Taulbee Survey Indicates Steady Interest in Computing

After peaking at between 1,000 and 1,100 graduates per year in the early and mid-1990s, the number of doctorates granted annually by US computer science departments slowly declined and has now stabilized at around 800, according to new figures from the Computing Research Association’s 2004-2005 Taulbee Survey. However, as long as currently enrolled students complete their doctorates, this number appears likely to increase in the coming decade.

The total number of students passing qualifying exams has risen sharply over the past two years. At the same time, total enrollment has continued to gradually increase, and the number of new students entering doctoral programs each fall has grown every year over the past decade.

Industry watchers debate whether or not US universities are producing sufficient numbers of computer science and engineering graduates. The debate centers around estimates of future workforce demand, a factor that is difficult to predict. A frequently cited element of the debate is the enrollment of foreign students in US programs. Non-US citizens account for about 50 percent of the computer science PhD and master’s degrees granted each year, about 40 percent of computer science and engineering PhDs, and 25 percent of computer science and engineering MS degrees. A majority of these students stay: Among those who received doctorates in math and computer science in 1999, 75 percent remained in the US in 2001. This rate has increased over time.

In 2000 and 2001, about 70 percent of full-time, first-time graduate enrollments in computer science were foreigners. By 2002, however, their representation had dropped to 60 percent, coinciding with a 15 percent drop in total numbers. This drop mirrors similar findings detailed in the Institute of International Education’s 2004 Open Doors report, which is available at www.opendoors.iienetwork.org.

Following robust growth in the number of international students enrolled in US math and computer science programs in 2000 through 2002, their numbers dropped by 6.3 percent in 2002/2003 and a further 5.8 percent in 2003/2004. Among all disciplines, 2003/2004 saw the first absolute decline in foreign enrollments since the early 1970s.

The Taulbee Survey is named in honor of the late Orrin Taulbee, a University of Pittsburgh researcher who conducted the survey for the CRA until 1984. For data from previous surveys and a detailed breakdown of the findings of the 2004-2005 Taulbee Survey, visit www.cra.org/statistics.

Nominations Open for IEEE Division VIII Director-Elect

IEEE Computer Society members are invited to submit nominations for candidates to serve as 2008 IEEE Division VIII director-elect and 2009-2010 Division VIII director. Division directors represent the members of IEEE societies on the IEEE Board of Directors and the Technical Activities Board; Division V and VIII directors represent the Computer Society membership. Elections for Division V director are typically held in even-numbered years, and Division VIII elections are held in odd-numbered years. The elected representative then serves one year in the director-elect role before assuming a two-year division director term.


Submit nominations by 6 October to Gerald L. Engel, Chair, Nominations Committee, IEEE Computer Society, 1730 Massachusetts Ave. NW, Washington, DC 20036-1992; g.engel@computer.org.
IEEE Computer Society Names Six New Editors in Chief

At a recent meeting in San Juan, Puerto Rico, the IEEE Computer Society Board of Governors approved six new editors in chief for Society publications. Their terms will begin in January 2007.

Carl Chang, past IEEE Computer Society president and chair of the computer science department at Iowa State University, will lead the Society’s flagship publication, Computer.


Fred Douglish, of IBM Research in Hawthorne, N.Y., is the new editor in chief of IEEE Internet Computing magazine.

Carl Landwehr, senior research scientist at the University of Maryland’s Institute for Systems Research, will take on an initial term at the helm of IEEE Security & Privacy.

Fabrizio Lombardi, the International Test Conference professor at Northeastern University, will serve as editor in chief of IEEE Transactions on Computers.

Thomas Ertl, of the University of Stuttgart, will become the new editor in chief of IEEE Transactions on Visualization & Computer Graphics.

Call for IEEE Computer Society Editor in Chief Nominations

The IEEE Computer Society is seeking nominations and applications for volunteers interested in serving as editor in chief of either IEEE Micro magazine or the Computer Society Press.

IEEE Micro

Applications for editor in chief of IEEE Micro should include a complete curriculum vita, a brief plan for the future of Micro, and a letter of support from the candidate’s institution or employer.

The plan should include six key items: the candidate’s perspective on the challenges and opportunities facing Micro; the expected tasks to be undertaken if appointed as EIC; the objective milestones associated with each task; a proposed schedule for the tasks and milestones; the projected organization needed to accomplish the tasks; and any funding requirements needed to accomplish the tasks.

Application packages should be submitted electronically, as Microsoft Word or PDF files, to Robin Baldwin at rbaldwin@computer.org. The due date for nominations and applications is 15 September.

IEEE Computer Society Press

Applicants for 2007-2008 editor in chief of the IEEE Computer Society Press should possess a good understanding of all aspects of the book publishing field. In addition, candidates must demonstrate the managerial skills necessary to process manuscripts through the editorial cycle in a timely fashion. Prospective candidates must provide a complete curriculum vita, a brief plan for the future of the Computer Society Press, and a letter of support from their institution or employer. Application packages should be submitted electronically to Angela Burgess at aburgess@computer.org, with “CS Press EIC Search” in the subject line. The due date for nominations and applications is 1 October.

IEEE Pervasive Computing

IEEE Pervasive Computing delivers the latest developments in pervasive, mobile, and ubiquitous computing. With content that’s accessible and useful today, the quarterly publication acts as a catalyst for realizing the vision of pervasive computing.
IEEE Computer Society Scholarships Benefit College Students

Each year, the IEEE Computer Society sponsors the Computer Society International Design Competition and participates in the Intel International Science and Engineering Fair to encourage students to create functional engineering prototypes. To support promising students in the course of their day-to-day studies, the Computer Society also offers scholarships to both graduate and undergraduate Society student members. Two opportunities for student support—the Lance Stafford Larson Student Scholarship and the Upsilon Pi Epsilon Student Award for Academic Excellence—seek applicants by 31 October.

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. Any undergraduate student member with a GPA of 3.0 or above is welcome to compete.

UPSILON 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 high achievement in the computing discipline.

The UPE scholarship is awarded based on a student’s academic record, letters of recommendation, and extracurricular 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 annually to the winning applicants. Winners also receive a one-year subscription to any Computer Society periodical of their choice.

For information on entering either contest, see www.computer.org/students/schlrshp.htm.

The Poor Person’s Guide to Estimating Software Development Costs

By Donald J. Reifer
Reifer Consultants Inc.

This guide offers a step-by-step process for estimating software costs. Built on public-domain information and cost models, it gives the formulas software developers need to estimate the effort and time required to design, develop, test, and deliver their software projects. $19

www.computer.org/ReadyNotes