Computer Society Sponsors Prizes at Intel Science Fair

Each year, both the IEEE Computer Society and the IEEE Foundation sponsor special awards for outstanding high school students at the Intel International Science and Engineering Fair, which takes place this year 10-15 May in Reno, Nevada. ISEF moves to San Jose, California, in 2010.

SPECIAL AWARDS AT ISEF

Millions of students from around the world annually participate in local and school-sponsored science fairs, competing to advance to Intel ISEF-affiliated regional and state science fairs, from which the best win the opportunity to attend ISEF. Intel ISEF showcases the talents of these top young scientific minds on an international stage, where they submit their work to judging by top scientists and compete for nearly $4 million in prizes and scholarships.

The Society for Science & the Public cooperates with Intel, along with dozens of other corporate, academic, government, and science-focused sponsors who provide support and awards for ISEF.

IEEE Computer Society prizes

The IEEE Computer Society presents one first award of $1,000 and a team first award of $500 to each team member, one second award of $500 and a team second award of $400 to each team member, and one third award of $350 and a team third award of $300 to each team member. Winners also receive a framed certificate and a one-year free subscription to the Computer Society magazine of their choice. A group photo of the winners will be published in an issue of Computer.

IEEE Presidents’ Scholarship

Given by the IEEE Foundation for outstanding achievement in the field of engineering, the IEEE Presidents’ Scholarship includes a $10,000 scholarship payable over four years for undergraduate study in engineering or a related field. The winner also receives a plaque, a framed certificate, and free IEEE membership for the duration of the scholarship.

IBM’S ROBERT DENNARD RECEIVES 2009 IEEE MEDAL OF HONOR

The IEEE Foundation, the philanthropic arm of the IEEE, announced recently that Robert H. Dennard, a Fellow at IBM's Thomas J. Watson Research Center, will receive the 2009 IEEE Medal of Honor. Dennard invented the one-transistor dynamic random access memory in 1967.

In the early 1960s, RAM was memory reserved for writing to and reading from in a temporary fashion, to be erased every time the computer was turned off. However, by the mid-1960s RAM required an elaborate system of wires and magnets that was bulky and consumed great volumes of power. Dennard’s groundbreaking achievement was to reduce RAM to a memory cell with only a single transistor. In today’s computers, a single chip can now hold a billion or more RAM cells.

Dennard’s award citation reads, “For invention of the single transistor Dynamic Random Access Memory and for developing scaling principles for integrated circuits.”

Dennard holds the National Medal of Technology, presented to him in 1988 by then-US president Ronald Reagan. He was inducted into the National Inventors Hall of Fame in 1997.

The Medal of Honor is the IEEE’s highest award. Five years after the formation of the Institute of Radio Engineers, the Medal of Honor was established as its first award, recognizing distinguished service in the then-fledgling art of radio communications. Major Edwin H. Armstrong received the first Medal of Honor in 1917. The Institute of Radio Engineers merged with the American Institute of Electrical Engineers in 1963 to form the IEEE.

For details on the IEEE Medal of Honor, as well as other IEEE medals, visit www.ieee.org/portal/pages/about/awards/medallist.html. Nominations for the 2010 IEEE Medal of Honor are due by 1 July.
Intel Foundation Young Scientist Award

The winners of this award are the top three students at Intel ISEF. They each receive a $50,000 scholarship. The scholarship is awarded in eight equal installments to students enrolled at any accredited degree-granting institution of higher education, following their successful completion of high school.

Recipients must provide proof of registration and good academic standing from their school’s registrar each semester.

Students recognized by the Computer Society often win other honors at ISEF. In 2008, $10,000 first-award winner Erika DeBenedictis also received a $3,000 award from the US Air Force, a $1,000 prize from Intel, and a $150 award from the Patent and Trademark Office Society. For a detailed list of ISEF winners from previous years, which includes recipients of Computer Society prizes, visit www.societyforscience.org/isef/results. For further information about the IEEE Presidents’ Scholarship, visit www.ieee.org/web/education/preuniversity/scholarship.

CRA and CDC Announce 2009 Undergraduate Research Programs

The Computing Research Association’s Committee on the Status of Women in Computing Research and the Coalition to Diversify Computing have announced a slate of 2009 programs that involve undergraduate students in cooperative research. The initiative aims to increase the numbers of women and minorities who continue on to graduate school in computer science, engineering, and related disciplines.

Coalition to Diversify Computing

A cooperative effort by the IEEE Computer Society, the Computing Research Association, and the Association for Computing Machinery, the Coalition to Diversify Computing seeks to address today’s shortage of highly trained scientists and engineers through the development of a diverse community of professionals that can effectively meet the computing demands of an evolving society.

CREU

The Collaborative Research Experience for Undergraduates is designed to provide positive research experiences for teams of undergraduates who will work during the academic year and optionally the following summer at their home institutions. Formerly administered as two separate programs, CREU and Multidisciplinary Research Opportunities for Women (MRO-W), the program has been both consolidated and expanded to include not only computer science and engineering research but also multidisciplinary research.

Each research team consists of undergraduate students and sponsoring faculty members. In the case of multidisciplinary projects, each team consists of faculty from both the computing and noncomputing fields as well as students from these respective fields. For example, a project in computational biology might include a computer science major, a biology major, a computer science professor, and a biology professor.

The program typically begins in the fall and runs either through the
Students maintain a weekly journal and website that document their progress. At the end of the project, students submit a one-page summary of their work that will be posted on the CRA-W website. Students are also encouraged to submit papers to appropriate journals and to present papers or posters at noteworthy conferences. The program may provide travel funds to support such participation.

Students each receive a stipend of $3,000 for their work during the academic year and $4,000 during the summer. Each project may also request up to $1,500 to be used for special equipment, travel, or supporting materials.

Participants must have completed two years of undergraduate study at the college level, encompassing at least four courses in their respective majors. Applications are due by 1 May. Teams consisting of all women or all underrepresented minorities are especially encouraged to apply.

More programs
The Distributed Research Experiences for Undergraduates program matches promising undergraduate students with a faculty mentor for a summer research experience at the faculty mentor’s home institution. This initiative targets students from all underrepresented groups, women and men, who are enrolled in a US college or university or who are US citizens or permanent residents studying abroad. DREU was known as the Distributed Mentor Project from 1994 to 2008.

The CRA-W also continues to sponsor the MRO-W project through summer 2009 (applications due by 9 May), and administers an analog of the DREU program that serves undergraduate women studying in Canada. For complete details, including application requirements and examples of previous projects, visit www.cra.org/Activities/craw/UgradResearch.