

2009

IEEE-USA ANNUAL REPORT



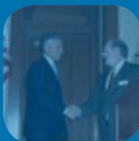
in



f



t



IEEE

Building Careers & Shaping Public Policy...



March 2010

Dear IEEE-USA Colleagues and Friends:

Never before in the years that we've used the motto *Building Careers and Shaping Public Policy* have those two phrases presented as many challenges and opportunities as in 2009.

The year began with serious concerns about employment. By our count, between December 2008 and February 2009, high-tech companies announced at least 160,000 job reductions. Those reductions led to 8.6 percent unemployment for electrical and electronics engineers in the second quarter, a record by more than one percentage point. As you will see within, we scrambled to meet the needs and concerns of our members by expanding our career-related products and services — and making them easier to access.



With a new administration arriving in January, we had already anticipated new challenges and opportunities in public policy. As we expected, energy, communications and patent reform were among the most debated topics. We were ready with new position statements in each of these areas and, at the request of Sen. Jeff Bingaman D-N.M., quickly added a new statement on energy workforce development. I'm pleased to report subsequent administration action in all four of these areas has been largely consistent with our recommendations. We also believe that we made important progress on immigration reform. For the first time, key members of both the House of Representatives and the Senate have expressed support for both parts of our position: permanent immigration of high-tech workers should be easier, and the temporary worker visa system for high-tech workers should be reformed to reduce abuse, returning the program to its original purposes. And we have developed model legislation that would achieve those goals.

Our efforts in both career support and public policy provided more than the usual number of opportunities to engage in public discussions on the issues. Last year, we issued 54 press releases, and were quoted in many prominent publications in the U.S. and abroad, including *The Wall Street Journal*, *Business Week*, *USA Today*, *Reuters*, *Computer World*, the *Dallas Morning News*, and the *San Jose Mercury News*. Many of these releases were about workforce issues, based on interviews emphasizing the importance of engineers in improving our quality of life and enhancing prosperity. Wherever possible, we promoted the theme *Engineers Create Jobs*.

I am very proud of what nearly 750 IEEE-USA volunteers accomplished in 2009, and I think you will be impressed with this summary.

Enjoy,

A handwritten signature in black ink that reads "Gordon W. Day".

Gordon W. Day
2009 President, IEEE-USA

The Institute of Electrical and Electronics Engineers, Inc. - United States of America

2001 L Street, N.W., Suite 700, Washington, D.C. 20036-5104 USA

Office: +1 202 530-8332 | Fax: +1 202 785 0835 | Web: <http://www.ieeeusa.org>

IEEE-USA Goals and Priorities

IEEE-USA's strategic focus for 2009 was defined by our mission statement: *Building Careers and Shaping Public Policy*:

- > **Building Careers:** The market down-turn and downsizing trends had a significant impact on the U.S. high-tech work force and U.S. IEEE members in 2009. IEEE-USA responded with a strong emphasis on supporting members' careers, with coordinated approaches designed to address the employment assistance needs of displaced members, and to promote entrepreneurship and consulting as career alternatives and for job creation. These two focused efforts also leveraged on-going efforts to expand and enhance the value of IEEE-USA's overall career-related products and services.
- > **Shaping Public Policy:** A new presidential administration, and the decision to make national "stimulus"-related economic investments in response to the economic downturn, changed the environment for S&T in Washington. IEEE-USA took advantage of the opportunities presented to advance a priority agenda focused on energy policy, broadband deployment, innovation investments, patent reform, and deployment of the national health information network. As Smart Grid emerged as a major policy focus, associated technology, standards and workforce issues emerged in a context that prompted IEEE-USA's active support and involvement for IEEE's Smart Grid Initiative.

In addition to these broad themes, IEEE-USA worked to increase the public visibility of IEEE and engineering, and to support the globalization of professional activities through-out all IEEE Regions.

Addressing Strategic Goals and Priorities in 2009

Supporting Members' Careers

- > **Responding to Rising Unemployment Among EEs and Technical Professionals: Online Career Help** — In February 2009, IEEE-USA launched a Career Help webpage specifically targeting at-risk and unemployed members. It provides links and resources to job listings, employment and career strategies discussion groups, insurance, consulting and entrepreneurship resources. In an effort to help at-risk and unemployed IEEE members network, IEEE-USA also began experimenting with social networking sites in May 2009. By year end, the IEEE-USA LinkedIn group grew to more than 1,000 members, and the Facebook group to 500. Participants are posting job openings, discussing the job market, and providing advice to one another. Utilization of the IEEE-USA Employment & Career Services Community is also on the rise, hitting a new high of 3,139 members, more than 2,800 posts, and averaging more than 1,500 visits per month.
- > **Exploring Career Strategies and Opportunities: IEEE-USA's Career Webinar Series** — IEEE-USA delivered 12 webinars on such topics as job hunting, social networking, innovation, entrepreneurship, and mentoring. Selected titles included: *What Are HR Professionals Looking for in a Resume?* (29 Oct.); *Snooping Employers: How Employers Get Background Information on You Prior to the Interview* (12 Nov.); and *Funding the Green Sector (Opportunities for Entrepreneurs)* (9 Dec.) Webinars are recorded and archived on IEEE-USA's website for easy access and to enhance member usage.
- > **Helping Members Face Career Transitions: Career Survival Workshops** — IEEE-USA's Career & Workforce Policy Committee organized Career Survival Workshops for IEEE Sections in Michigan (18 April), Northern

“The timing for this course was perfect. I had just received a severance notice from my employer, and the course addressed exactly what I needed to do to redefine my position as an engineer. The presenters were dynamic and passionate. They wanted us to succeed, and gave us the follow-up tools to do it.”

— Boston Career Survival Workshop Participant

Virginia (2 May), and Boston (24 October). Geared toward engineers and other technical professionals who are unemployed or facing career transitions, the workshops focused on such topics as creative job searching, developing a career plan, understanding the interview process, effective communications, and emerging future jobs.

- > **Educating Members on Career Topics: IEEE-USA E-Books** — IEEE-USA published 18 new e-book titles in 2009, bringing IEEE-USA's E-Book catalog to 52 titles, most of which address career-related topics. 2009 career titles include:
 - IEEE-USA Unemployment Survey 2008 (01/09)
 - Launching Your Career: A Practitioners Guide to Leadership (01/09)
 - Lifelong Learning: Your Key to an Enjoyable and Rewarding Career (02/09)
 - Perspectives on Innovation (05/09)
 - Developing a Workable Innovation Process (09/09)
 - Fostering an Innovation Culture (12/09)
 - What It Takes To Be an Innovator (12/09)

In addition to member and non-member sales, IEEE-USA distributed 42,914 free e-books to IEEE members in Regions 1-10 in 2009, as promotional and membership renewal incentives.

- > **What Are You Worth? What Should You Charge? Salary and Consultants Fees Surveys** — IEEE-USA conducted its 2009 Salary and Consultants Fees surveys in November 2009, with results released in April 2010.
- > **Promoting Entrepreneurial Potential: Small Business Administration Strategic Alliance** — On 23 June 2009, IEEE-USA signed a Strategic Alliance with the U.S. Small Business Administration to promote America's entrepreneurial potential through the expansion of small businesses. An SBA speaker participated in an IEEE-USA-organized career track at the 2009 International Test Conference (1-6 Nov.) The SBA will also provide speakers and support for a webinar series for U.S. IEEE members considering small business and entrepreneurial opportunities. IEEE-USA will foster SBA's SCORE program by tapping our PACE network and the IEEE Life Members for volunteers willing to serve as business mentors. By utilizing the business expertise of IEEE members, SBA hopes to enhance its support for technology entrepreneurs.



IEEE-USA President Gordon Day and U.S. Small Business Administration Chief of Staff Ana M. Ma at signing ceremony on 18 June.

- > **Connecting Entrepreneurs with Funders: TechMatch Service** — In November 2009, IEEE-USA launched its TechMatch service. Developed by the IEEE-USA Entrepreneurs Activities Committee, TechMatch is a community-based resource for entrepreneurs, angels, venture capitalists and other funders of early stage high-technology commercialization efforts. IEEE-USA TechMatch will allow IEEE member entrepreneurs to receive peer assessments of their business plans, and help them connect with potential funders.
- > **Honoring Visionary Efforts: New Entrepreneurship Award** — On May 29, IEEE-USA announced a new award to honor an IEEE member for furthering entrepreneurial growth and spirit in the United States. The IEEE-USA Entrepreneur Achievement Award for Leadership in Entrepreneurial Spirit is designed to honor a member whose perseverance and visionary efforts have created "a successful business that has commercialized technology products or services," and "advanced society through commerce and community improvement."
- > **Advancing Consultants Networks: Reaching a Growth Milestone** — During 2009, the IEEE-USA-supported Alliance of IEEE Consultants Networks (AICN) boasted 50 consultants networks, including seven in Regions



Student Professional Activities Conferences, Events & Workshops

6 Feb. Virginia Tech
 6 Feb. Christian Brothers - Memphis
 10 Feb. The University of Southern California
 16 Feb. Michigan State University
 18 Feb. McNeese State University
 18 Feb. Ohio State University
 19 Feb. Rowan University
 19 Feb. Valparaiso University
 20 Feb. The University of Texas at Dallas
 24 Feb. University of Florida
 6 Mar. Binghamton University - SUNY
 6 Mar. Georgia Tech
 13 Mar. University of Colorado at Denver
 18 Mar. Louisiana Tech University
 24 Mar. SUNY at New Paltz
 25 Mar. Cleveland State University
 25 Mar. University of Florida
 28 Mar. Embry-Riddle Aeronautical University
 1 Apr. The University of Maine
 8 Apr. DeVry College of New York
 9 Apr. Syracuse University
 10 Apr. The University of Texas at Arlington
 15 Apr. California State University, Long Beach
 16 Apr. University of California, Berkeley
 17 Apr. Texas Tech
 24 Apr. University of Houston-Clear Lake
 25 Apr. Grove City College
 4 May UMass - Dartmouth
 5 May Christian Brothers - Memphis
 7 May University of California, Irvine
 9 May UCLA
 3 Jun. Devry University - Columbus
 24 Sep. University of Florida
 25 Sep. University of Rhode Island
 26 Sep. University of Illinois at Urbana-Champaign
 17 Oct. Boston University
 20 Oct. Gannon University
 21 Oct. University of Florida
 24 Oct. University of Cincinnati
 27 Oct. Gannon University
 29 Oct. University of Utah
 4 Nov. Youngstown State University
 4 Nov. University of Dayton
 5 Nov. The University of Akron
 5 Nov. Ohio Northern University
 10 Nov. The Ohio State University
 18 Nov. Cleveland State University
 19 Nov. Case Western Reserve University
 23 Nov. Case Western Reserve University
 24 Nov. Devry University - Columbus
 1 Dec. University of Kentucky

7-10. IEEE-USA's AICN Coordinating Committee also reinstated its quarterly e-newsletter, providing information and advice for IEEE members considering consulting as a career option.

- > **Nurturing Competitiveness: IEEE-USA's Innovation Institute** — As part of its planning for a programmatic redirection, the IEEE-USA Innovation Institute, in conjunction with National Instruments, conducted a focus group of more than 36 university and industry representatives in Austin, Texas, to discuss how IEEE-USA can best assist them in innovation and competitiveness. The Innovation Institute also joined in sponsoring the *IEEE-USA Workshop on STEM Enterprise: Measures for Innovation and Competitiveness*, held on 21 October 2009, at George Washington University in Washington, D.C. Innovation Institute President Ralph Wyndrum was a featured workshop speaker.
- > **Engaging Engineering Students: Student Professional Awareness 30th Anniversary and Conferences** — IEEE-USA's SPAC program provides IEEE Student Chapters with professional, career and employment advice from seasoned engineers in the form of conferences, events and workshops. IEEE-USA sponsored 49 student professional awareness conferences (S-PACs), events (S-PAVs), and Workshops (S-PAWs) in 2009. On 17 October, the Student Professional Awareness Program celebrated its 30th Anniversary in Boston, Mass.
- > **Supporting Teachers and Students: K-12 STEM Education Activities** — IEEE-USA's Precollege Education Committee held workshops at Northern University (25 Feb.), Widener University (26 Feb.), and George Washington University (13 March) to introduce K-12 math and science teachers to IEEE/IEEE-USA STEM education resources, including the PEC Teacher Reward/Grant Program, the IEEE-USA PEC Teacher-Engineer Partnership Award and IEEE lesson plans available on-line as part of the Teacher in Service Program (TISP) and TryEngineering.org. The workshops were held in conjunction with local JETS TEAMS Competitions. On 21 March, IEEE-USA Communications VP Paul Kostek provided a briefing on career opportunities in engineering to participants in the Department of Energy's 2009 Real World Design Challenge, a new annual competition that provides high school students with the opportunity to apply the

lessons of the classroom to important energy and environment technical problems currently encountered in the engineering field.

- > **Exploring Education: White House Educate to Innovate Initiative** — In September, at the request of the White House Office of Science and Technology Policy, IEEE-USA engaged a dozen engineering societies to participate in a White House meeting to explore a possible STEM Education Initiative for 2010. Participants discussed plans for a National Laboratory Day (analogous to Net Day, 19 April 1997), where scientists and engineers could volunteer to work with middle schools — to help upgrade lab capabilities and for better utilization. In subsequent meetings, the participating societies outlined a year long effort to promote engagements between STEM professionals, teachers and others to enhance K-12 STEM education. On 23 Nov., IEEE-USA President Gordon Day and other STEM community leaders joined President Obama at the White House to announce the *Educate to Innovate* campaign, including National Labs Day and related initiatives.

- > **Providing Professional Development: IEEE-USA's Annual Meeting** — IEEE-USA's 2009 Annual Meeting (held 26 Feb.–1 March in Salt Lake City) drew record attendance, with more than 200 participants. The event featured key note speeches by Utah Governor Jon M. Huntsman, Jr.; Richard Walje, President Rocky Mountain Power; and R. James Woolsey, Venture Partner, VantagePoint, and a Founder of *Set America Free*.



IEEE-USA President Gordon Day introduces Utah Governor Jon M. Huntsman, Jr., who provided the key note address for the 2009 Annual Meeting.

- > **Encouraging Discovery and Exploration: U.S. Science and Engineering Festival 2010** — IEEE-USA will participate in the U.S. Science and Engineering Festival, a two-week series of STEM-related events culminating in two days of discovery and exploration, to be held on the National Mall in Washington, D.C., on 23-24 Oct. 2010. The event will feature hundreds of hands-on displays and activities, and is expected to draw 100,000+ participants.
- > **Partnering with IEEE Computer Society and NCEES: Software Engineering Licensure Examination** — Responding to a National Council of Examiners on Engineering and Surveying (NCEES) request, IEEE-USA and the IEEE Computer Society announced a partnership on 10 Sept., to develop an examination for state licensure boards for prospective use in licensing software engineering professionals. NCEES approved the development of a Principles and Practice of Engineering examination — a P.E. exam — for software engineering in August 2009, responding to a request by ten state licensing boards. The organization develops and administers the engineering and surveying competency exams used for licensing purposes in all U.S. jurisdictions.
- > **Advancing Women in Engineering (WIE): WIE Professional Development Seminar** — IEEE-USA was the primary financial sponsor for the 2009 IEEE Women in Engineering Professional Development Seminar, held 25-27 Sept., in White Plains, New York. The event theme, *Engineer the Future, Sharpen Your Competitive Edge*, offered presentations and panels on such topics as licensure and certification, leadership skills, emotional intelligence, consulting, risk management, and effective communications.
- > **Reaching Out Internationally: International Test Conference Career Track** — IEEE-USA organized a successful Career Track, in conjunction with the IEEE International Test Conference, held 6 Nov. 2009 in Austin, Texas.
- > **Upholding Professional Integrity: Professionals for the Public Interest** — On 19 May 2009, IEEE-USA joined with the American Association for the Advancement of Science, and 17 other national and global organizations, to form Professionals for the Public Interest, a coalition dedicated to promoting professional integrity in the public interest.
- > **Promoting Lifelong Learning: Lifelong Learning Imperative Project** — IEEE-USA President Gordon Day participated in a National Academy of Engineering Workshop on Lifelong Learning, held 18 June 2009, in support of NAE's Lifelong Learning Imperative Project. Dr. Linda Katehi-Tseregounis, of the University of Illinois at Urbana-Champaign, an IEEE Fellow and former engineering dean at Purdue University, chaired the Initiative.

Shaping Public Policy

- > **Aligning Priority Issues/Legislative Outcomes:** During 2009, IEEE-USA focused its advocacy efforts on five key issue areas – innovation/R&D, energy policy, patent reform, immigration reform, and implementing the authorized national health information network from legislation passed in 2008. Despite Congress' preoccupation this year with healthcare legislation, significant progress was made in all five issue areas, with IEEE-USA-backed bills or amendments passed into law or pending in Congress. Some highlights include:
 - IEEE-USA-backed passage of the *American Economic Recovery and Reinvestment Act of 2009* (ARRA) (H.R. 1), signed into Public Law 111-5 on 17 Feb. 2009. Also known as the “stimulus bill”, this law authorized major federal investments, including \$8.9 billion for civilian R&D at NSF, DOE, NIST and NASA, plus \$11 billion in investments related to building the Smart Grid, including workforce development and standards.
 - At the request of Senators Charles Grassley (R-Iowa), and Richard Durbin, (D-Ill.), IEEE-USA supported a successful amendment to ARRA (S. Admt. 306), which extends U.S. hiring certification requirements to all (i.e., H-1B dependent requirement) employers receiving ARRA funds.
 - Working with Senator Ted Kaufman (D-Del.), IEEE-USA supported a substitute amendment to the *Edward M. Kennedy Serve America Act* passed by Congress in March (Public Law 111-13), making S&T professionals eligible to participate in the proposed national service corps. Senator Kaufman had asked IEEE-USA to review his legislative proposal to establish a national volunteer service corps for S&T professionals. After working with him to revise and expand his draft legislation, the Senator was subsequently able to obtain an amendment to the *Edward Kennedy Serve America Act* (Public Law 111-13 that was signed into law.
 - The pending *Patent Reform Act of 2009* (S. 515) contains a *gatekeeper* proposal, empowering judges to give jury instructions on damages issues in patent cases. IEEE-USA proposed the gatekeeper, in response to a House Judiciary Committee request. IEEE-USA has also endorsed other key reforms outlined in the legislation, that the Senate Judiciary Committee has successfully reported, but the legislation still awaits congressional action.
 - Working with former U.S. Representative Bruce Morrison (D-Conn.) and the Semiconductor Industries Association, and by interacting with Rep. Zoe Lofgren (D-Calif.) and Senator Charles Schumer (D-N.Y.), who chair key committees in the House and Senate, IEEE-USA helped shape the content of skilled immigration titles of forthcoming immigration reform legislation consistent with our pro-immigration position. Passage of an immigration reform bill is one of the administration's legislative priorities for Congress, but one currently on hold, pending the outcomes of on-going efforts to pass major health-care reform and energy/climate change legislation.
 - At the request of House Science and Technology Committee Chair Rep. Bart Gordon (D-Tenn), IEEE-USA endorsed the *National Water Research and Development Act* (H.R. 1145), which passed the House on 23 April and is pending consideration in the Senate. Inspired, in part, by increasing awareness of the Energy/Water Nexus issue, the bill would require establishing an interagency committee to coordinate the efforts of federal departments and agencies on water-related issues. It would also direct creation of a National Water Research and Assessment Plan to set national priorities for water-related R&D, demonstration, data collection, education, and technology transfer activities.
 - In Sept., IEEE-USA joined the chorus of organizations urging Congress to reauthorize the expiring Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs that target federal R&D opportunities toward small business. Congress is currently debating a short-term extension until January 2010 to allow more time for consideration of programmatic enhancements.
 - At the request of Senator Ron Wyden (D-Ore.), IEEE-USA endorsed the *Storage Technology of Renewable and Green Energy Act of 2009* (S. 1091) legislation currently pending in the Senate Finance Committee that would provide an energy investment credit for energy storage property connected to the grid, and for other purposes.

IEEE-USA Contributes to IEEE Smart Grid Initiative

Throughout 2009, IEEE-USA worked with the IEEE Smart Grid Committee and the IEEE Standards Association in support of IEEE's Smart Grid Initiative. The main thrust of IEEE-USA's participation was monitoring U.S. legislative and regulatory developments, organizing meetings and briefings to connect IEEE Smart Grid leaders with decision-makers in Washington, D.C. IEEE-USA also worked to ensure that IEEE was well-positioned to take advantage of the Smart Grid standards development and programmatic opportunities called for in the *American Research and Competitiveness Act* and funded through the federal economic stimulus. Following are some highlights of that activity:



Electricity Delivery Workforce Development: Responding to a request from Senate Energy and Natural Resources Chair, Senator Jeff Bingaman (D-N.M.), IEEE-USA enlisted the support of the IEEE Power Engineering Society and its Power and Energy Engineering Workforce Collaborative in a crash, 30-day project to develop a position statement making recommendations to the Department of Energy on how best to allocate \$100M in "stimulus" money appropriated in the *American Recovery and Reinvestment Act* for "worker training activities" related to building the national Smart Grid. Dennis Ray, of the IEEE-PES Workforce Collaborative, chaired a special IEEE-USA task force that developed the recommendations, approved by a special meeting of the IEEE-USA Board on 23 April, subsequently delivered to key DOE officials in meetings held in April and early May 2009. This exercise demonstrated IEEE-USA's ability to act nimbly, respond to a fast-moving opportunity, and partner effectively with IEEE technical societies to draw on their member expertise.

On 21 Sept., DOE released its request for proposals in the Federal Register. In reviewing the request, Dennis Ray observed that DOE's proposed funding plan was "very consistent" with IEEE-USA's advice. Ray added that "IEEE USA's position statement found substantial implementation in the DOE Funding Opportunity Announcement," specifically on areas related to innovation education approaches and curriculum development.

Smart Grid Testimony: With assistance from IEEE Standards and the IEEE-PES Power and Energy Workforce Collaborative, IEEE-USA submitted testimony to the House Science Subcommittee on Environment, Technology and Standards for a 23 July hearing on effectively updating the U.S. national electrical system to a Smart Grid.

Congressional Briefings on Smart Grid Standards: On 26 March, IEEE-USA (with assistance of IEEE-SA) and ASME jointly sponsored a congressional briefing on the status of NIST's efforts related to Smart Grid interoperability standards. In September, IEEE-USA joined with IEEE-SA in organizing a special briefing on the IEEE P2030 Smart Grid interoperability standard for congressional staffers, including a personal briefing for staff of Senate Majority Leader Harry Reid (D-Nev.). IEEE-SA President Chuck Adams and P2030 Work Group Chair Dick DeBlasio delivered the briefings.

DOE Interactions: On 17 July, IEEE-USA President Gordon Day met with DOE Under Secretary for Science Steve Koonin and David Rodgers, Director, Office of Strategic Planning & Analysis, Office Energy Efficiency, followed by a meeting on 16 October with Under Secretary of Energy Kristina Johnson to discuss how IEEE-USA can assist the Department of Energy's mission to advance U.S. national, economic and energy security. As an outcome of the meeting, Under Secretary Koonin requested that IEEE-USA (working with IEEE-PES, and other interested IEEE technical societies) organize a technical conference focused on *IT Implications across Energy Sectors*.

Smart Grid Video: In January, IEEE released *A Smart Grid for Intelligent Energy Use* video via YouTube and IEEEtv, IEEE-USA, IEEE-PES and the IEEE New Technology Directions Committee, with support of IEEE Technical Activities collaborated to develop the video, which generated 31,187 views through October 2009.

National Energy Summit: On 23-24 Sept., IEEE-USA President Gordon Day represented IEEE in a National Energy Summit, organized by the Council on Competitiveness, and featuring keynotes by Energy Secretary Steven Chu, Transportation Secretary Ray LaHood, Commerce Secretary Gary Locke, Presidential S&T Advisor John Holdren, and Vice President Joe Biden, as well as various leaders from industry, academia, and the media.

Road to the New Energy Economy: In partnership with *Discover Magazine*, the National Science Foundation and ASME, IEEE-USA sponsored a four-part briefing series for Congress on *The Road to the New Energy Economy*.

These bills are just a few of the many IEEE-USA has endorsed and supported in the 111th Congress. Other efforts include support for passage of legislation to reauthorize the Federal Aviation Administration; permanently extend the R&D tax credit; fund the DOE's proposed RE-ENERGYSE education program for energy workforce development; and fund K-12 STEM education programs at NSF and the Department of Education.

- > **Promoting Broadband:** IEEE-USA provided recommendations in response to Department of Commerce (NTIA) requests for public comment on using stimulus funds for broadband development, and by the Federal Communications Committee on their proposed national broadband plan.
- > **Filing *In Re Bilski* Amicus Brief:** On 1 Sept., IEEE-USA joined Dr. Lee Holhaar in filing a joint amicus curiae ("friend of the court") brief before the United States Supreme Court in the *In Re Bilski*, a landmark case that deals with issues related to the patentability of processes – one that poses profound implications for software patents. In the *Bilski* case, the Federal Circuit Court rejected a patent claim involving a method of hedging risks in commodities trading. In its brief, IEEE-USA recommended that to be patentable, a process or method must be linked to a "machine, manufacture, or composition of matter," the original clear and simple test used for determining when a process is statutory subject matter. Oral arguments were held before the Supreme Court on 9 Nov., and their decision is expected in Spring 2010.
- > **Visa Processing:** In early June, IEEE-USA joined with the American Association for the Advancement of Science, the Association of American Universities and other members of the Science and Security Working Group in a communication to the Obama administration expressing concern with the significant increase in delays many international students, scholars, and scientists who have applied for visas to study, conduct research, or attend conferences in the United States experienced in early 2009. The statement outlined a number of recommendations to streamline and enhance the visa process. A similar effort and outreach in 2005 resulted in several significant reforms to U.S. visa processing regulations.
- > **Science, Technology, Engineering and Mathematics (STEM) Measures Workshop:** On 21 Oct., IEEE-USA held a workshop on the *STEM Enterprise: Measures for Innovation and Competitiveness*. IEEE-USA's R&D Policy Committee organized the event, in partnership with the Alliance for Science and Technology Research In America (ASTRA); the RAND Corporation; American Society of Mechanical Engineers; Thomson Reuters; American Association of Engineering' and IEEE-USA's Innovation Institute, the program focused on ways to assess and measure the outcomes from federal investments in STEM-related R&D. Held at the George Washington University, the workshop program featured speakers Kei Koizumi, from the White House Office of Science and Technology Policy, and former OSTP Director Jack Marburger. IEEE-USA is developing an e-book proceedings and video excerpts from the workshop that will help inform future R&DPC policy positions on related issues.
- > **Congressional Briefings/Caucuses:** During 2009, IEEE-USA conducted 14 briefings for Members of Congress and their staff, more than double the number in a typical year. Most were organized in collaboration with other societies, or with Congressional Caucuses (informal groups formed by Members of Congress around issues of common interest). The programs typically consisted of two or three speakers, often IEEE Technical Experts, who make presentations and answer questions. Many of the briefings draw an attendance of 50 to 150 people. On occasion, targeted briefings may be conducted for small groups of key staff. The table on the opposite page lists briefings conducted in 2009.



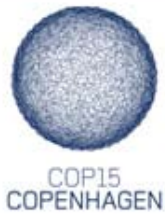
Dr. Diana Hicks, chair of the Georgia Institute of Technology's School of Public Policy speaks at the STEM Measures Workshop on 21 October 2009.

2009 Congressional Briefings

11 Feb.	<i>The American Recovery and Reinvestment Act of 2009, R&D Funding, and Ways to Measure its Effectiveness: Three Perspectives</i>	Open briefing in partnership with the Alliance for Science and Technology Research in America (ASTRA).
24 Feb.	The Dearth of Women in Academic Science and Engineering: Proactive Strategies for Improvement	Congressional Diversity and Innovation Caucus
26 March	Modernizing the Electric Grid: A 'Smart' Way to Use Energy	Congressional Research Caucus
20 May	Bringing Innovative Computing Curriculum Across the Digital Divide	Congressional STEM Education Caucus
21 May	National Robotics Technology Roadmap	Congressional Robotics Caucus
18 June	Cellulosic Biofuels	Open briefing in partnership with Discover Magazine, the National Science Foundation, and ASME
16 July	Energy Storage	Open briefing in partnership with Discover Magazine, the National Science Foundation, and ASME
23 July	Medical and Healthcare Robotics	Congressional Robotics Caucus
19 Sept.	Increasing Energy Efficiencies	Open briefing in partnership with Discover Magazine, the National Science Foundation, and ASME
23 Sept.	IEEE P2030 Smart Grid Interoperability Standard	In partnership with IEEE-Standards Association for select energy staffers in the House and Senate.
13 Oct.	Engineering in K-12 STEM Education	Congressional STEM Education Caucus
15 Oct.	Robotics and K-12 Education	Congressional Robotics Caucus
15 Oct.	Transitional Energy Technologies	Open briefing in partnership with Discover Magazine, the National Science Foundation, and ASME
29 Oct.	Computer Modelling R&D	Congressional Research Caucus

IEEE-USA also continues to co-chair the steering committees that support the congressional caucuses on Research and Robotics.

- > **Helping IEEE Members be Effective Advocates:** IEEE-USA's grassroots program seeks to inform IEEE members about key public policy issues of concern to the profession, educate them on the public policy process, and help them participate directly in visits with legislators and other government officials. IEEE-USA's *Eye on Washington* e-newsletter reaches more than 11,000 members and other subscribers. For the year to date, IEEE-USA arranged nearly 300 congressional visits for IEEE/IEEE-USA volunteers and U.S. IEEE members, including more than 200 visits by the 130 participants in its 2009 schedule of grassroots advocacy events: the Career Fly-In (March 23-24); the 14th Annual Science, Engineering and Technology Congressional Visits Day (April 28-29); the CLEO Fly-In (June 3-4); and the Energy Fly-In (June 15-16). In addition, IEEE-USA's CARE Network has grown



COPENHAGEN DIARY

IEEE's Thomas Lee observes the
UN Climate Change Conference
December 2009



IEEE-USA Congressional Fellow Thomas Lee joined the U.S. Congressional Delegation to Copenhagen for the United Nations Climate Change Conference in December 2009. Lee shared his real-time observations and experiences in a special Copenhagen Diary blog site, as a special feature to IEEE-USA Today's Engineer.

by more than 7,000 members this year, now exceeding 20,000 members, in part by adding the entire Foothill Section (Los Angeles) to the network. IEEE-USA staff has delivered 28 policy-related talks to IEEE Sections and student groups in all six U.S. IEEE Regions.

As part of its grassroots program, IEEE-USA partnered with Scientists and Engineers for America, and other participating organizations, to offer *Campaign School*, a series of educational workshops for engineers aspiring to run for public office. Workshop topics included campaign messaging (22 July), campaign fund-raising (24 Oct.), and campaign organizing (5 Dec.).

- > **New Position Statements:** By year-end, IEEE-USA had released 25 new position statements on topics ranging from electricity delivery workforce training to patent reform.

IEEE-USA's National Energy Policy Recommendations have been widely praised in meetings with senior Energy Department officials and congressional staff. Its Broadband Communications position statement, emphasizing universal availability, is consistent with funding priorities in the American Recovery and Reinvestment Act ("the stimulus bill"). And IEEE-USA's recommendations for deployment of funding for energy workforce training closely match the criteria in a recent Department of Energy request for proposals.



In 10 Dec. testimony to the Senate Energy and Commerce Committee, at a hearing on grid-wise energy storage, Dr. Robert McGrath, Deputy Laboratory Director of the national Renewable Energy Laboratory told Congress that "our nation will be well-served, if recommendations from this year's IEEE-USA Policy Position Statement are implemented."

Perhaps as a result of a long-term IEEE-USA effort urging greater technical expertise in the Federal Communications Commission (FCC), the FCC appointed IEEE Fellow Jon Peha as its chief technologist in 2009, with responsibility for overseeing the development of the national broadband plan.

- > **Policy Communications:** By year-end, IEEE-USA had issued 54 policy communications to Congress and/or key decision-makers in the executive branch on a wide-variety of topics.
- > **Government Fellowships:** Each year, IEEE-USA sponsors three IEEE members to spend a year in Washington, D.C., as government fellows, serving as advisors to the U.S. Congress and to U.S. State Department decision-makers. IEEE-USA's 2009 Government Fellows were Kenneth Lutz (Ocean City, N.J.), Thomas Lee (Palo Alto, Calif.), and Thomas Tierney (Los Alamos, N.M.). Lutz spent his year working on energy and telecommunications issues for Senator Ron Wyden (D-Oreg.). Lee supported Rep. Jay Inslee (D-Wash.) on energy issues. Tierney spent his year as an advisor in the Office of the Coordinator for Counter Terrorism at the U.S. Department of State.



IEEE-USA's 2010 Government Fellows began their orientations in early September. Dr. John Cederquist (Ann Arbor, Mich.) and Dr. L. Jean Camp (Bloomington, Ind.) will spend a year working for the U.S. Congress as Congressional Fellows, while Dr. Norman Lerner (Arlington, Va.) will serve as a technical advisor to the U.S. Department of State as an Engineering & Diplomacy Fellow. Cederquist has accepted an assignment with Senator Jon Tester (D-Mont.).

- > **Washington Internships for Students of Engineering:** IEEE student members Milad Alemohammad (Drexel University), Ian Hoffbeck (Calvin College), and Stephen McGill (University of Pennsylvania) participated in the 2009 WISE program, exploring the intersections of technology and public policy. The WISE interns made their final presentations to an assembly gathered in the Rayburn House Office Building in early August. WISE student papers are published in the *WISE EJournal of Engineering and Public Policy*. After presenting their papers, the WISE interns toured Congress and met with Senator Ted Kaufman (D-Del.) on 6 August.

IEEE's 2009 WISE interns Stephen McGill, Milad Alemohammad and Ian Hoffbeck.
- > **Technical Conference Sponsorships:** IEEE-USA partners in organizing and/or sponsoring technical conferences on subjects that relate to IEEE-USA's mission and purposes. IEEE-USA particularly focuses on conferences that provide a venue for engaging public officials and opinion-leaders on technology policy-related issues, that address public policy or societal implications of technology in the program, and/or that advance technologies deemed important to U.S. economic competitiveness and/or security, especially new and emerging technologies. In 2009, IEEE-USA sponsored or co-sponsored four major conferences:
 - IEEE Green Technology Conference (16-17 April 2009), in partnership with Region 5
 - IEEE International Conference on RFID (27-28 April), in partnership with the IEEE Communications Society
 - IEEE International Conference on Technologies for Homeland Security (11-12 May), in partnership with the IEEE Boston Section
 - Atlanta Conference on Science and Innovation Policy (2-3 Oct. 2009), in partnership with the Georgia Institute of Technology
- > **Sustainability/Energy-Water Nexus:** Through the leadership of IEEE-USA Past President Russell Lefevre, IEEE-USA addressed the issue of sustainability in 2009. IEEE-USA participated in organizing meetings for an IEEE technical committee focused on sustainability issues, as well as participating in an AAES Engineer's Forum on Sustainability, and as a member of the Coalition on Practice, Education and Research for Sustainable Infrastructure (PERSI). In partnership with AIChE's Institute for Sustainability, IEEE-USA supported the First International Congress on Sustainability Science and Engineering, and sponsored an associated Water Workshop on 13 August, in Cincinnati, Ohio, bringing together a forum of representatives from key government agencies to discuss sustainable management of U.S. water resources.
- > **GovDoc E-Books:** As an informational service to IEEE members, IEEE-USA began republishing selected government reports and related public domain documents on selected topics through its E-Book publishing program in 2009, to make them more readily available. Through year-end, ten "GovDoc" titles were released, including the National Science Foundation's *Science and Engineering Indicators 2008*, the National Science Board's draft report on *Building a Sustainable Energy Future*, a House Science Committee report on *The Globalization of R&D and Innovation* and the final report of the *National Energy Policy Commission's Task Force on Future Energy Jobs*.

Increasing the Public Visibility of IEEE and Engineering

- > **Congressional Recognition of IEEE 125th Anniversary:** In support of IEEE's 125th Anniversary celebration, IEEE-USA worked with U.S. Representatives Bart Gordon (D-Tenn.) and Clifford Stearns (R-Fla.) on a special anniversary resolution (H. Res. 413) passed unanimously by the U.S. House of Representatives on 12 May. The resolution appears in the Congressional Record, and congressional deliberations on the resolution were televised nationally on C-Span.



Celebrating 125 Years
of Engineering the Future

- > **TopCoder:** To help raise IEEE's visibility and promote membership, IEEE-USA sponsored the 2009 TopCoder Open, held on 4 June in Las Vegas, Nev. TopCoder is a premier national design competition for computer software professionals (software programmers, web developers and graphics designers). As a sponsor, IEEE-USA had a presence in two Single Round Matches (on-line competitions), as well as the 2009 TopCoder Open, which featured 77 semifinalists from around the globe participating in the championship round of a year-long competition. IEEE-USA arranged for an IEEE membership exhibit and a speaker from the IEEE Computer Society to present on the IEEE software development professional certification programs. As a sponsor, we were able to reach TopCoder's network of more 190,000 professionals with information on IEEE and the benefits of IEEE membership.
- > **The Road to the New Energy Economy:** IEEE-USA joined with *Discover* magazine, the National Science Foundation and the American Society of Mechanical Engineers in organizing a series of congressional briefings on selected energy issues that *Discover Magazine* featured on its website and in magazine articles, giving IEEE-USA multiple exposures to *Discover's* audience of 6.6 million readers.
- > **IEEE-USA Media Relations:** IEEE-USA generates visibility and works to raise public awareness of its issues, technology, and the profession by actively engaging the media. IEEE-USA released 54 press releases in 2009, generating interviews and coverage in such national periodicals as *The Wall Street Journal*, the *Washington Post*, *Business Week*, and *USA Today*.





"Engineers create jobs" has been a frequent theme in our media relations this year, as we have sought to track and analyze unemployment trends in much of the technology sector, and the resulting concerns for the U.S. economy.

- > **Engineers Week Activities (EWeek Family Day):** Each year, IEEE-USA supports a series of activities during National Engineers Week designed to help celebrate the engineering profession and enhance public awareness of engineering. Events and activities include sponsoring the Future Cities Competition and participating in Introduce a Girl to Engineering, Engineer Your Life, DiscoverE, The New Faces of Engineering, the Million Hours Campaign, and other EWeek programs.

One of IEEE-USA's major EWeek initiatives is sponsoring Family Day at the National Building Museum in Washington, D.C. The event features hands-on exhibits and activities, drawing parents and children interested in learning more about engineering. Family Day 2009 featured IEEE member Nate Ball, the host of PBS' engineering reality show *Design Squad*, demonstrating his company's patented Powered Rope Ascender. IEEE-USA volunteers manned booths offering a number of electronics presentations and gave away breadboard project kits. More than 400 event volunteers from various organizations supported the 2009 event, which drew a record 8,178 visitors. Family Day was featured in the *Washington Post*, in two local TV news spots (NewsChannel8 and WHUT-TV), and on WETA radio.

- > **Discoveries & Breakthroughs – IEEE Technologies on TV:** As a sponsor and participant in the American Institute of Physics' *Discoveries & Breakthroughs* TV news service, IEEE-USA helped produce more than three dozen TV news reports on IEEE technologies distributed to 140 U.S. TV stations, and aired on stations with an estimated 122 million views. Over the past five years, IEEE-USA has helped underwrite some 700 local TV news reports on engineering and science through the *Discoveries & Breakthroughs* program.

- > **Mass Media Fellowships:** Two IEEE graduate student members served as IEEE-USA Engineering Mass Media Fellows helping journalists in print and broadcast fields communicate authoritatively to the public about science, engineering and technology: Nicholas Diakopoulos at the *Sacramento Bee* (Calif.); and David Lukofsky, at WOSU-FM, a public radio station in Columbus, Ohio. IEEE-USA is the only engineering organization in the Mass Media Fellows program, administered by the American Association for the Advancement of Science (AAAS). From 2006-2008, AAAS Science & Engineering Mass Media Fellows produced more than 600 first-run stories on science, engineering and technology.
- > **Student Video Contest:** On 12 Feb., IEEE-USA announced the winners of the 2008-2009 *How Engineers Make a World of Difference* Student Video Contest. A first-prize scholarship was presented to Samantha Caldwell, of the University of Texas-Austin, at IEEE-USA's awards ceremony at its 2009 Annual Meeting. IEEE-USA presents four scholarship awards, 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. The 2009-2010 Student Video Contest is currently underway.
 
- > **Washington Radio Announcements:** To increase our visibility within the Washington, D.C. community, IEEE-USA sponsored 30 promotional announcements on WETA-FM, a DC-based radio station whose programming demographic is comprised of 400,000 influential Washington-area listeners. IEEE-USA's radio spots included a brief message about the organization's mission to promote the public good, and its support of community activities in precollege math and science education and technological literacy. These announcements were also used to promote IEEE-USA's involvement as a sponsor of EWeek Engineering Family Day at the National Building Museum in Washington, and to recognize NASA and its Goddard Space Flight Center on the 40th anniversary of the lunar landing.
- > **NASA 40th Anniversary:** IEEE-USA honored NASA on the 40th anniversary of the lunar landing on 20 July 2009, by placing an ad in a commemorative print publication, and in several IEEE publications, including IEEE's flagship magazine, *Spectrum*, as well as airing public radio announcements on WETA-FM in Washington. The commemorative publication was distributed to NASA facilities and contractors, government agencies, professional and trade associations, the general public and NASA visitor centers.
- > **EWeek Family Day Advertising:** IEEE-USA contracted with the Washington, D.C. Metro Transit Authority to place posters heralding EWeek Family Day on all five Metro rail lines, and in two lighted dioramas at the Metro Station outside the National Building Museum where the Family Day is held annually. The first ads were installed in Metro cars on Inauguration Day, 21 January, when a record number of customers, estimated at more than a million, rode Metrorail. In the four-week period during which the ads were posted, nearly four million Metro riders were transported in the 100 cars with the IEEE-USA EWeek ads.
 
- > **IEEE-USA Journalism Awards:** For the first time in 2009, IEEE-USA awarded two \$1,500 honoraria to recognize print and electronic journalists who have added to a greater understanding of the contributions of engineering and computer professionals to society. The two award winners were recognized at the organization's annual meeting in Salt Lake City on 28 February: Alan Boyle, science editor of MSNBC, for his series of articles on future engineering challenges; and John Dodge, editor-in-chief of *Design News*, for his series of articles on key technologies in the Boeing 787 Dreamliner.
- > **Public Television Exposure:** In March, IEEE-USA spearheaded Washington-area IEEE member and staff participation in a televised pledge night on WETA-TV, helping to raise \$10,000, and emphasizing the community involvement of engineers. The IEEE volunteer contingent was recognized on camera during pledge breaks. And IEEE/IEEE-USA logos filled the TV screen.
- > **IEEE-USA History Project:** In support of IEEE's 125th Anniversary Celebration, IEEE-USA assembled a digital archive of documents on the history of the organization, including an overview of the first four decades of

IEEE-USA from 1973-2009; a detailed description of the organization's formation and its first 10 years from 1973-1983; a look at IEEE-USA's growth and maturity from 1984-1999, with annual reports covering the 15-year period; and a glimpse of the organization in the 21st century from 2000-2009, including annual reports, years in review, and program handbooks. IEEE-USA Past President John Meredith presented a paper on the history of IEEE-USA (1973-2009) at the 2009 IEEE History Conference, held 5-7 August in Philadelphia, Pa.

Advancing the Globalization of IEEE's Professional Activities

In 2009, IEEE-USA partnered with MGA on a new initiative project on *Globalization of Professional Activities*, with three specific objectives:

- > Developing a working definition of what "professional activities" encompasses
- > Compiling data and assessing member interests and preferences related to Professional Activities, its management, and financing
- > Developing a strategic plan to assist all regions in developing Professional Activities tailored to their specific needs and interests

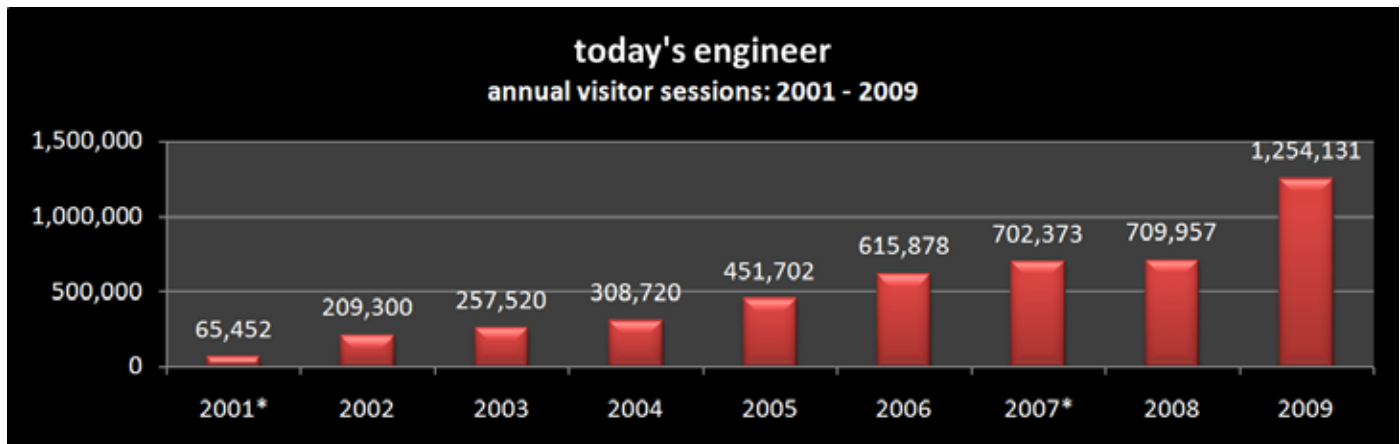
This project was designed to advance the professional purposes outlined in Article II of the IEEE Constitution, and is also responsive to a recommendation from the 2008 Sections Congress that "there are a good number of IEEE member benefits that are relevant or accessible to Regions 1 - 6 members only. IEEE should implement similar benefits of local relevance across all Regions."

A joint MGA/IEEE-USA steering committee, chaired by Francisco Martinez and Russell Lefevre, was formed and began meeting in December 2008. A report of the committee's findings and recommendations was presented to the IEEE Board of Directors in November, with responsibility for next steps assigned to the IEEE Member and Geographic Activities Board.

In addition to outlining a globalization path for professional activities within IEEE, the committee also identified a series of existing professional activities resources and created a website and communications program to help disseminate them more widely to members in Regions 7-10. As a free member benefit, four IEEE-USA e-books and 13 webinars were packaged for electronic delivery on the IEEE-branded *IEEE Globalization of Professional Activities* webpage.

Other Noteworthy Activities and Achievements

- > IEEE-USA's **Today's Engineer** monthly e-journal readership continues to grow steadily, surpassing the one-million visitor session milestone in October 2009. Total readership for 2009 rose 70 percent over 2008. Since 2002, visitor sessions have more than quadrupled.



(* In graph above, 2001 data based on six months; 2007 data is missing April and May.)

- > In September, IEEE-USA kicked off its new Membership Development Incentive for the 2009-2010 IEEE membership years. IEEE-USA will be providing a \$10 incentive split between the Regions and Sections for each new higher grade member recruited over the 2009 member year base line.
- > During the course of a year, many opportunities arise for IEEE-USA and its President to engage the broader community in the nation's capital, and nationally, on a variety of topics. Some 2009 highlights include:
 - On 20 Jan., IEEE-USA co-sponsored the 2009 LinkLive *Technology Serving Humanity* Presidential Inaugural Gala, held at the Corcoran Gallery in Washington, D.C. IEEE-USA President Gordon Day and IEEE-USA Past President Russell Lefevre and their spouses participated in the inaugural gala.
 - During the STEM Congressional Visits Day (28-29 April), IEEE-USA President Gordon Day represented the participating engineering societies in presenting the George E. Brown, Jr. Memorial Award for SET Leadership to U.S. Representative David R. Obey(D-Wis.), chair of the House Appropriations Committee.
 - On 20 May, IEEE-USA was represented at an information meeting with First Lady Michelle Obama to explore how the organization can engage in the administration's *Summer of Service* public service program.
 - In July, the National Academy of Engineering invited IEEE-USA President Gordon Day to respond in the summer issue of *Issues in Science and Technology*, to an article by Dr. Ron Hira on *U.S. Workers in a Global Market*.
 - On 17 Aug., President Gordon Day delivered a breakfast keynote on the *Globalization, Offshoring of R&D, and the Science and Engineering Workforce* to the American Chemical Society's (ACS) Annual Meeting, at a session organized by the ACS Professional and Member Relations Committee.
 - IEEE-USA joined approximately 70 public- and private-sector organizations in co-sponsoring the 4th Annual National Health IT Week, held 21-25 Sept.

2009 IEEE-USA Awards and Recognitions

Award for Distinguished Public Service

Shawn Otto - For taking the lead in elevating science and technology in America's public dialogue through Science Debate 2008

Harry Diamond Award

James M. McGarrity - For contributions to the understanding of radiation effects in microelectronics, and to the development of defense electronics for harsh environments

Citation of Honor

Thomas C. Jepsen - For leadership in advancing the vital role of technology in medical policy and health care delivery

Mitchell A. Thornton - For contributions to the advancement of software engineering licensure in the United States

Professional Leadership Awards

Loretta J. Arellano - For leadership in volunteer development in Region 6

G. Thomas Bellarmine - For leadership in PACE activities in Region 3

Carole C. Carey - For establishing a Women in Engineering professional development seminar in Region 2 that rotates through IEEE U.S. Regions

Uri Moszkowicz - For leadership in GOLD and student activities in Region 1

Darlene Rivera - For leadership in Women in Engineering activities in Region 1

Kevin Taylor - For leadership in integrating IEEE PES participation at the IEEE-USA Annual Meeting

Professional Achievement Awards

Gary Bishop — For leadership in the support of GOLD and K-12 activities

Kheng Swee Goh - For leadership in GOLD and S-PAC activities inspiring young professionals

Mike Hayes - For leadership in organizing the Engineering Expo in Syracuse, N.Y.

Vishnu Pandey - For leadership in increasing GOLD participation at the 2009 IEEE-USA Annual Meeting

John Richardson - For leadership in preparing IEEE-USA's response to the FCC in the matter of *A National Broadband Plan for Our Future*

Gordon Young - For engaging local industry in the 2009 IEEE-USA Annual Meeting

Boeing Corporation - For promoting diversity in the U.S. work force, environmental awareness, and for outstanding support of U.S. IEEE members

Award for Distinguished Literary Contributions Furthering the Public Understanding of the Profession

Randy Atkins - For increasing public understanding of the profession through weekly radio Engineering Innovation reports

Holly Morris - For increasing public understanding of the profession through live television reporting of the EWeek Future City Competition

Award for Distinguished Literary Contributions Furthering Engineering Professionalism

Lee Howard - For investigative reports on the misuse of the H-1B Visa Program

Precollege Teacher-Engineer Partnership Award

George Haus and Richard Sanders - For enhancing the learning experiences of precollege students through a wide range of scientific activities

2009 IEEE-USA Board of Directors



Front Row: James Howard, Russell Lefevre, Gordon Day, Evelyn Hirt, Chris Brantley

Second Row: Emily Sopensky, Leonard Bond, John Twitchell, William Walsh, William Ratcliff, Howard Michel, David Pierce

Third Row: Peter Winokur, Paul Kostek, Don Bramlett, Peter Eckstein, Gary Blank, Ralph Wyndrum, Ravi Todi

About IEEE-USA

IEEE-USA advances the public good and promotes the careers and public policy interests of more than 210,000 engineers, scientists and allied professionals who are U.S. members of the IEEE. IEEE-USA is part of the IEEE. With nearly 400,000 members in 160 countries, IEEE, the world's largest technical professional association, is dedicated to advancing technology for the benefit of humanity.

More information about IEEE-USA can be found online at: <http://www.ieeeusa.org>.

IEEE-USA is located at:

2001 L Street, NW
Suite 700
Washington, D.C. 20036
+1 202 785 0017
+1 202 785 0835 (fax)

About the Annual Report

Compiled and edited by Chris Brantley, Georgia C. Stelluto and Greg Hill.

Cover design and layout by Greg Hill.



IEEE-USA
2001 L St., NW, Suite 700
Washington, D.C. 20036
www.ieeeusa.org

