Weyuker and Barbacci Honored with Society Awards

In an ongoing effort to recognize technical achievements and service to both the Society and the profession, the IEEE Computer Society each year presents two distinct types of awards. Technical awards, many of them highly coveted, spotlight pioneering and significant contributions to the fields of computer science and engineering. Service awards honor volunteers and staffers who have made valuable contributions to the Society.

ELAINE WEYUKER WINS 2004 HARLAN D. MILLS AWARD

AT&T Fellow Elaine J. Weyuker, one of only two women to hold that title, has been named recipient of the 2004 Harlan D. Mills Award, which recognizes researchers and practitioners who have made longstanding, sustained, and meaningful contributions to the theory and practice of the information sciences, focusing on contributions to the practice of software engineering through the application of sound theory.

Her citation reads, “For leading research on rigorous software testing including industrial evaluations of the comparative effectiveness and costs of such testing methods.” Weyuker’s other honors include the AT&T Chairman’s Award, the YWCA Woman of Achievement Award, and recognition as an outstanding alumnus by Rutgers University.


Winners of the Harlan D. Mills Award receive a $3,000 honorarium, a museum-quality memento, and an invitation to speak at the annual International Conference on Software Engineering.

MARIO BARBACCI RECEIVES 2005 RICHARD E. MERWIN AWARD

Mario Barbacci, cofounder of the Software Engineering Institute at Carnegie Mellon University in Pittsburgh, recently received the 2005 Richard E. Merwin Distinguished Service Award. Barbacci also served as the founding chair of the International Federation for Information Processing (IFIP) 10.2 Working Group on computer descriptions and tools. His citation reads, “For outstanding achievements and dedicated service to the IEEE Computer Society.”

A fellow of the IEEE, Barbacci is the recipient of several IEEE Computer Society Outstanding Contribution Certificates, the IFIP Silver Core Award, and the ACM Recognition of Service Award. He currently lectures as part of the IEEE Computer Society Distinguished Visitor program and served as IEEE Division V Director in 1998 and 1999.

Winners of the Richard E. Merwin Award, the Society’s most prestigious service award, receive a bronze medal and $5,000 for outstanding service to the profession at large, including significant service to the IEEE Computer Society or its predecessor organizations. Past recipients include Sidney Fernbach, Oscar Garcia, Gerald Engel, and Doris Carver.

The IEEE Computer Society presents more than 20 annual awards that carry honoraria of up to $10,000. The nomination deadline for most awards is 1 October. For details on awards criteria, lists of past winners, and nomination forms for future awards, visit www.computer.org/awards.

Editor: Bob Ward, Computer; bnward@computer.org
Computer Society International Design Competition chair Alan Clements, of the UK’s University of Teesside, recently addressed the ongoing impact of decisions made in the earliest stages of conceiving and launching the influential university-level computer system design and programming contest.

Said Clements, “The Computer Society’s International Design Competition did not arise by accident. From its very beginning, all those involved saw the competition as a means of implementing many of the threads of the Computing Curriculum 2001 project. Getting an education in computer science involves a lot more than simply absorbing a body of knowledge. It’s all about applying that knowledge to real-world problems. When students graduate, they will not be given nicely prepackaged problems that an individual can solve in an hour or so. They are going to have to deal with poorly specified problems that cut across conventional curriculum boundaries and require the cooperation of a diverse team of people. Moreover, real problems involve professional issues such as safety, the need to conform to international standards, and even the need to create user documentation.”

Teams participating in CSIDC work to solve problems of their own choosing to address a central theme that changes from year to year. In 2006, the CSIDC theme is Preserving, Protecting, and Enhancing the Environment. Teams are, therefore, free to design systems that could benefit any part of the environment, including air and water quality, wildland ecosystems integrity, urban quality-of-life issues, fire management, or coastal erosion control, to name only a few possibilities.

Clements said, “By being required to work in teams for a semester or more on a totally open-ended problem, student competitors are forced to come up with cost-effective solutions that require mastering many areas of computer science, considering professional ethics, and often gaining a thorough understanding of another discipline. For example, if a CSIDC team decides to design a personal health monitor, its members must look at competing products, investigate human physiology, and possibly learn how to measure blood pressure or how to obtain an electrocardiograph reading.”

Clements also stressed the impact that CSIDC is having on university-level computer science and engineering education. “Students who have taken part in CSIDC graduate with more than a degree. They can effectively ‘hit the ground running’ because of all the transferable professional skills they’ve picked up during the competition. Ultimately, I believe that CSIDC is contributing to permanent, positive changes in university-level computer science and engineering education itself. More academics are taking part in the competition as judges or mentors and are, for example, placing more emphasis on students’ senior-year capstone projects,” he said.

Following several rounds of elimination-style reporting, students on the final 10 teams each receive an award certificate, a one-year complimentary membership in both the Computer Society and the IEEE, and a one-year subscription to a Computer Society magazine.

For more information on the IEEE Computer Society International Design Competition, including eligibility rules and an archive of past projects, visit www.computer.org/csidc.

## Computer Science Degree Production Falls in 2005

Between the 2003/2004 and 2004/2005 academic years, the number of bachelor’s degrees in computer science awarded by PhD-granting departments at US universities fell by 17 percent to 11,808, according to the Computing Research Association’s annual Taulbee Survey. Continuing a recent trend, new majors and enrollments also fell, while the median number of degrees granted per department declined by 14 percent to 59.

The Taulbee Survey’s PhD-granting schools account for slightly fewer than 30 percent of all undergraduate computer science degrees reported to the US National Science Foundation. Nevertheless, cyclical swings in computer science enrollment are nothing new.

According to the NSF, undergraduate computer science degree production nearly quadrupled to more than 42,000 between 1980 and 1986. A swift decline in subsequent years leveled off at about 25,000 during the 1990s. By 2001, computer science degree production again surged to more than 43,000.

In light of the economically languid early years of the new century, the CRA recently began predicting another decline in computer science degree production.

The Taulbee Survey is named for Orrin E. Taulbee of the University of Pittsburgh, who launched the survey in 1974 for the Computer Science Board (predecessor of the CRA). The survey is a key source of information on the enrollment, production, and employment of PhDs in computer science and computer engineering and also provides demographic data for computer science and computer engineering faculty in North America.

Full results are posted each May on the CRA Web site at www.cra.org/statistics.