As part of our goal to promote excellence in computer engineering, the IEEE Computer Society recognizes the contributions of professionals who have left their mark on their fields. With plaques, certificates, and substantial cash prizes, Society volunteers honor their peers for achievements in the theory, practice, and application of computer technologies. Awards ceremonies often take place in conjunction with Computer Society-sponsored technical or administrative meetings.

**Computer Society Pioneer Award Goes to Noted IBM Scientist**

Frances E. Allen’s 40-plus-year career at IBM included pioneering work in the development of advanced compilers for program optimization. As a member of the IBM Stretch/Harvest project in the early 1960s, Allen designed and built an advanced code-breaking language, known as Alpha, for the US National Security Agency. She also developed several programming languages and helped to create one of the first automatic debugging systems.

In recognition of her accomplishments, the IEEE Computer Society Board of Governors selected Allen to receive its 2004 Computer Pioneer Award. Her citation reads, “For pioneering work establishing the theory and practice of compiler optimization.” Computer Pioneer Award winners receive a commemorative bronze medallion.

In 2000, IBM named Allen as the first recipient of the eponymous Frances E. Allen Women in Technology Mentoring Award. Now retired from IBM, Allen is a Fellow Emerita at IBM’s T. J. Watson Research Center and continues her involvement in professional, technical, and women’s advocacy projects.

Earlier this year, Allen joined the Computing Research Association Committee on the Status of Women in Computing Research (CRA-W) as the co-coordinator of a new program that will provide career mentoring to women in industrial and government research labs. She also serves on the Advisory Board of the Anita Borg Institute for Women and Technology.

**Simon Lam Named W. Wallace-McDowell Award Winner**

Simon Lam, professor and Regent’s Chair in Computer Sciences at the University of Texas at Austin, has made numerous contributions to the development of secure network communications and multi-access protocols. In recognition of his work, the Computer Society presented to Lam the 2004 W. Wallace-McDowell Award for innovative contributions to computing. His citation reads, “For outstanding fundamental contributions in network protocols and security services.”

Lam is currently working under a $350,000 National Science Foundation grant to develop a foundation for designing overlay network protocols. He recently completed a $200,000 project titled “Congestion-Controlled Streaming Media for the Internet” for the Texas Advanced Research Program. Lam’s Prospec tool, developed in 1985, was among the first software programs for interactive protocol specification and verification to employ a graphical user interface.

A Fellow of both the IEEE and the ACM, earlier this year Lam also received the ACM’s Sigcomm Award, recognizing his lifetime of contributions to the field of communication networks. He served as editor in chief of *IEEE/ACM Transactions on Networking*, copublished by the Computer Society, from 1995 to 1999. Winners of the W. Wallace-McDowell Award receive a certificate and a $2,000 honorarium.

**Edmund Clarke Jr. Receives Award for Innovation in Information Processing**

Edmund Clarke Jr. developed temporal logic model checking.

The IEEE Computer Society Board of Governors has awarded the 2004
Harry H. Goode Memorial Award to Edmund Clarke Jr. “for significant and pioneering contributions to formal verification of hardware and software systems, and for the profound impact these contributions have had on the electronics industry.” A bronze medal and a $2,000 stipend accompany the award.

Model checking is an approach to formal verification methods that helps to uncover errors that escape formal debugging and testing methods. Clarke and his research group recently received a $1 million grant from the NSF for their work in applying “temporal logic model checking” to the verification of both embedded and autonomous systems. Clarke is currently collaborating on an investigation of bounded model checking methods for the Specification and Verification Center at Carnegie Mellon University.

The Fore Systems Professor of Computer Science at Carnegie Mellon, Clarke has served on the editorial boards of Distributed Computing, IEEE Transactions on Software Engineering, and Logic and Computation. A Fellow of the ACM, Clarke is also a member of the IEEE Computer Society, Sigma Xi, and Phi Beta Kappa.

Sally Fincher Honored with Undergraduate Teaching Award

Sally Fincher’s interests include pattern languages as well as computer science education methods.

Sally Fincher will receive the IEEE Computer Society’s Computer Science & Engineering Undergraduate Teaching Award this month at the 2004 Frontiers in Education conference in Savannah, Georgia. Fincher is being recognized for her “sustained contributions to undergraduate computer science education through rigorous examination of teaching effectiveness, and fostering and promoting research in computer science education.”

Chair of the Computers and Education Research Group at the University of Kent in Canterbury, Fincher is active in technical research as well as computer science education. Her research interests lie in patterns and pattern languages, especially in the development of patterns for human-computer interaction. She maintains “The Pattern Gallery” (www.cs.kent.ac.uk/people/staff/sf/patterns/gallery.html), a Web page that displays methods used to present HCI patterns.

A coauthor of Computer Science Education Research and a board member of the ACM’s Special Interest Group on Computer Science Education, Fincher also serves as editor of the Journal of Computer Science Education.

Winners of the Computer Science & Engineering Undergraduate Teaching Award receive a plaque and a $2,000 honorarium.

IEEE Approves Intelligent Transportation Systems Society

The IEEE Board of Directors has approved a request for the IEEE Intelligent Transportation Systems Council to become the IEEE’s 39th full-fledged society, the IEEE Intelligent Transportation Systems Society (ITSS). The renamed body will continue to sponsor two major conferences each year, the International IEEE Intelligent Transportation Systems Conference, and the IEEE Intelligent Vehicle Symposium. Society members are interested in the application of technology to the solution of transportation problems, ranging from smart cars and smart highways to creating on-board navigation systems, crash warning systems, and on-the-fly electronic toll payment systems.

IEEE technical councils provide a way for member societies to cooperate in emerging areas of mutual interest, primarily through conference and publication activities. When interest in a field grows strong enough, the IEEE can opt to promote an existing technical council to full IEEE society status. IEEE societies accept individual members and may establish technical committees to allow members to promote specialized technical areas.

Membership in the new society includes a subscription to the ITSS newsletter and online access to IEEE Transactions on Intelligent Transportation Systems. A printed version of the transaction is available at an additional cost. 2005 dues for the new society are $25. Students can join for $13. For more information, or to join the ITSS, visit www.ewh.ieee.org/tc/its/.

Other IEEE society changes

In other action, the IEEE Board of Directors changed the name of the IEEE Neural Networks Society to the IEEE Computational Intelligence Society (CIS). The name change reflects a society membership that has grown to include researchers whose interests lie beyond the traditional scope of neural networking. CIS members are interested in fields that include not only neural networks but also fuzzy systems, evolutionary computation, and other biologically and linguistically motivated computational models. The name change takes effect in 2005. To learn more about the CIS, visit www.ieee-cis.org/.
Society Program Certifies New Software Development Professionals

Recognizing the need of many IEEE Computer Society members to transform their knowledge into a demonstrable competitive advantage, Society leaders in 2002 established a software engineering certification program. In the most recent evaluation cycle, professionals from around the world earned a standards-based distinction independent of vendor or educational bias: the IEEE Computer Society Certified Software Development Professional credential.

Computer Society leaders developed the CSDP examination by first performing a formal job task analysis of working software engineers. Test developers then factored real-world responsibilities and knowledge requirements into the structure of the exam. The resulting test consists of questions from 11 topic areas that include software design, testing, and requirements.

In addition to demonstrating proficiency via the CSDP exam, those who received the credential also met minimum requirements for work experience and education. Applicants must hold a baccalaureate degree and have had a total of 9,000 hours of relevant experience, including at least two years of software engineering work within the past four years.

IEEE Computer Society partner Thomson Prometric administers the CSDP examination at testing centers throughout the world. Service to Central and South America expands this year with the addition of testing centers in Argentina, Bolivia, Brazil, Chile, Colombia, the Dominican Republic, Guatemala, Mexico, Peru, and Venezuela.

CSDP certification is valid for three years. To be eligible for recertification, practicing software development professionals must complete 30 Professional Development Units in fields that include educational activities, publishing, presentations, technical/professional service, and self-study.

The list of recent CSDP recipients is available online at http://www.computer.org/certification/NewCSDPS.htm.

NEXT CSDP TESTING OPPORTUNITIES

Online preparation courses are available through the IEEE Computer Society Distance Learning Campus at a cost of $395 for Computer Society members and $495 for nonmembers. For those candidates who prefer a more personal touch, software management consultant Richard Thayer will teach a CSDP preparation course at the Systems and Software Technology Conference, set for April 2005 in Salt Lake City. The Computer Society also will offer an opportunity for professionals to take the CSDP exam at SSTC. As a benefit of attending the conference, any candidate who fails to pass the exam on site at SSTC 2005 will receive a coupon for a free retest.

Applications for the Spring CSDP examination testing window, open from 1 April to 30 June 2005, are due by 1 April 2005. For IEEE or IEEE Computer Society members, application and examination fees total $450. To learn more about the Certified Software Development Professional program, visit http://www.computer.org/certification/.

Power Systems Pioneer Concordia Leaves $100,000 to IEEE Foundation

When 1999 IEEE Medal of Honor winner Charles Concordia passed away in December at the age of 95, he included in his legacy an unrestricted gift of $100,000 to the IEEE Foundation.

In the 1940s, Concordia pioneered the development of methods for analyzing synchronous and induction machines and their effect on power system stability. He also worked to build high-voltage power delivery systems for communities around the world. In 2000, the National Academy of Engineering identified widespread electrification as the most important engineering accomplishment of the 20th century. Concordia, a cofounder of the ACM, used the latest computational tools available, from network and mechanical differential analyzers to analog computers, in his efforts to make electrical power systems more interconnected. In recognition of his contributions, the IEEE Power Engineering Society last year established the Charles Concordia Power Systems Engineering Award.

The IEEE Foundation will use Concordia’s contribution in accordance with his spirit of generosity and innovation: to fund programs that will make an impact on the future of the engineering profession.

Donors may designate the IEEE Foundation as a beneficiary of a will, life insurance policy, retirement plan, or charitable trust. For more information about establishing legacy gifts to the IEEE Foundation, visit www.ieee.org/organizations/foundation/html/ways_legacy.html.
Computing Curricula Volume Available for Review

Following several rounds of drafts, an Ironman version of the Computing Curricula: Computer Engineering volume is now available for public review. The interim document is a product of a long-term effort to establish a uniform framework for computer science education. Its authors seek comment especially upon Appendix B, which contains four new sample implementations of computer engineering curricula.

In 1990, the IEEE Computer Society joined with the ACM to release Computing Curricula 1991, a document that provided a basis for curriculum design in undergraduate programs over the succeeding decade. Motivated by the drastic changes in computing, the Society and the ACM later formed the Joint Task Force on Model Curricula for Computing to perform a major review of the guidelines. Since then, the task force has worked to create four volumes of recommendations covering computer engineering, computer science, software engineering, and information systems. The task force completed the computer science volume in 2001. In 2002, the Computer Society endorsed IS 2002, the information systems curriculum document. A second draft of the software engineering volume was made public earlier this year.

The Computing Curricula: Computer Engineering volume progressed through several iterations before reaching the Ironman stage. With each iteration, reviewers respond with ideas and concerns that are then incorporated into the evolving document. The final Steelman revision will be available for review in coming months.

The task force encourages input from the professional community. To read the document or to submit a review, visit www.eng.auburn.edu/ece/CCCE/.

Computer Society Distance Learning Campus Expands

Since 2001, the IEEE Computer Society Distance Learning Campus has offered members a rotating catalog of 350 free professional development classes on subjects that range from personal effectiveness skills to Internet and computer fundamentals. In addition to this core set of online classes, the Society is now offering 26 management courses from such authoritative sources as the American Management Association and noted management consultant Peter Drucker. Course titles on the new roster, available for a small fee, include the “Forbes Management and Strategy Series” and “Negotiate to Win: Essential Strategies for Effective Negotiations.”

All Distance Learning classes are managed by KnowledgeNet and employ advanced graphics, animation, and text features. Students can take pre-assessment tests before tackling a course and can track their performance as study progresses. Distance Learning course materials include a powerful search tool that helps students connect with vital resources.

Through 31 October, the new collection of management courses is available at a discounted rate of $59 (regularly $99) for IEEE Computer Society members and $89 (regularly $129) for IEEE members. Access purchased at the discounted rate expires in March 2005. For more information on the Distance Learning Campus, visit www.computer.org/distancelearning/.

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Advancing in the IEEE Computer Society can elevate your standing in the profession.

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✔ ten years or more of professional expertise

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