

Candidates for Region 2 Delegate-Elect/Director-Elect

The following individuals are candidates for IEEE Region 2 (Eastern USA) Delegate-Elect/Director-Elect, 2009-10 and Delegate/Director, 2011-12.

Ralph M. Ford

Director and Professor
Penn State Erie, The Behrend College
School of Engineering
Erie, Pennsylvania

www.personal.psu.edu/rmf7

Dr. Ralph Ford is director of the School of Engineering at Penn State Erie, The Behrend College. He obtained his B.S. degree from Clarkson University and Ph.D. from the University of Arizona. He was a senior associate engineer at IBM in East Fishkill, NY from 1989-1991 where he developed machine vision systems for semiconductor packaging inspection. He joined Penn State Behrend in 1994 and then served as chair of electrical and computer engineering for eight years. During this period, the program expanded to add two new programs in computer and software engineering. He was a Fulbright Scholar to the Czech Republic, teaching and conducting research at Brno University of Technology. He is author of the book *Design for Electrical and Computer Engineers* (McGraw-Hill). He became director of the School of Engineering in 2005. His technical interests are in digital signal processing, digital image processing, and engineering design.

IEEE Activities

(S'87-M'89-S'92-M'95-SM'02) *Committee/Board:* Member and Geographic Activities Board, Nominations and Appointments Committee Member, 2007-08. *Region:* Region 2 – Eastern USA, Conference Coordinator, 2003-08. *Section:* Erie Section: Chair, 2001; Vice Chair, 1997-2000.

IEEE Accomplishments

Chair of the Erie Section—Established the first web presence for the Section to provide better communication to membership; participated in the creation of the Section's first MPAC, which continues on a bi-annual basis; organized a membership drive that resulted in a substantial increase in the number of senior members in the Section; the Erie Section supported student membership and participation in the area through sponsorship of paper competitions at colleges/universities, K–12 programs, and the annual new members dinner.

IEEE Region2 Conference Coordinator—Provided distribution of conference and workshops information in Region 2 through the Region 2's electronic leadership forum. Participated in first strategic planning process for IEEE conferences (2005-2006).

IEEE MGAB Nominations and Awards Committee—Solicit, review, and nominate IEEE volunteer members for RAB/MGAB positions.

Statement

As director, I intend to focus on:

• Engaging practicing engineers in IEEE activities and services that support their careers. This is critical given the rate of technological change and increased global competition. Examples include offering practice-oriented conferences, MPACs, and networking opportunities.

• Engaging members and sections in support of engineering outreach to the K-12 audience. There is momentum in many states and communities for improving STEM education. IEEE can support this through existing resources, such as IEEE in-service activities. Increasing the pipeline of students who pursue engineering degrees is critical for our national competitiveness.

• Supporting efforts that engage and strengthen college and university chapters, as well as efforts to retain recent college graduates. Retention of recent graduates in IEEE continues to be a vexing problem.

I will be highly engaged with section chairs to support their initiatives and develop future leaders of IEEE. I will work closely with the incoming Region 2 director to support his efforts as well as the strategic directions of IEEE and the region. I appreciate this opportunity to serve.

I strongly believe in supporting our profession. I have experience in academia, industry and professional organizations and appreciate the opportunity to serve IEEE's membership.

Murty S. Polavarapu

Senior Principal Engineer
BAE Systems
Manassas, Virginia

www.murtyp.org

Over the last two decades, Murty Polavarapu has worked on all facets of semiconductor technology with a special focus on developing and manufacturing advanced memory and logic products for space environments. His current interests include development of phase change memory devices and nanotechnology applications for space systems. He holds Masters degrees in Physics from India, Electrical Engineering from Howard University and Management of Technology from University of Pennsylvania. He was awarded ten patents in semiconductor technology, Dominion Semiconductor President's Award and IBM Outstanding Technical Achievement Award. Polavarapu is a Fellow of Washington Academy of Sciences and a member of American Association for the Advancement of Science. He served as a Peace Corps volunteer teaching at a rural high school in Fiji and is currently active with the local arm of American Youth Hostels in promoting global understanding. Polavarapu is an active participant in pre-college and student branch activities.

IEEE Activities

(M'97-SM'98) *Committees/Boards:* IEEE-USA Pre-College Education Committee, Member, 2003-05; IEEE-USA Research and Development Policy Committee, Member, 2002-04. *Region:* Region 2, Executive Committee, Member, 2006-08; South Area, Chair, 2006-08; Pre-College Education, Coordinator, 2003-05. *Section:* Northern Virginia Section, Pre-College Committee, Chair, 2008; Professional Activities Committees for Engineers (PACE); Chair, 2007; Section Chair, 2005; Chair-Elect and Vice Chair, 2004; Secretary, 2003; Treasurer, 2002. *Chapters:* Electron Devices Society Northern Virginia/Washington Chapter, Chair, 1999-2001, 2003-05; Society on Social Implications of Technology, Northern Virginia/Washington/Baltimore Chapter, Chair, 2003, 2005. *Society:* Electron Devices Society, Regions/Chapters Sub-Committee, Vice Chair, 2006-08; Newsletter, Editor - North America-East, 2002-04. *Conferences:* Aerospace Conference, Session Co-Chair, 2006-07; International Reliability Physics Symposium, Memory Subcommittee Member, 2007. *Representatives:* Washington Academy of Sciences, Northern Virginia Section Delegate, 2004-08; DC Council of Engineering and Architectural Societies, Northern Virginia Section Delegate, 2002-06. *Awards:* Distinguished Leadership Award (Washington/Northern Virginia Sections), 2008; James F. Strother Meritorious Service Award, 2007; IEEE Regional Activities Board Achievement Award, 2005; IEEE Northern Virginia Section, Volunteer of the Year, 2004; IEEE Washington/Northern Virginia Sections, Distinguished Service Award, 2004; IEEE Third Millennium Medal, 2000.

IEEE Accomplishments

I did not achieve the following accomplishments alone, and gratefully acknowledge the excellent co-operation of my fellow volunteers.

• Introduced the IEEE virtual community for National Capital Area, the fist of its kind at a local level. This community serves as a forum for online discussions, as a repository for AdCom meeting minutes and to publicize local events. *www.ieeecommunities.org/nca*

• Revived the dormant Electron Devices Society Chapter and introduced premier events such as the series of talks on nanotechnology.

• Mentored the George Mason University Student Branch in holding its first annual Ethics Awareness Conference and multiple S-PAC events.

• Contributed to the rejuvenation of the Leadership Training Workshop of National Capital Area that provides a much-needed orientation for new volunteers. I look forward to offering this program across the region.

• Continued the pace of increased involvement of the Section in pre-college activities with one additional High School Club and support for local FIRST Robotics teams. I also worked with Northern Virginia Technology Council in conducting a Nanotechnology Education Seminar for local teachers.

• Contributed to the strategy of better serving local members with electronic and print distribution of newsletters. *www.ieee.org/escanner.*

Statement

My goal is to leverage synergy across the region to focus on three broad areas:

• Better serve our members—I will focus on helping members realize the value of their membership by improving local events such as technical meetings and symposia, educational and professional development courses. I will create a set of model events that can be replicated across the Region. This will also include career issues such as out-sourcing, intellectual property protection, health care and retirement benefits.

• Grow the membership—I will foster pilot experiments in membership recruitment and retention. I will also encourage stronger relationships between Sections and Student Branches to help students see the value of IEEE membership. I will promote a more active role for GOLD members in Section and Region activities.

• Build a sustainable leadership team— Our region includes small sections such as Youngstown and large sections such as Philadelphia and Washington. I will promote sharing of resources across the region and create a well-trained leadership team that will ensure continued growth of IEEE.

National Capital Area is my home and I am grateful for the opportunities I have had over the last decade to serve the local members in various capacities. With your support, I hope to have the opportunity to lead Region 2 and help transform IEEE to better serve its members.

Financial Planner Stresses Impact of Early Saving

By Kerry Hartman
Treasurer, Northern Virginia Section

On June 11, the Export Import Bank of the United States hosted a financial planning presentation by Larry Grogan of Grogan Advisory Services. About a dozen IEEE members attended the event, which was cosponsored by the Graduates of the Last Decade (GOLD) affinity groups of the Northern Virginia and Washington Sections and the Women in Engineering affinity group.

The presentation was coordinated by Michael Sams of the Export Import Bank and was held in the Bank's stately upper-floor conference room at 811 Vermont Ave., N.W., Washington, D.C.

To demonstrate the importance of getting an early start on saving for retirement, Grogan showed the dramatic loss that results when a retirement fund is started at age 35 as opposed to starting at age 25. He also highlighted some

of the real costs that a retiree will face over her expected lifetime just to satisfy basic needs such as food and clothing. Explaining the difference between allocation and diversification, Grogan examined the current economic situation and shared some of the financial strategies he is currently using to keep his clients safe in this troubled market.

The presentation included a review of the detailed portfolio analysis that Grogan Advisory Services offers free and without obligation to any IEEE member. During the following question-and-answer period, some of the options beyond the basic 401k plan were discussed.

There is no minimum level of investment required to take advantage of the services offered by Grogan Advisory Services, and their free portfolio review is available to any IEEE member. They can be reached at 518-899-6090.

Planning Ahead—*Left to right, seated: Katie Schaffold, chair of Women in Engineering, and Alison Leonard, chair of GOLD (Washington). Standing: Jim Mahoney of the Export Import Bank of the United States, Larry Grogan of Grogan Advisory Services, Kerry Hartman of the Northern Virginia Section, and Michael Sams of the Export Import Bank of the United States.*

the first wearable insulin pump for diabetics, the HomeChoice portable peritoneal dialysis machine, the Independence iBOT Mobility System, and the Segway Human Transporter. One of his newest projects is the development of a revolutionary water purification system that is being designed to help provide clean drinking water to the estimated 1.1 billion of people in the world who lack access to clean water.

Among Mr. Kamen's proudest accomplishments is founding FIRST (For Inspiration and Recognition of Science and Technology), an organization dedicated to motivating the next generation to understand, use and enjoy science

and technology. Many IEEE members serve as team mentors for the annual FIRST Robotics competitions.

Mr. Kamen was awarded the National Medal of Technology in 2000, received the Lemelson-MIT Prize in 2002, is a member of the National Academy of Engineering and was inducted into the National Inventors Hall of Fame in May 2005.

Participants for the Centennial Forum on "The Future of Information Systems and Communications" will include Victor Bahl, Principal Researcher, Microsoft Corp. and IEEE Fellow; Michael Brown, Executive Vice President, comScore; Douglas Himberger, Vice President, Booz Allen Hamilton;

Rajiv Laroia, CTO, Qualcomm Flarion Technologies and IEEE Fellow.

Participants for the Centennial Forum on "The Future of Energy" will include David Goodstein, Professor and Former Vice Provost, California Institute of Technology; Larry Kazmerski, Director, Photovoltaics, National Renewable Energy Lab; Joseph Turnage, Senior Vice President, Constellation Energy; Steven Cowley, Director, Culham Science Center, U.K., and Professor, UCLA.

The ECE Centennial event is sponsored by Qualcomm, Texas Instruments and Booz Allen Hamilton.

Guests can register online for ECE Centennial Weekend events at *www.ece.umd.edu/centennial/register.php*. The reception on the evening of Friday, September 26 is complimentary for alumni and friends. Tickets for the

daytime luncheon and forum events on Saturday, September 27 are $20 each, and tickets to the ECE Centennial gala event on Saturday evening are $50 each. For more information, please contact Ted Knight at *teknight@umd.edu* or 301-405-3596.

The A. James Clark School of Engineering is one of the premier engineering schools in the U.S. In *U.S. News & World Report's* annual rating of graduate programs, the school is 17th among public and private programs nationally. The electrical engineering program is ranked 14th in the nation and first in the mid-Atlantic region. The Clark School offers 13 graduate programs and 12 undergraduate programs, including degree and certification programs tailored for working professionals.

For more information about the Clark School, see *www.eng.umd.edu*.

calls *for* papers

IEEE Systems Journal—*Special Issue on Biometrics Systems*
Submission deadline: January 15, 2009
Acceptance notification: Expected by April 15, 2009
Publication: August 2009
http://www.dti.unimi.it/~piuri/pages/ISJ-SpecialIssueBiometricsSystemsCFP.pdf

This special issue is directed to collect original papers that address any aspect of the design, implementation and application of biometrics systems, by focusing on a system-level perspective. Questions about the special issue should be directed to Prof. Vincenzo Piuri at *vincenzo.piuri@unimi.it*.

IEEE Transactions on Instrumentation and Measurement—*Special Issue on Biometric Instrumentation and Measurement*
Submission deadline: February 15-March 1, 2009
Acceptance notification: Expected by June 30, 2009
Publication: December 2009
www.dti.unimi.it/~piuri/pages/TIM-SpecialIssueBiometricIMCFP.pdf

This special issue is focused on publishing original papers that address instrumentation and measurement aspects of the design, implementation and applications of biometrics. Questions about the special issue should be directed to Dr. Fabio Scotti at *fabio.scotti@unimi.it*.

EXPERT NOW, *from p. 1*

The four-hour session on Saturday, October 4 will start with check-in from 11:00 to 11:30 a.m. Module 2 will be shown from 11:30 a.m. to 12:30 p.m. From 12:30 to 1:15 p.m. we will have lunch and discuss Part 2. From 1:15 to 2:15 p.m. we will view Module 3, followed by discussion and wrap-up from 2:15 to 3:00 p.m.

The course materials are designed to help younger engineers and emerging project managers—indeed, engineers in all disciplines and all professionals—learn the soft skills that are important to be more effective and happier in the real world. Participants should be able to develop an understanding of basic skills needed for success in the real world, including decision-making, setting priorities and managing time, and getting feedback.

Perhaps the best single overview of the content is a quote from Tom O'Neill, CEO of Parsons Brinckerhoff, on why he gave Selinger's book to Dartmouth's 150 engineering graduates in 2005: "It is a good, useful publication about something that I believe very strongly. I was happy to see that someone has written a book about something that should be a fundamental precept for success in the world of engineering, and I was happy to share it with some young people who will shape the world for the next 40 years."

The IEEE Washington and Northern Virginia Sections are very pleased to participate in the IEEE Expert Now course program, which offers a selection of the best courses and tutorials from IEEE conferences and workshops around the world and makes them available to IEEE sections, chapters, and members. Thanks to IEEE's current promotion and the generosity of our hosts, we can offer these presentations to IEEE members at no cost during 2008. Not an IEEE member? We can sign you up!

SEOC has been given the lead responsibility within EAB for building and maintaining strong working relationships with IEEE regions, sections and chapters in order to work with them as partners. An important product of SEOC is the Expert Now series of modules that can be used by local sections for continuing education and professional development activities.

The purpose of the SEOC meeting I attended in June was to identify and facilitate the educational needs of the public, the profession and IEEE members.

The Washington Section will work with the EAB's Society Outreach Committee, Continuing Professional Education Committee, and Accreditation Policy Committee to serve as a focal point for identifying opportunities and facilitating the implementation of various EAB activities and programs.

I will be in touch with all registrants prior to October 4. For more information about Expert Now courses, see *www.ieee.org/web/education/Expert_Now_IEEE.*

Wally Lee is responsible for organizing the continuing education activities of the Washington Section.

BEIJING, *from p. 1*

sections to IEEE-USA.

Under the financial management efforts of our Executive Committee and the COMSOC staff, GLOBECOM 2007 earned over $60,000 in revenue sharing for the local sections. With this kind of top-flight performance, it was quite a pleasure to present our closing report to the GIMS review board during ICC 2008 in Beijing.

The theme of ICC 2008, "Faster-Higher–Stronger," characterizes the continuing pervasiveness of telecommunications in all aspects of global society, industry and government. One of the ICC 2008 hosts described the conference as the Olympics of communication engineering events. An overwhelming 3,135 paper submissions from 58 countries and regions were submitted to ICC 2008, no doubt setting a record in the history of the two COMSOC conferences.

"China is one of the oldest civilizations known to man. Since the implementation of an open policy in 1978 and enrollment of the WTO in 2002, China continues to grow at an alarming rate. The telecommunications industry and related research and development activities are also expanding its reach globally. Today, the Chinese telecommunications industry is serving over 367 million PSTN terminals with more than 556 million mobile users," said the ICC 2008 General Chair, Dr. Jichuan Wu of the Chinese Institute of Electronics.

ICC 2008 was jointly organized by the Chinese Institute of Electronics, Chinese Institute of Communications, Tsinghua University and Beijing University of Posts and Telecommunications, under the support of the Ministry of Information Industry of China, Beijing Municipal Government, National Science Foundation of China, and major telecommunication operators.

The ICC 2008 featured extraordinary exhibits by prominent companies in the Asian telecommunications market including China Mobile, Huawei, China Unicom, ZTE and China Telecom. Views of the conference are available at *www.ieee-icc.org/2008/pics.html.*
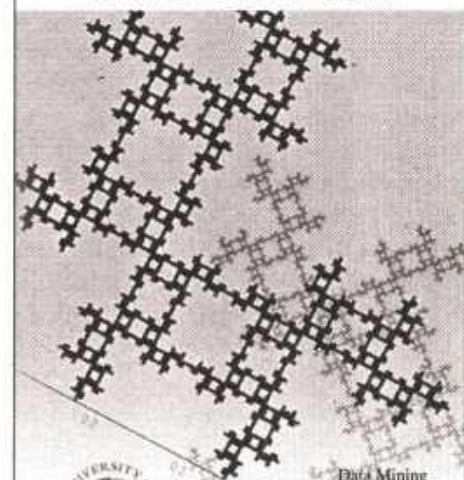
My thanks go to GLOBECOM 2007 General Chair Jerry Gibbon and Finance Chair Doug Holly for supporting these efforts and making this trip possible.

Tim Weil served as the IEEE GLOBECOM 2007 Patron Chair.

Aloha!—*Tim Weil invites ICC 2008 attendees to GLOBECOM 2009 in Hawaii.*

ADAPTx Developer Discusses the Challenges of Automated System Identification

By Jill Nelson

The Signal Processing Society's Northern Virginia Chapter held its second technical meeting of the year on May 29 at the Mitre campus in McLean, Va. Attendees enjoyed a seminar by Dr. Wallace Larimore, whose talk was titled "Reduced Rank Adaptive Modeling for Detection, Prediction, and Control."

Dr. Larimore focused on the challenge of automated system identification and on the use of reduced-rank statistical methods to address that challenge. In his talk, he described how statistical methods can be used to avoid the problems of nonlinear optimization and nonconvergence often faced in traditional approaches to system identification. Dr. Larimore presented an automated technique in which singular value decomposition (SVD) is employed to identify the statistically significant parameters of a system model, and under appropriate weighting of the SVD,

Reduced Rank Adaptive Modeling—*Dr. Wallace Larimore (center) described his approach to automated system identification at a joint meeting of three technical society chapters. He is shown with hosts Jeff Poston (left) and Dr. Timothy Settle, chair of the SPS chapter.*

a maximum likelihood solution is obtained. Dr. Larimore described several applications to which his approach to automated system identification has been applied, including adaptive control of aircraft wing flutter, fault detection in pH neutralization processes, and control of magnetic chip levitation for accurate photolithography.

Dr. Larimore is the founder and president of Adaptics, Inc. and has developed the ADAPTx software package for automated multivariable system identification and time series analysis. A leader in the field of process modeling and control, he published the first paper on subspace system identification. Dr. Larimore holds a Ph.D. and M.S. in statistics from George Washington University.

The seminar was cosponsored by the Northern Virginia and Washington chapters of the Control Systems Society.

Seeking Intelligent Life is Mission of SETI Astronomers

By Roger Oliva
Chair, Aerospace and Electronic Systems Society Chapter

Although many people wonder about it, there is a single group here in the United States that is actually trying to scientifically discern whether or not intelligent life exists beyond our earthly bounds. The Search for Extraterrestrial Intelligence (SETI) Institute in Mountain View, California is the place that will most likely uncover this mystery, one way or the other.

On Wednesday evening, July 23, Dr. Seth Shostak, senior astronomer at SETI, spoke at a meeting of the Aerospace and Electronic Systems Society (AESS) chapter hosted by the University of the District of Columbia. Besides a good sampling of IEEE members, Dr. Shostak's mother, his wife, and Dr. William Culver, vice chair of the AESS chapter, were in attendance. Dr. Shostak has an undergraduate degree in physics from Princeton University and a Ph.D. in astronomy from the California Institute of Technology. He gave an engaging presentation on the past and future expected progress in discovering intelligent extraterrestrial life.

The basis of the search is the Drake Equation, named for Dr. Frank Drake, who first presented it in 1961. Dr. Drake is chairman emeritus of the SETI board. The formula calculates the number of civilizations in the Milky Way Galaxy that have electromagnetic emissions that are detectable based on the rate of formation of suitable stars; fraction of stars with planetary systems; number of planets per solar system with an environment suitable for life; fraction of suitable planets on which life actually appears; fraction of life-bearing planets on which intelligent life emerges; fraction of civilizations that develop a technology that releases detectable signs of their existence into space; and the length of time such civilizations release detectable signals into space.

The principal project for detecting extraterrestrial civilizations to date involves listening for radio signals that were either deliberately beamed our way, or were inadvertently transmitted from another planet. Research continues in development of the best algorithms to process captured signals.

Another key project at SETI is the implementation of the Allen Telescope Array. It will consist of an array of approximately 350 6.1-meter offset Gregorian dishes. Given the number of antennas and the large size of the primary beam (approximately 4 degrees at 21 cm wavelength), this array will have an unprecedented amount of flexibility for observations. Also, a new experiment is underway that looks for powerful light pulses beamed our way from other star systems.

SETI has some public funding through various projects but is principally operated and maintained by private funding.

Dr. Shostak fielded many questions and kept the audience fully engaged and entertained. Such questions as "Why would intelligent life try to talk to Earth?" and "So what! If we receive a message that's a thousand light years away, what good will that do me?" and "What will extraterrestrials really look like?" kept us all thinking.

He also pointed out that by our own definition, Earth has only been considered to be "intelligent" for less than 100 years. We weren't broadcasting electronic signals before that.

Currently, SETI can look or listen out to 60 light years. Within the next 12 years, technology suggests that we will be able to see or hear out to 1,000 light years. This improvement should give us a good enough sampling to "really" assess whether or not intelligent life is out there.

So, what have we discovered? One thing was for sure, after our dinner outing that night the Heavens opened up on us for a deluge of rain, thunder, and lightning. Assuming we can ignore those atmospherics, there is no evidence of intelligent life beyond Earth. If there is intelligent life out there, we should have a very good idea within a dozen years. So, STANDBY...

Meanwhile, you will find a plethora of useful information on this endeavor at *www.seti.org*. SETI encourages contacts from all intelligent life, so please let them know when you are in Northern California, and you will be welcomed to see first hand what is happening.