

Computer Science Enrollments Drop

Each year, the Computing Research Association conducts its Taulbee Survey of PhD-granting departments of computer science and computer engineering in North America. The survey documents trends in student enrollment, postgraduate employment, and faculty salaries. The CRA releases preliminary results on undergraduate enrollment in March and full results in May.



2006/2007. The median number of degrees granted per department declined 39 percent to 42. The CRA suggests that the sustained drop in total enrollments and student interest in computer science as a major will cause degree production numbers to continue their slide over the next few years.

FEWER COMPUTER SCIENCE UNDERGRADUATES

The number of students enrolled in computer science has fallen for several years. In fall 2007, the number of new computer science majors (7,915) was half of what it was in fall 2000 (15,958). Between 2005/2006 and 2006/2007, total enrollments declined 18 percent to 28,675. Overall, enrollments have dropped 49 percent from their peak in 2001/2002, while the median number of students enrolled in each department has fallen 53 percent since 2000/2001.

DEGREE PRODUCTION SINKS

The decline in undergraduate numbers has had a significant impact on degree production. After posting several years of increases, the total number of bachelor's degrees awarded by PhD-granting computer science departments fell 43 percent to 8,021 between 2003/2004 and

2006/2007. A steep drop in degree production among computer science departments has happened before. According to the US National Science Foundation, undergraduate computer science production nearly quadrupled between 1980 and 1986 to more than 42,000 degrees. This period was followed by a swift decline, leveling off in the early 1990s, with the number of degrees granted hovering around 25,000. During the late 1990s, computer science degree production again surged, reaching more than 57,000 in 2004.

COMPUTING RESEARCH ASSOCIATION

The CRA is an association of more than 200 academic departments of computer science, computer engineering, and related fields. It includes organizations in industry, government, and academia that engage in basic computing research as well as affiliated professional societies. The Taulbee Survey is named in honor of the late Orrin E. Taulbee of the University of Pittsburgh, who from 1974 to 1984 conducted the survey for the Computer Science Board, the CRA's predecessor. ■

IEEE Computer Society Petition Candidate Nominations Due 6 May

In preparation for the annual election of its officers, the IEEE Computer Society welcomes the nominations of candidates for office. To add a name to the ballot, a member can submit a petition to the Society secretary via mail, fax, or e-mail indicating the desired office, the starting date of the term, and the name of the candidate. The petition must also include the signatures of voting members of the Society: at least 250 for Board term nominees and at least 1,000 for officer nominees. Petition "signatures" can simply indicate the signing member's name and member number. A voting member can sign only one Board of Governors petition and one officer petition for each other office.

For each petition nomination, the Society secretary must receive a statement signed by the nominee indicating a willingness and availability to serve if elected. Petition candidates must also submit biographical data, position statements, and 300-dpi digital images or studio-quality head-and-shoulders photographs to the Society secretary.

All petition nominee materials must be received by **6 May**. Send them to Computer Society Secretary Michel Israel at IEEE Computer Society, 1828 L. Street, NW, Suite 1202, Washington, DC 20036-5104; or m.israel@computer.org.

Society Rolls Out New Certification

In response to industry requests for a way to confirm the skill and knowledge levels of those just entering the software field, the IEEE Computer Society has created the Certified Software Development Associate certification, a new program created for those entering the software development profession.

CSDA certification takes a broad view of software development and validates knowledge of the foundations of computer science, mathematics, and engineering. Core software engineering principles covered include software construction, design, testing, requirements, and methods. The CSDA exam centers on key concepts addressed in *The Guide to the Software Engineering Body of Knowledge* (SWEBOK) and *Software Engineering 2004: Curriculum Guidelines for Undergraduate Degree Programs in Software Engineering* (SE2004.)

Certified Software Development Associate exam questions cover topics in each of the following areas:

- I. Software Requirements (6-8% questions)
- II. Software Design (7-9% questions)
- III. Software Construction (8-10% questions)
- IV. Software Testing (6-8% questions)
- V. Software Maintenance (6-8% questions)
- VI. Software Configuration Management (2-4% questions)
- VII. Software Engineering Management (2-4% questions)
- VIII. Software Engineering Process (4-6% questions)
- IX. Software Engineering Methods (4-6% questions)
- X. Software Quality (4-6% questions)
- XI. Software Engineering Professional Practice (5-7% questions)
- XII. Software Engineering Economics (3-5% questions)
- XIII. Computing Foundations (8-10% questions)
- XIV. Mathematical Foundations (8-10% questions)
- XV. Engineering Foundations (8-10% questions)

Candidates can prepare for the exam by reviewing SWEBOK and selectively reading references in areas of software engineering that the exam covers. Candidates can also review applicable textbooks or university course notes. Two textbooks that cover the basics of software engineering are Ian Sommerville's *Software Engineering*, 8th edition (Addison-Wesley, 2007) and Richard H. Thayer and colleagues' two-volume *Software Engineering*, 3rd edition (John Wiley & Sons, 2005).

To learn more about the CSDA certification process, launched in beta mode early in 2008, visit www.computer.org/certification/csda. ■

Nominations for Cray and Fernbach Awards Due 1 July

Each fall, the IEEE Computer Society presents two of the most distinguished awards in computing. The Seymour Cray Computer Science & Engineering Award and the Sidney Fernbach Award recognize individuals for making outstanding contributions to computer science and engineering.

Supercomputing pioneer Seymour Cray was well known for discovering unconventional solutions to vexing problems. The IEEE Computer Society's Seymour Cray Computer Science & Engineering Award recognizes individuals whose contributions to high-performance computing systems best reflect Cray's innovative, creative spirit. Recipients of the Cray Award also receive a crystal memento, an illuminated certificate, and a \$10,000 honorarium.

Sidney Fernbach, an early researcher in high-performance computing, made important strides in the use of high-performance computers to solve large computational problems. In 1992, the Computer Society

established the Sidney Fernbach Memorial Award to recognize individuals who have made notable contributions to developing applications for high-performance computing. The Fernbach award winner receives a certificate of recognition and a \$2,000 honorarium.

Recipients of both the Cray and Fernbach awards will accept their honors during a special awards ceremony at SC 2008 in Austin, Texas, this November.

Computer Society awards recognize technical achievements, contributions to engineering education, and service to the Society or the profession. Nominations for the Cray and Fernbach awards are due by **1 July**. Other Computer Society awards with 1 July deadlines include the Taylor L. Booth Education Award and the Computer Science & Engineering Undergraduate Teaching Award. To nominate a candidate for any IEEE Computer Society award, visit <http://awards.computer.org/ana>.

IEEE Computer Society Launches Peer-Reviewed Webinars

The IEEE Computer Society is launching a peer-reviewed webinar series under the banner of Computing Now, a new initiative designed to bring more online technical content to its members and raise awareness of the Society's 14 technical magazines.

The Computing Now Webinar Series effort debuted with a webinar on standardizing software process improvement initiatives by Computer Society president-elect Susan (Kathy) Land, CSDP, principal software and systems engineer at MITRE. Land has more than 20 years of industry experience in practical software engineering methodologies, information systems management, and software development team leadership.

The six Computer Society webinars set for 2008 offer expanded access to the Society's wide-ranging intellectual property and the expertise of its members and

contributors. In contrast to many commercial offerings, the free webinars are delivered by real experts—authors, researchers, and scientists who seek to advance the profession.

To learn more about the free webinars, presented in cooperation with ON24, go to www.computer.org/webinar/standardizing. ■

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