

# The President's Perspective

One of the primary objectives of the IEEE Foundation is to connect the interests of potential donors with the exciting visions of those from the many IEEE units and thus expand the educational and scientific services provided on behalf of the IEEE. As part of this outreach, the IEEE Foundation provides grants to promote the development of new programs and services throughout the world.

This newsletter illustrates the wide range of programs and activities supported through the IEEE Foundation. From the recognition of excellence through the presentation of peer-to-peer awards to the Presidents' Scholarship recipients, the IEEE continues to encourage the hallmark of achievement that has been our proud tradition for the last 122 years.

The article on page 5 about the Teacher's In-Service program (TISP) provides an example of the results possible by combining dedicated volunteers and staff with an IEEE Foundation project grant to create an important contribution to improve education. IEEE Foundation grants also keep the past alive through history initiatives like the Benjamin Franklin House in the United Kingdom (article on page 6).

The story highlighting IEEE Life Fellow, Prasad Kodali, with a record of distinguished service to India and to the IEEE, provides the reminder that the many members of IEEE around the world can make a difference in the quality of life of all peoples through their donations. Contributions to the IEEE Foundation help to expand the worldwide educational and scientific services provided through the IEEE.

On behalf of the IEEE Foundation Board of Directors, staff, and the many recipients of the activities and services made possible through contributions, I thank you for honoring us with your continued support and steadfast commitment.

Best Regards,



Richard J. Gowen  
2006 President, IEEE Foundation



**IEEE Foundation President** Richard J. Gowen (middle) congratulates Dr. Toshiharu Aoki (right) and his wife, Mitsuko (left) for winning the 2006 IEEE Founders Medal, sponsored by the IEEE Foundation.



# Gifts Growing Toward Goal — Presidents' Scholarship Fund Challenge Update

By: Susan Frentz, IEEE Development Office

The IEEE Presidents' Scholarship Fund Match Challenge has raised just under US\$60,000 in donations to support the annual awarding of the Presidents' Scholarship to students in the engineering or science fields. However, to meet the IEEE Foundation's goal of matching US\$100,000 in donations through 2009 and to support the continuation of engineering education in a world where the cost of a college education continues to rise, more donations are needed.

Leading the way amongst the current contributors is Peter A Lewis, whose gift will be matched by PSE&G. Not far behind is Dorsey & Whitney LLP, who made their US\$10,000 gift in recognition of the three most recent presidents, Dr. Michael Lightner, Dr. Leah Jamieson and Mr. W. Cleon Anderson, as well as past presidents.

Another leader is Charles A. (Bud) Eldon, who believes the benefits of this fund will be great for both the IEEE and the IEEE Foundation. "I believe that IEEE itself will benefit, by encouraging more students to join

IEEE, and the Foundation will benefit by demonstrating what it does for members," he said.

*The student receives a  
US\$10,000 scholarship to study  
engineering or a related field.*

The IEEE Presidents' Scholarship, which is named for all the presidents of the IEEE, is awarded to one student every year to recognize individual science and engineering knowledge through a winning project presented in an IEEE field of interest at the Intel International Science and Engineering Fair. The student receives a US\$10,000 scholarship to study engineering or a related field.

Are you ready to respond to the challenge? Contribute your gift to help the future of engineering and science by visiting [www.ieeefoundation.org](http://www.ieeefoundation.org) and click on the "Donate Online" tab.



**Five IEEE Past Presidents** and the current IEEE President proudly accept Dorsey & Whitney LLP's gift to the IEEE Presidents' Scholarship Fund during the June 2006 IEEE Foundation Board meeting. Pictured left to right are W. Cleon Anderson, 2005 IEEE President, Michael R. Lightner, 2006 IEEE President, Raymond D. Findlay, 2002 IEEE President, Richard J. Gowen, 1984 IEEE President, Peter S. Hendrixson, Managing Partner, Dorsey & Whitney LLP, Robert J. Dwyer, Jr., Partner, Dorsey & Whitney LLP, Arthur W. Winston, 2004 IEEE President, and Wallace S. Read, 1996 IEEE President.

## Donors Who Have Met the Challenge

Clinton J. Andrews

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Charles A. (Bud) Eldon

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# Budding Engineer Wins 2006 IEEE Presidents' Scholarship

By: Allison Ickowicz, IEEE Educational Activities

A three-dimensional laser scanner, built by high school sophomore Brandon Lee Reavis, has won the budding engineer the 2006 IEEE Presidents' Scholarship from the IEEE Foundation. IEEE President-Elect Leah Jamieson presented Reavis with the scholarship for his project, "3-D Silhouette Laser Scanning: A Digital Reconstruction of Real-World Objects into Point Clouds," at the 57th Intel International Science and Engineering Fair (ISEF), held from 7 to 12 May in Indianapolis.

Reavis' device scans an object and transfers it into a computer as a 3-D image. Such a 3-D laser scan can be used for numerous purposes such as inputting the shape of a sculpture into a computer for analysis or recording details of delicate archeological remains.

He designed his scanner to outperform existing 3-D scanners in two ways: to capture more details of an object's contour and to cost less to build. Three-D scanners on the market typically sell for more than US\$10,000, while his model can be put together for

about US\$400. "I knew the project would also allow me to learn more about software and electrical engineering," Reavis says.

"I already knew about silhouette scanning, but wanted to find a way to do it more effectively," Reavis says. "I found a way to rotate the object in front of a camera while scanning it with two lasers to get multiple views for the computer to analyze." The lasers allow for more detailed scans of an object and are not limited to scanning only the outermost contour-like cameras in existing 3-D scanners. Reavis can also move the lasers via a computer to make further contours visible — a feature not possible with ordinary 3-D scanners.

The son of a product safety engineer, Reavis hopes to one day work in either robotics or computer engineering. He has not yet chosen which university he will attend.

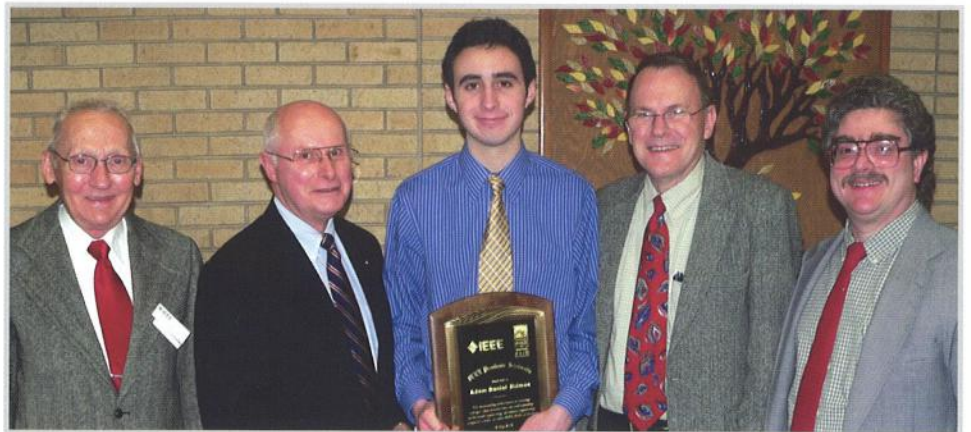
The IEEE Presidents' Scholarship consists of US\$10,000 payable over four years of undergraduate study, a framed certificate, a brass and walnut plaque, and complimentary student membership dues during college. It is awarded every year to a high school student who creates and enters a project in the Intel ISEF that demonstrates a fine understanding of electrical or electronics engineering, computer science, or other IEEE field of interest. The winner must also intend to study an IEEE area of interest in college.



**Leah Jamieson**, IEEE President-Elect, congratulates Brandon Lee Reavis after he receives the 2006 IEEE Presidents' Scholarship sponsored by the IEEE Foundation.

## 2005 IEEE Presidents' Scholarship Winner Headed to Harvard

A year after Adam Michael Sidman received the 2005 IEEE Presidents' Scholarship for his project, "Camera Stabilization: Take 2," he is headed to Harvard University. Adam plans to study his two passions, engineering and filmmaking, both of which were key parts of his project.



**Adam Sidman**, 2005 IEEE Presidents' Scholarship winner, was presented with a congratulatory plaque during a Colorado Springs District 11 School Board meeting by IEEE Volunteers. Pictured left to right: Dave Wells, Awards Chair, IEEE Pikes Peak Section; Pete Lewis, Director, IEEE Foundation; Adam Sidman, John Meredith, Past IEEE Region 5 Director; and Rich Painter, Chairman, IEEE Pikes Peak Section.



# Edison Lecture Reaches Thousands of Students in Texas

By: **Dr. Anthony Ambler**, IEEE Fellow

The United States is facing a severe shortage of home-grown technical know-how. The Edison Lecture Series was organized by The University of Texas at Austin's Department of Electrical & Computer Engineering in order to address this crisis. It is an annual event designed to excite middle and high school students about the possibilities

of a career in technology. The hour-long presentation includes hands-on activities and dazzling examples of how creative and fun engineering can be. A similar lecture series conducted in the UK (the Faraday Lecture) has contributed to a 20% increase in applications to study engineering at the college level.

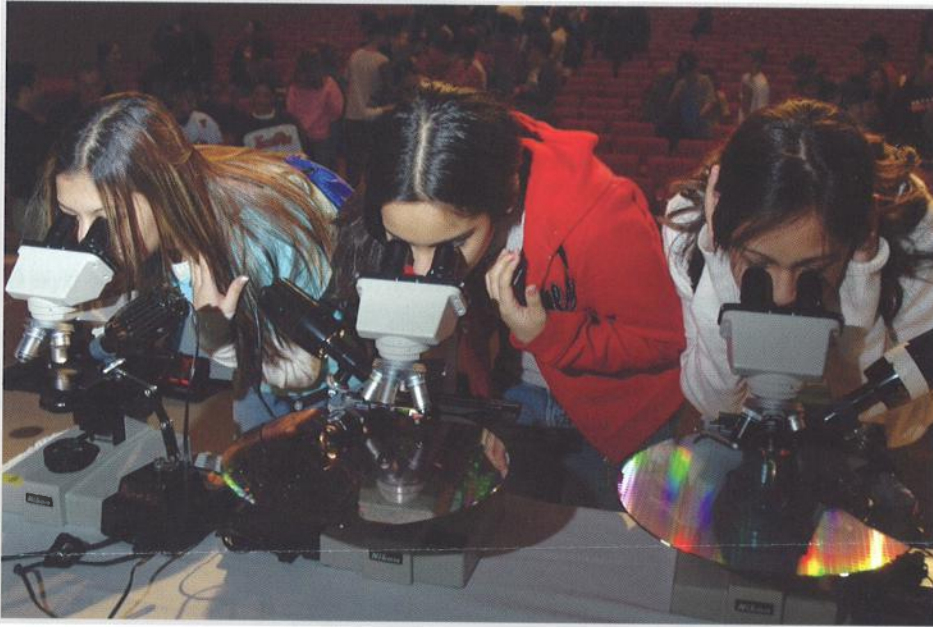
Last year, the IEEE Foundation's generous support of The Edison Lecture Series helped expose over 4,000 middle and high school students to the impact and future of microprocessors. Over 1,200 attended one of the free live shows on The University of Texas at Austin campus. There were four performances for school groups and one night show for families—all of which are also streamed real-time on the website ([edisonlectureseries.org](http://edisonlectureseries.org)). Another 3,000 students participated in Texas Connects: Edison Day, a day-long video conference presented by the Texas Education Telecommunications Network.

Next year the show will focus on Renewable Energy.

Highlights will include

- 800 sq ft off-the-grid solar house
- Solar car designed, built, and "rayced" by UT undergraduates
- Giant wind turbine blades
- Hybrid car demonstrations
- TV powered by a bike

Videos of past Lectures, and information about the upcoming one, are available at [www.edisonlectureseries.org](http://www.edisonlectureseries.org).



**High School** students discover the intricacies of microprocessors during the 2006 Edison Lecture, *Microprocessors, The Past, Present, and Future*

# Recognizing Pioneers of the Profession — 2006 IEEE Honors Ceremony

By: **Elianna Goldman**, IEEE Development Office



**Hosted by IEEE President** Dr. Michael R. Lightner, and IEEE President-Elect, Professor Leah H. Jamieson, the 2006 IEEE Honors Ceremony was held 24 June 2006 in Minneapolis, MN, USA. The event recognized 17 individuals and one corporation for laying the foundation for technologies and applications considered commonplace today.



**Dr. Toshiharu Aoki** (left) accepts the 2006 IEEE Founders Medal from Leah H. Jamieson (right). In the philanthropic spirit of giving back to his profession, Dr. Aoki generously donated his award honorarium back to the IEEE Foundation.



**The recipients** honored during the Honors Ceremony.