The IEEE Computer Society recognizes outstanding work by computer professionals who advance the field through exceptional technical achievement and service to the profession and to society. The Society recently named several winners of important professional awards.

**COMPUTER PIONEER AWARD**

Cleve Moler is founder, chairman, and chief scientist of MathWorks.

2012 Computer Pioneer Award recipient Cleve Moler served as a professor of mathematics and computer science for almost 20 years, first at the University of Michigan, then at Stanford University, and finally at the University of New Mexico. At New Mexico, he was a professor in the mathematics department in the late 1970s and then chair of the computer science department in the early 1980s. During this time he developed several packages of mathematical software for computational science and engineering. These packages eventually formed the basis for Matlab, a high-level technical computing environment.

Moler’s award citation reads, “For improving the quality of mathematical software, making it more accessible and creating Matlab.”

In 1984, Moler and Jack Little founded MathWorks to commercialize and continue development of Matlab. Before joining MathWorks full-time in 1989, Moler spent five years with two computer hardware manufacturers, Hypercube and Ardent. At MathWorks, Moler has served as chief scientist, overseeing the mathematical aspects of the company’s products.

Moler is one of the authors of the LINPACK and EISPACK scientific subroutine libraries, as well as author or coauthor of five textbooks on numerical analysis and computational science. He is a member of the National Academy of Engineering and a past president of SIAM, the Society for Industrial and Applied Mathematics.

Today, Moler works from his home office in Santa Fe, New Mexico, writing books, articles, and Matlab programs.

**HARRY H. GOODE MEMORIAL AWARD**

Arvind researches rapid development of embedded systems using guarded atomic actions.

Arvind, winner of the 2012 Harry H. Goode Memorial Award, is the Johnson Professor of Computer Science and Engineering at the Massachusetts Institute of Technology. He has contributed to the development of dynamic dataflow architectures, the implicitly parallel programming languages Id and pH, and the compilation of these types of languages on parallel machines.

Arvind’s award citation reads, “For fundamental contributions to research in dataflow computing, memory models, and cache coherence protocols.”

In 1992, Arvind’s group, in collaboration with Motorola, completed the Monsoon dataflow machine and its associated software. A dozen of these machines were built and installed at Los Alamos National Laboratory and other institutions, before Monsoon was retired to the Computer History Museum in Mountain View, California.

In 2000, Arvind started Sandburst, a fabless semiconductor company, to produce a chip set for 10-Gbit Ethernet routers. He served as its president until his return to MIT in 2002. In 2003, Arvind cofounded Bluespec, an electronic design automation company that produces a set of tools for high-level synthesis, and currently serves on its board. Arvind authored *Implicit Parallel Programming in pH*.
Arvind received a BS in electrical engineering from the Indian Institute of Technology Kanpur and an MS and PhD in computer science from the University of Minnesota. Prior to going to MIT, he taught at the University of California, Irvine, from 1974 to 1978, and at IITK from 1977 to 1978. He remains interested in memory models and cache coherence protocols for parallel architectures and languages.

Arvind is a Fellow of IEEE and ACM and a member of the National Academy of Engineering.

**TAYLOR L. BOOTH EDUCATION AWARD**

**Eric Roberts** was the principal architect of Stanford’s introductory programming curricula.

Stanford University’s Eric Roberts recently won the IEEE Computer Society Taylor L. Booth Education Award in recognition of an outstanding record in computer science and engineering education.

Roberts’s award citation reads, “For contributions to computing education as demonstrated by teaching excellence, education publications, curricula development, and student mentoring.”

After receiving a PhD in applied mathematics from Harvard University, Roberts taught at Wellesley College, where he chaired the computer science department. From 1985 to 1990, he was a member of the research staff at Digital Equipment Corporation’s Systems Research Center in Palo Alto, California, where he focused on programming tools for multiprocessor architectures. In September 1990, Roberts joined the faculty at Stanford, where he is now a professor of computer science and a Bass University Fellow in undergraduate education.

From 1990 to 2002, Roberts was associate chair and director of undergraduate studies for computer science. In that capacity, he was the principal architect of Stanford’s introductory programming sequence. He has written five computer science textbooks that are used at colleges and universities throughout the world. His current research focuses on computer science education, particularly for underserved communities. Roberts directed the Bermuda Project, which developed the computer science curriculum for Bermuda’s public secondary schools.

At Stanford, Roberts has received several teaching awards, including the Bing Fellowship, the Dinkelspiel Award, and the Hoagland Prize. In 2003, he received the ACM SIGCSE Award for Outstanding Contribution to Computer Science Education.

Roberts is also active in professional organizations dedicated to computer science education. He is past chair of the ACM Education Board. From 1998 to 2001, Roberts served as cochair and principal editor of the ACM/IEEE-CS Joint Task Force on Computing Curricula 2001, which published a detailed set of curriculum guidelines in December 2001. He has also been active in several organizations seeking to promote socially responsible use of science and technology, including Computer Professionals for Social Responsibility and Student Pugwash USA. In 2000, Roberts was the Eugene M. Lang Visiting Professor for Social Change at Swarthmore College.

**COMPUTER SCIENCE AND ENGINEERING UNDERGRADUATE TEACHING AWARD**

**Mark Guzdial** is a proponent of media computation.

Mark Guzdial is a professor in the school of interactive computing at Georgia Institute of Technology whose research focuses on learning sciences and technology, specifically, computing education research. His award citation reads, “For outstanding and sustained excellence in computing education through innovative teaching, mentoring, inventive course development, and knowledge dissemination.”

Guzdial has published several books (with his wife and colleague, Barbara Ericson) on the use of media as a context for learning computing, an approach he calls “media computation.” He received a PhD in education and computer science from the University of Michigan. Guzdial serves on the ACM Education Board, and also on the board of the ACM’s Special Interest Group on Computer Science Education. Additionally, he serves on the editorial boards of the *Journal of the Learning Sciences*, *ACM Transactions on Computing Education*, and *Communications of the ACM*. 
Richard E. Merwin Student Scholarship

The IEEE Computer Society is offering $40,000 in student scholarships of $1,000 and up to recognize and reward promising, active student volunteer leaders in student branches or chapters.

The scholarships were established in honor of the late Richard E. Merwin, past president of the IEEE Computer Society. The winners of this award serve as IEEE Computer Society student ambassadors for their local IEEE region. Student ambassadors collect and disseminate information to student branches or chapters in their region and serve as a liaison to the IEEE Computer Society Member and Geographic Activities Board. More than a dozen academic-year scholarships are available.

SCHOLARSHIP CRITERIA

Graduate students and those in the final two years of an undergraduate program in electrical or computer engineering, computer science, or a well-defined computer-related field of engineering who are active members of a student branch or chapter are eligible. IEEE Computer Society membership is required.

Applicants are required to have a minimum grade point average of 2.5 out of 4.0, and be full-time students as defined by their academic institution during the course of the award.

Evaluation criteria include involvement in chapter or branch activities (40 percent), academic achievement (30 percent), other extracurricular activities in college (10 percent), and a letter of evaluation by a branch or chapter advisor (20 percent). Each winner will submit a brief statement at the end of the academic year outlining his or her accomplishments.

The deadline for application submissions is 30 April. To apply for the Richard E. Merwin Memorial Scholarship, visit www.computer.org/portal/web/studentactivities/merwin or e-mail jw.daniel@computer.org.

Computer Society Software Engineering Assessment Tutorials Now Available via IEEE Xplore

The first IEEE Computer Society software engineering assessment tutorials are available in the IEEE Xplore eLearning Library. Developed by the IEEE Computer Society, the IEEE Software Engineering Assessment Series (SEAS) consists of 14 tutorials, each aligned to a knowledge area of the Guide to the Software Engineering Body of Knowledge (SWEBOK).

Each tutorial consists of several subtopics that review each SWEBOK Guide knowledge area. Quizzes are presented within every subtopic to measure the student’s comprehension of the topic. Within each course module is a list of textbooks, papers, and websites designed to provide the student with a comprehensive listing of essential references.

SEAS courses are designed to help software engineers earn CEU/PDH credits in standard software engineering topics, gain additional competence in a particular SWEBOK knowledge area, and prepare for the IEEE Computer Society Certified Software Development Professional certification exam. Students also earn credits towards CSDP recertification.

“The Computer Society’s software development certification and education programs provide an effective and efficient way for software professionals to enhance their career potential by gaining knowledge and perspective on the software engineering discipline,” said Dennis Frailey, co-chair of the IEEE Computer Society Educational Activities Board Professional Development Committee.

IEEE eLearning Library

A component of the IEEE Xplore digital library, the IEEE eLearning Library includes engaging and highly interactive online learning tutorials based on the best educational content from IEEE conferences around the world and unique materials developed specifically for the eLearning Library. Recognized experts from a wide range of engineering and research fields develop the tutorials.

The Xplore platform uses Modular Object-Oriented Dynamic Learning Environment (MOODLE), a state-of-the-art e-learning system that includes full professional voice narration on each slide, multimedia quizzes and graphics, and easy-to-use course navigation. Learn more about the courses at http://ieee-elearning.org/course/category.php?id=38.