



## The President's Perspective

What does it mean when the IEEE Foundation says it "Supports the Advancement of Technology and Education"?

It means investing in people by turning your CONTRIBUTIONS into ACTIONS. — Your gifts ...

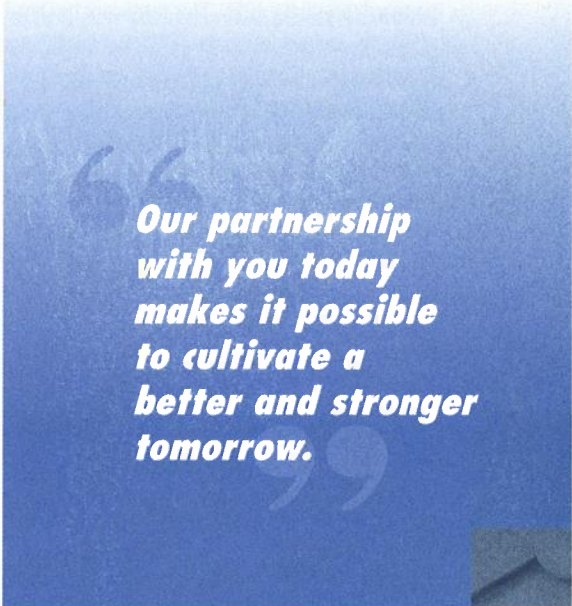
- **RAISE** the level of teachers' technological literacy
- **SUPPORT** the development and dissemination of engineering learning activities for children ages 5 to 18
- **WORK** to keep professional engineering on the leading edge of technology
- **RECOGNIZE** and **CELEBRATE** engineering achievements
- **FOSTER** an appreciation of the impact of engineers on everyday life
- **PROMOTE** the history of electrical and information technologies

During the last several years, thanks to the generosity of our donors, the IEEE Foundation has been able to grant almost US\$1.0 million per year. As a result of the changing economy, we are anticipating an increase in demand for our support. We would not want lack of resources to force us to turn away projects of the type you will read about in this issue of the *Focus*.

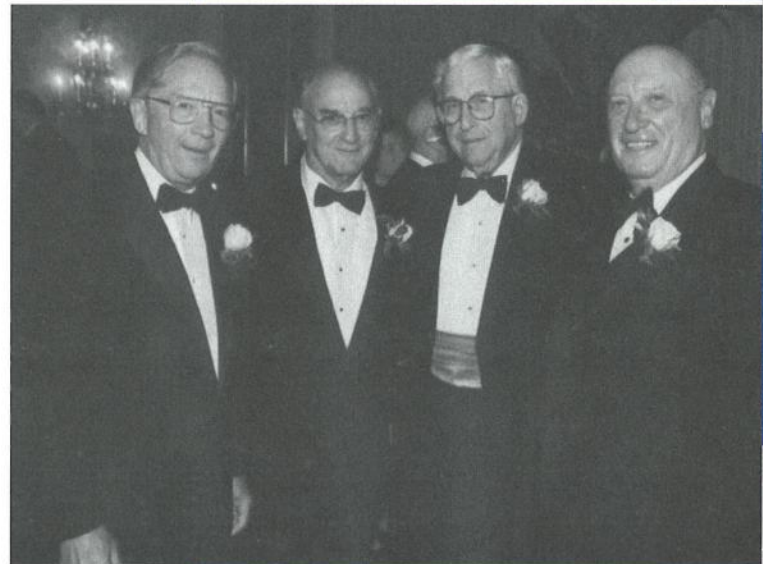
It is my sincere hope that you will continue to renew your commitment year after year and help us in our quest to provide more than US\$1.0 million in funding to support the advancement of technology and education. If you would like to learn more about the IEEE Foundation, please visit us on the web at [www.ieee.org/foundation](http://www.ieee.org/foundation). We welcome your comments and suggestions; please e-mail me at [supportieee@ieee.org](mailto:supportieee@ieee.org).

On behalf of the IEEE Foundation Board of Directors and those who benefit from the Foundation's support, I thank you. Our partnership with you today makes it possible to cultivate a better and stronger tomorrow.

Sincerely,  
**Emerson Pugh**  
President, IEEE Foundation



*Our partnership with you today makes it possible to cultivate a better and stronger tomorrow.*



**IEEE** Foundation President, Emerson Pugh and IEEE Director Emeritus, Eric Herz visit with Arthur Stern, the 2001 IEEE Haraden Pratt Award recipient and Robert Frosch, the 2001 IEEE Founders Medal recipient. The IEEE Haraden Pratt Award and the IEEE Founders Medal are sponsored by the IEEE Foundation





# Partners for 40 Years in Providing Services, Now Partners in Philanthropy

By: Kristina Collmann, IEEE Development Office



**SUSAN Hussar** and Mark Nunes from Seabury & Smith, a Marsh Company present the US\$50,000 gift to Ted Hissey and Emerson Pugh during the June 2001 IEEE Foundation Board Meeting.

Seabury & Smith, a Marsh Company, is on the eve of celebrating a forty-year partnership with the IEEE. This teamwork has resulted in bringing a multitude of benefits and services to the IEEE membership and their families. In 1998, Seabury & Smith created a new partnership, a partnership in philanthropy with the IEEE Foundation.

In April of 1998, Seabury & Smith, an international insurance program management company, illustrated their commitment to this new relationship with a US\$25,000 charitable contribution to support the advancement of IEEE educational programs. This year, Seabury & Smith was approached to renew their support of these critical programs funded by the IEEE Foundation, and not only did they renew, they doubled their gift and presented the Foundation with US\$50,000 on 22 June 2001.

Seabury & Smith is well known for going above and beyond for the IEEE member, so it was no surprise when they expressed their interest in dedicating their gift in honor of a member of the IEEE Foundation Board of Directors who is also known for his commitment to a growing area of the IEEE membership, the student membership. IEEE Director Emeritus, Theodore W. Hissey is respected and loved for his determination to bring the highest level of educational programs to students all over the world. This determination inspired Seabury & Smith, and so with their gift they established the *Seabury & Smith Theodore W. Hissey International Education Fund* within the IEEE Foundation General Fund. The Fund will provide support to programs, selected by the IEEE Foundation Board of Directors, in the area of international education, with a special focus on developing and enhancing educational opportunities in Regions 8, 9, and 10.

We thank Seabury & Smith for partnering with the IEEE Foundation to make these opportunities possible for young engineers. It is partnerships like this one that allow the IEEE Foundation to fulfill its mission to support the advancement of educational and technological programs. If you would like to learn more about the *Seabury & Smith Theodore W. Hissey International Education Fund*, please call the IEEE Development Office at +1 732 562 3915 or email [supportieee@ieee.org](mailto:supportieee@ieee.org).

## Tax Reform 2001: Key Features and Implications for Income, Estate and Charitable Gift Planning

By: Ilisa Hurowitz, Esq.

The Economic Growth and Tax Relief Reconciliation Act of 2001 became law on June 7th of this year. The Tax Act has attracted widespread attention as one of the largest tax cuts in history, including provisions that impact individual income taxation, federal estate, gift and generation-skipping transfer taxes. In areas affecting estate planning and, indirectly, charitable giving, the legislative changes are not as dramatic as anticipated.

The Tax Act "phases in" a number of provisions, and all changes under the new law "sunset" as of January 1, 2011. At that time, the tax law will revert to its status before this Tax Act passed. Additionally, there is likelihood that the law will change – potentially as often as every year – between now and 2011. Accordingly, this is a time of uncertainty, when income and estate planning are challenging, but important. Individuals are especially well advised to meet with their attorneys and financial planners to review income and estate intentions in the context of the new law. It is particularly necessary to build flexibility into one's planning in order to maximize current benefits and to anticipate, to the extent possible, future legislative change.

### A WORD ABOUT PHILANTHROPY:

The occasion for estate, income, and financial planning can also be an opportunity to consider, review, and develop charitable gift plans. A number of charitable gift planning "tools" can effectively address philanthropic goals, as well as a donor's personal financial objectives. Under the new Tax Act, charitable gifts during lifetime can still generate tax savings. In addition, a range of "life income gifts," e.g., charitable trusts, can increase a donor's current income, minimize capital gains, income and estate taxes, and, at the same time, provide a valuable benefit to one's favorite non-profit organization. Further, charitable giving by bequest remains a tax wise way to support philanthropy – at least until 2010, and, in all likelihood, beyond.

### KEY FEATURES OF THE TAX ACT INCLUDE THE FOLLOWING:

- **Income taxation:** Tax rates will be reduced very gradually over time, resulting in a top tax rate of 35% in the year 2006 and beyond. The overall limitation on itemized deductions will be phased out, beginning in 2006 and fully in 2010. This is a change from most recent law, which limited the total of itemized deductions by reducing it by 3% of adjusted gross income over \$132,950.
- **Federal Estate Tax:** This provision has inspired considerable interest and debate. There is a sense that the federal estate tax is effectively repealed. This is not actually the case until the year 2010. Before that time, the top federal estate tax rate will decrease incrementally on an annual basis at the same time that the unified gift and estate tax credit will increase. For example, the top estate tax rate is currently 55%. In 2007, the top rate will have dropped to 45%. The rate will remain flat at that level until 2009, and the federal estate tax will disappear entirely in 2010. At the same time, the lifetime exemption amounts will increase from the 2001 level of \$675,000 to \$3,500,000 by 2009.
- **Gift Tax:** Gift tax rates will also be reduced, but unlike the treatment of the estate tax, the gift tax will not be eliminated. In 2010, the top gift tax rate will be 35% and the lifetime exemption will equal \$1 million – assuming, that is, that future legislation does not further change these provisions.
- **Carryover basis:** Beginning in 2010, when the federal estate tax is scheduled to disappear, a decedent's cost basis in capital assets will "carryover" to those who inherit such property. This is a major change from pre-Tax Act law, which allows for a "stepped-up" basis equal to the market value of the assets at the time of the decedent's death. Even under the new law, the step up in basis will still apply to \$1.3 million of estate assets (the executor will have the discretion to identify those assets), in addition to \$3 million of appreciated assets to a surviving spouse.



# IEEE Foundation Helps to Promote Community World-Wide by Recognizing Engineering Excellence

By: **Karen Galuchie**, IEEE Development Office

The IEEE Joint National Society Awards Project, funded by the IEEE Foundation, presented the first ever award given by the IEEE jointly with another national society on 7 Aug. in Piura, Peru to Dr. Jorge Heraud-Pérez. Dr. Heraud received the Asociación Electrotécnica Peruana (AEP)/IEEE Elektron Award for his extraordinary contributions to the technological development in electronics and his permanent effort in the disclosure and promotion of the benefits of science and technology in Peru. IEEE President, Joel Snyder and IEEE Awards Board Chair, Troy Nagle presented the award at INTERCON 2001.

The IEEE Joint National Society Awards Project is led by IEEE Director Emeritus Ted Hissey and past IEEE President and current IEEE Awards Board member J. Thomas Cain. This award will serve as a model for creating similar joint awards with other national societies.



**Dr. Jorge Heraud-Pérez** surrounded by his students after he was presented with 2001 Asociación Electrotécnica Peruana (AEP)/IEEE Elektron Award during INTERCON 2001.

## IEEE Societies Collaborate for the New Century at the 2001

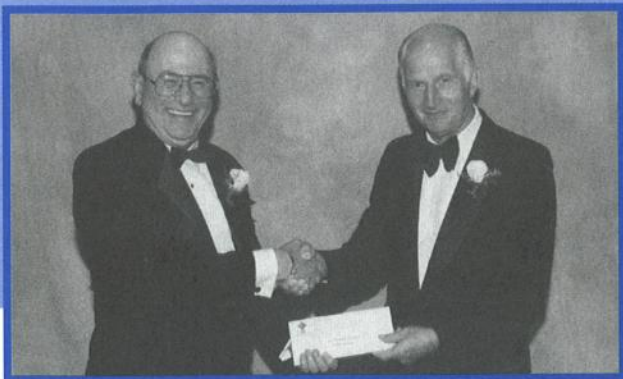
By **Lynn Murison**, IEEE Educational Activities

On 21-22 April in Alexandria, VA USA, nearly 20 IEEE Societies and Councils began an education collaboration for the new century by sending education and web representatives to the 2001 Technical Societies Web Education (WebEd) Workshop. Sponsored by the IEEE Foundation, the goal of the workshop was to empower IEEE Societies to implement web solutions for their outreach and continuing education programs. The focus was to provide participants with the knowledge, templates, and tools necessary to develop high quality online courseware.

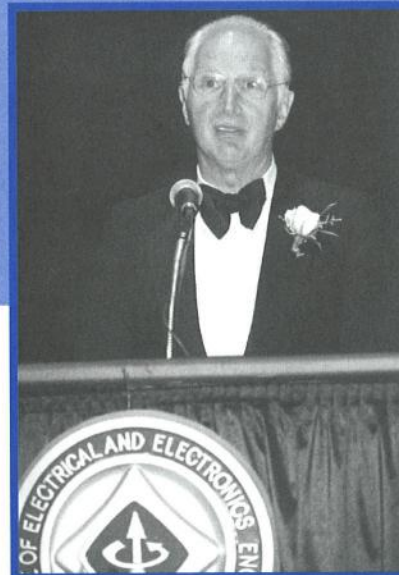
Dr. Saifur Rahman, Chair of the Society Education Committee of the Educational Activities Board (EAB), set a collegial, participatory tone for the 2-day workshop by encouraging questions and comments throughout the program. Society representatives gave 5-minute overviews of their education plans, joined in breakout groups, and learned a new application, Hotfoot, which will facilitate the making and distributing of audio-PowerPoint tutorials.

John Yen from the IEEE Neural Networks Council summed up the general feeling of the workshop participants when he said "I have not had the opportunity to meet my Society counterparts at any other forum. WebEd provided first-hand information to the Societies about the vision, the plan, and the resources of IEEE Educational Activities using new media such as the Web and it enabled the societies to learn from each other about education-related activities."

The overall conclusion of the workshop was that there was a need, on the part of the Societies, for help from EAB to establish a vision, guidelines, standards, and a plan for educational delivery. Representatives left the workshop pledging to contribute a short overview tutorial, using their complimentary copy of Hotfoot, to the IEEE Professional Development Institute (PDI). These tutorials will help the IEEE PDI promote inter-linkage between Societies.



Upon presenting Dr. Herwig Kogelnik (right) with the 2001 IEEE Medal of Honor, IEEE President Joel Snyder (left) said "Dr. Kogelnik's work represents an exceptional value to society by making long distance more affordable. Everyone who makes long distance calls, sends data or faxes, has benefited by this body of work." Kogelnik was presented the Institute's highest Award for his pioneering research and leadership in developing lasers and optoelectronics.



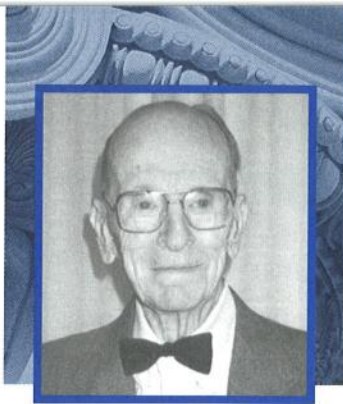
During his acceptance speech, Dr. Kogelnik said, "An Award such as this one inspires all kinds of feeling, I feel honored, humble, lucky, and grateful. Grateful to the IEEE and lucky to have been at the right place at the right time – Bell Labs." He went on to say "It was fun to be part of this technological revolution." Sponsored by the IEEE Foundation, the Medal of Honor recognizes an exceptional contribution or an extraordinary career in the IEEE fields of interest.



## Engineer - Donor - Friend

It is with sadness that we share with you that Dr. Cyril G. Veinott passed away this past February on his 96th birthday. The recipient of the 2000 IEEE Medal for Engineering Excellence and numerous other honors, Dr. Veinott will always be remembered for his lifetime of work devoted to all aspects of small motor theory and technology.

Dr. Veinott will not only be remembered for his professional legacy, but for his generosity as well. As a mentor and active IEEE volunteer, Dr. Veinott wanted to



encourage the development and participation of others in the IEEE. With this in mind, he contributed over US\$130,000 to establish and fund in perpetuity *The Cyril G. Veinott Electromechanical Energy Conversion Award*.

Dr. Veinott is survived by his wife, June, and his son, Richard.

## 2000 Honor Roll of Donors Corrections:

The following information was erroneously listed in the 2000 Honor Roll of Donors. The IEEE Development Office makes every effort to ensure the accuracy of the listings, however mistakes do sometimes occur.

The corrections are as follows :

- T. H. Bonn was listed as T. H. Bond
- Daryl T. Hester was mistakenly listed as deceased
- Joseph V. Lillie should have been listed as a member of the 2000 IEEE Board of Directors

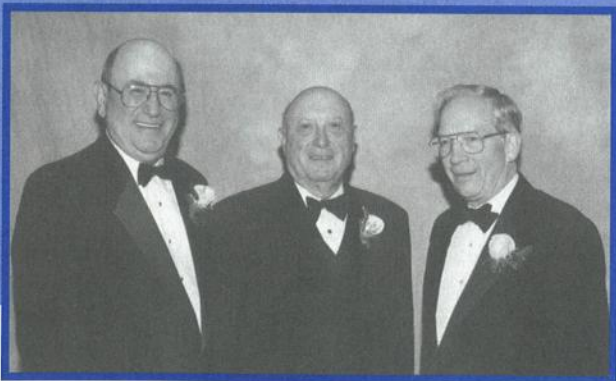
*We thank you for helping us to succeed in our mission and we apologize for any inconvenience.*

## WebEd Workshop

Dr. Rahman closed out the successful workshop by announcing a contest for the best overview tutorials. Prizes will be US\$500, \$350, and \$200. The contest is open to any IEEE Society, whether or not representatives attended the workshop. Tutorials must be submitted by 15 September to be eligible for the prizes.

Full information on the WebEd, including the presentations given by Society representatives, volunteers, and staff, and the rules and criteria for the contest, can be found at [www.ieee.org/eab/webed2/](http://www.ieee.org/eab/webed2/).

**WebEd** participants help each other to learn Hotfoot



Dr. Robert A. Frosch (center) received the 2001 IEEE Founders Medal for a career of significant advance in aerospace and automotive technology, and industrial ecology, and for skilled administration of R & D in industry, government and academia. The IEEE Founders Medal is sponsored by the IEEE Foundation. (L to R) IEEE President Joel Snyder, Dr. Frosch, IEEE Foundation President Emerson Pugh.



IEEE President Joel Snyder (left) along with IEEE President-Elect Ray Findlay (right) and IEEE Secretary Hugo Fernandez (center right) present Arthur Stern (center left) with the 2001 IEEE Haraden Pratt Award for exceptional contributions to IRE and AIEE, advancing solid-state technology, and providing outstanding leadership in the early years of IEEE. The Award is presented for outstanding service to the Institute and is sponsored by the IEEE Foundation.



# Thanks to the IEEE Foundation, IEEE Student Members Connect at IEEE Telecom History Conference

By Michael N. Geselowitz, Ph.D., Director, IEEE History Center



**CORNELIA Connolly** makes a point at the student poster session while colleague Jakob Nebeker looks on.

On 25-27 July 2001, the IEEE History Committee held the fifth in its biennial series of history workshops. The theme of this workshop, held in St. John's, Newfoundland, Canada, was "The History of Telecommunications." The goal of these biennial conferences is to explore the history of recent technology by bringing together the rare individuals who have a hand in both history and engineering, engineers with an interest in history, and some historians who will benefit from exposure to the engineering perspective while also bringing a more purely historical analysis to the table for the benefit of the engineers. This conference was by all measures and accounts a great success. Some 47 individuals from eight countries attended, with a balanced mix of historians and engineers. The setting was superb, and all of the 32 papers were well received.

This year's conference was made especially enjoyable by the inclusion of the IEEE student members. In the past, young engineers have not been a presence at these functions, but this time, thanks to a grant from the IEEE Foundation, the conference was able to hold the IEEE Student Branch History Paper Contest. Students were encouraged to research their own local history of

telecommunications for their submissions. The winners received funding to present his or her paper at the conference. The goal of the History Paper Contest was to raise interest and awareness among students concerning the history of engineering in general and in their home regions in particular.

In all, five Regions submitted papers, and all five Regional winners were able to attend the conference and present his or her paper in a special poster session. The students got a rare opportunity to meet with senior IEEE members as well as historians interested in the students and their regions. They also were exposed to IEEE's historical activities, and several have already said that they will become involved in IEEE Milestones activities back home. As one student emailed soon after the conference, "The conference and the time that I spent with my fellow students and with all of you was great!"



**THE** students receive their awards: From Left to Right, Jakob Nebeker, University of Illinois, USA (Region 4), Keiko Tanaka, University of Washington, USA (Region 6), Rahul Malik, Nanyang Technological University, Singapore (Region 10), Cornelia Connolly, University of Limerick, Ireland (Region 8), Rodrigo Carvallo Fernandini, Catholic University, Valparaiso, Chile (Region 9).

## Connecticut Teenager Wins US\$10,000 IEEE Presidents' Scholarship

By Lynn Murison, IEEE Educational Activities

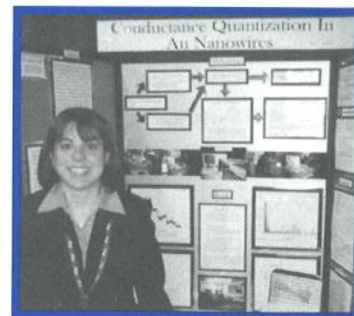
Mariangela Lisanti won the US\$10,000 IEEE Presidents' Scholarship with her project "Conductance Quantization in Au Nanocontacts." The 17 year old senior from Staples High School, Westport, Conn., USA was presented with the scholarship, on 10 May 2001 at the annual Intel International Science and Engineering Fair (ISEF) held in San Jose, CA, USA.

Sponsored by the IEEE Foundation, the IEEE Presidents' Scholarship recognizes "outstanding achievement in creating a project that demonstrates an understanding of electrical engineering, information technology, or other IEEE fields of interest." This scholarship has the distinction of being the only Institute-wide scholarship awarded to a pre-college student and is the largest single special award given by an organization at ISEF.

Lisanti won the scholarship for her novel technique for measuring conductance quantization in metallic nanowires, using gold as its conductor. It is both faster and less expensive than the three devices commonly used, aiding in the continuing quest for the miniaturization of electronic devices. "I predict that she

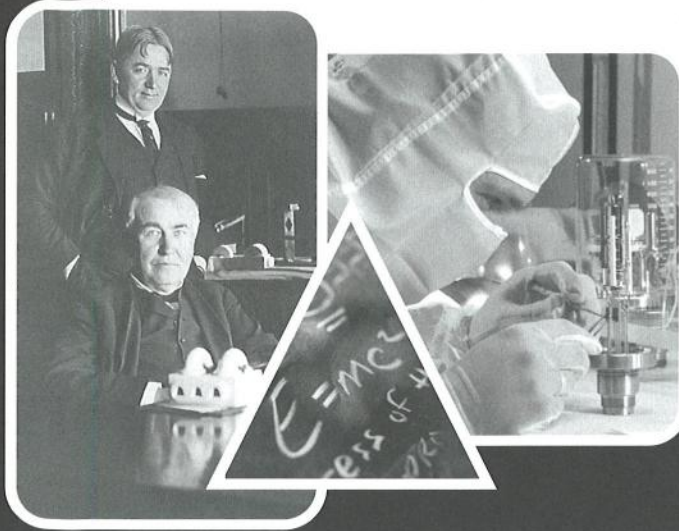
will be heard from in the future," said IEEE past President Bruce Eisenstein who traveled to San Jose to present the award.

When asked why she chose this project, Lisanti said, "I wanted to learn about quantum mechanics and thought the best way was to try a practical application in condensed matter physics." Lisanti continued by saying, "There are a lot of tough times when you're doing research and you have to be lucky, but my motto is: the more hard work you put in will increase the probability that you'll be lucky." Lisanti is continuing her research during the summer at Yale University and hopes to publish her findings. She will attend Harvard University beginning September 2001.



**MARIANGELA Lisanti** in front of her scholarship winning project "Conductance Quantization in Au Nanocontacts"

# Create The Future



- ◆ Recognize Engineering Achievements
- ◆ Foster a life-long appreciation of mathematics, science and technology in students
- ◆ Support the development of engineering oriented learning
- ◆ Promote the legacy of electrical and information technology

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