Society Introduces New Technical Task Forces

The IEEE Computer Society Technical Activities Board recently created two new collaborative bodies for furthering participation in society activities. Computer Society Technical Committees, Technical Councils, and Task Forces form an international network of professionals who share common interests in computer hardware, software, applications, and other related fields. They serve as the focal point for the Computer Society’s activities within a technical discipline and directly influence Society policy on standards development, conferences, publications, and educational initiatives.

IEEE COMPUTER SOCIETY TASK FORCE ON HAPTICS

The IEEE Technical Committee and Task Force on Haptics was founded in 2006 under the joint sponsorship of the IEEE Computer Society and the IEEE Robotics and Automation Society (where it enjoys full Technical Committee status). Initiated by a group of haptics researchers, the TC/TF on Haptics is home to the international interdisciplinary haptics research community. The group provides leadership and organization for scientific work in haptics, which covers a wide range of disciplines from engineering to neurophysiology.

The new haptics group will coordinate the scheduling of major haptics conferences; sponsor special conference sessions, tutorials, and journal issues on haptics; and contribute to the new IEEE Transactions on Haptics.

Founding chair of the new group is Hong Z. Tan of Purdue University. Cochairs are Matthias Harders of the Swiss Federal Institute of Technology in Zurich and Hiroyuki Kajimoto of the University of Electro-Communications in Tokyo.

Membership in the IEEE Haptics TC/TF is open to all individuals interested in haptics research at a professional level. There are no fees for membership, and IEEE membership is not required for joining the group. Visit www.worldhaptics.org to learn more.

IEEE COMPUTER SOCIETY TASK FORCE ON GAME TECHNOLOGY

As the field of computer-based gaming has matured in the past few years, the genre known as “serious” games has grown in number and purpose. More than 30 years of unstructured development in a highly competitive commercial market has yielded game technologies and design processes that can be used in applications outside entertainment.

The new IEEE Computer Society Task Force on Game Technology advocates formalizing the collaborative frameworks that contribute to the existing grassroots cohesion of the serious games and gaming communities. In particular, task force organizers suggest that applied game technology can result in better software applications, especially in areas of collaboration, user interface, collective intelligence, visualization, and artificial intelligence.

Founding chair of the IEEE Task Force on Game Technology is James R. Parker of Canada’s University of Calgary. Parker is the author of Start Your Engines (Paraglyph, 2005), the first book published on the art of designing and developing driving and racing games.

Learn more about the IEEE Task Force on Game Technology at www.ucalgary.ca/~jparker/TFGT.

Apply Now for UPE and Larson Scholarships

Each year, the IEEE Computer Society offers scholarships to both graduate and undergraduate Society student members. Two opportunities for student support—the Upsilon Pi Epsilon Student Award for Academic Excellence and the Lance Stafford Larson Student Scholarship—seek applicants by 31 October.

UPSILOM PI EPSILON STUDENT AWARD FOR ACADEMIC EXCELLENCE

Presented by the IEEE Computer Society in conjunction with international computing honor society Upsilon Pi Epsilon, the Upsilon Pi Epsilon Student Award for Academic Excellence recognizes...
Computer Science Enrollments Drop in 2006

The percentage of incoming undergraduates among all degree-granting institutions who indicated they would major in computer science and related fields declined by 70 percent between 2000 and 2005, according to the Computing Research Association’s annual Taulbee Survey of PhD-granting computer science and computer engineering departments in North America.

The number of students who declared their major in computer science and related fields among the PhD-granting departments surveyed by the CRA also fell. After six years of declines, the number of new majors in 2006 was nearly half of what it was in 2000 (15,958 versus 7,798). This is a slight decline from the 7,952 new majors reported in 2005. Overall enrollments in computer science and engineering dropped 14 percent between 2004/2005 and 2005/2006, to 34,898. Overall, enrollments have dropped 39 percent from their height in 2001/2002.

These declines in enrollment are, predictably, being reflected at the other end of the pipeline. Following several years of increases, the total number of bachelor’s degrees awarded by PhD-granting computer science departments fell 28 percent between 2003/2004 and 2005/2006, to 10,206. The median number of degrees granted per department declined 30 percent (to 48). The sustained drop in total enrollment combined with waning student interest in computer science or engineering as a major suggests that degree production numbers will continue to drop in the near term.

A steep drop in degree production among computer science departments has happened before. According to the National Science Foundation, the number of undergraduate computer science degrees granted each year nearly quadrupled between 1980 and 1986 to more than 42,000. This period was followed by a swift decline and leveling off during the 1990s, with several years in which the number of degrees granted hovered around 25,000. During the late 1990s, undergraduate computer science degree production again surged to more than 57,000 in 2004. In light of the economic downturn and slow job growth of the early 2000s, the CRA has projected for several years the current decline in degree production.

The Taulbee Survey is named for the late Orrin E. Taulbee of the University of Pittsburgh, who launched the survey in 1974 for the Computer Science Board (predecessor of the CRA) and conducted it until 1984. The survey is a key source of information on the enrollment, production, and employment of PhDs in computer science and computer engineering. It also provides salary and demographic data for computer science and computer engineering faculty in North America. Results from the Taulbee Survey can be compared with data produced by the National Science Foundation, which surveys all institutions that grant computer science degrees.

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

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The UPE scholarship is awarded based on a student’s academic record, letters of recommendation, and extra-curricular involvement related to the computing field. Any Society member who is a full-time undergraduate or graduate student with a minimum 3.0 GPA—the required GPA for Upsilon Pi Epsilon membership—can apply. Up to four awards of $500 each are given each year.

**LARSON BEST PAPER CONTEST**

The Lance Stafford Larson Student Scholarship awards $500 to a Computer Society student member for the best paper submitted on a computer-related topic. A competitive scholarship, it was established in memory of Lance Larson, the son of former IEEE president Robert Larson, and a University of Maryland undergraduate at the time of his death. The Larson competition was created to encourage engineering students to improve their communication skills. Only papers concerning computer-related subjects are eligible. Papers will be judged on technical content, writing skill, and overall presentation. Any undergraduate student member with a GPA of 3.0 or above is welcome to compete. First-, second-, and third-place winners also receive a certificate of commendation.

Recipients of either honor also enjoy a complimentary one-year subscription to any Computer Society periodical of their choice. For information on entering either contest, see www.computer.org/students/schlrshp.htm.