CRA Survey Counts New PhDs

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.

PHD NUMBERS RISE

In the early and mid-1990s, the number of doctorates granted annually by US computer science departments peaked at between 1,000 and 1,100. From the mid-1990s until a few years ago, annual doctorate production hovered at around 800. At the same time, however, the number of new students entering doctorate programs increased rapidly—nearly tripling between 1995 and 2002. This led to a nearly 90 percent increase in enrollment between 1995 and 2005. As a result, doctorate production doubled between 2003 and 2007, to more than 1,500.

Despite the positive numbers, there are signs that the surge in degree production is close to peaking and that the number of doctorates granted will begin to shrink. The number of new students entering doctorate programs has declined in each of the past four years, and is now 17 percent lower than it was at its peak in 2002. Likewise, total enrollments in doctorate programs have leveled off since 2004, and the number of students passing qualifying exams dropped nearly 30 percent between 2005 and 2007. Overall, it is too soon to tell if degree production will edge back to levels seen in the mid-1990s or if a new, higher level of production will become the norm.

MORE PHDS HEADING TO INDUSTRY POSTS

The CRA also tracks the proportion of doctoral graduates who were employed in academia, outside of academia, and outside North America. Between 1985 and 1990, more employees with doctorates worked in academia (50 percent) than outside it (40 percent). In subsequent years, employment in industry dominated, rising to nearly 60 percent in 1997. Since 2001, however, there have been two dramatic reversals. Between 2001 and 2003, the share of employees with doctorates going into academia jumped from 44 percent to 64 percent, with an associated drop from 52 percent to 32 percent in the share working in industry. As the fortunes of the IT industry recovered, so did doctoral employment in the sector. By 2007, industry claimed 57 percent of employees with doctorates while academia had slipped to 32 percent.

IEEE TAPS E. JAMES PRENDERGAST FOR EXECUTIVE DIRECTOR

The IEEE has selected E. James (Jim) Prendergast, who most recently served as vice president and chief technology officer for DuPont Electronic and Communication Technologies, as its new executive director and chief operating officer. His appointment comes after an eight-month search by the IEEE’s Board of Directors.

Prendergast assumes the role on 6 April, managing more than 1,000 IEEE staff members at seven US and overseas locations. He joins the IEEE staff during the organization’s 125th Anniversary, commemorating “125 Years of Engineering the Future.” Prior to joining DuPont, Prendergast was vice president and director of Motorola’s Physical Sciences Research Laboratories in Tempe, Arizona. He is an IEEE Senior Member, and has been a member of IEEE for 32 years. Prendergast received undergraduate degrees from the University of Sydney and a PhD in electrical engineering from the University of Cambridge. Prendergast succeeds former IEEE Executive Director Jeffry W. Raynes, who resigned last year.
Society Announces Bylaws Changes

The IEEE Computer Society Board of Governors voted at a recent meeting to amend three articles of the Society’s bylaws. Article II was changed to clarify the process for nominating officer candidates. Article III was amended to address new circumstances in meeting participation and voting, and Article XII was recast to further define the makeup of the Nominations Committee.

Deletions are marked in strikeout text, and insertions are underlined. Only relevant segments of the bylaws in question are reproduced here.

ARTICLE II – NOMINATIONS AND ELECTIONS

Section 1: Nomination to the Board of Governors

1. Annually the Nominations Committee shall provide a list of nominees for Board positions. This list shall be submitted to the current Board of Governors at least four weeks prior to the Board meeting at which the Board shall select nominees. Additional nominees may be submitted by written Board petition signed by one-third of the franchised Board members and received by the secretary at least 10 days prior to the above meeting. The Board shall select by secret ballot not less than 11 nominees to fill elected Board member positions, and the names of those nominees shall be published in a Society publication nominally reaching the entire membership sufficiently in advance of the deadline for receipt of member petitions to allow a reasonable time to obtain necessary signatures. In the same issue, there shall be a request for petitions for additional nominees. Additional nominees may be named by signatures of voting members of the Society with each member eligible to sign only one petition. The number of signatures required is specified in the IEEE Policy Manual, (in 2007 it was Section 13.7.3.c). For each elective office of the Society, individual voting members eligible to vote in such election may nominate candidates either by a written petition or by majority vote at a nomination meeting of the organizational unit, provided such nominations are made at least 28 days before the date of election. The number of signatures required on a member petition shall be determined in accordance with IEEE Bylaws as follows. For all positions where the electorate is less than 30,000 voting members, signatures shall be required from 2 percent of the eligible voters. For all positions where the electorate is more than 30,000 voting members, 600 signatures of eligible voters plus 1 percent of the difference between the number of eligible voters and 30,000 shall be required.

3.2 Members shall be notified of all duly made nominations prior to the election. Prior to submission of a nomination petition, the petitioner shall have determined that the nominee named in the petition is willing to serve; if elected, evidence of such
Section 4: Board Elections

1. Election to the Board shall be by secret ballot of the Society membership.

2. Candidates will shall be elected to the Board in the order of their plurality, the largest plurality being first.

3. In the case of a tie vote for the final position, the Board shall select the winner by secret ballot.

4. Board position vacancies due to current Board members being elected to Society officer positions of president-elect, first vice president and second vice president, shall be treated as normal Board vacancies.

5. The top two runners-up for Board positions from the most recent election, along with other nominees to be selected by the Nominations Committee, shall form a roster of candidates to fill vacancies on the Board. The Board shall vote by secret ballot to fill vacancies.

Section 5: Officer Nominations

Annually the Nominations Committee shall provide a list of nominees for positions of president-elect, first vice president, and second vice president, at least four weeks prior to the Board meeting at which the Board shall select nominees. One or more nominees shall be proposed for each of these offices. Additional nominees for any position may be nominated by written petition of one-third of the franchised Board members. Such nominations must be received by the secretary at least 10 days prior to the above meeting. The Board shall select by secret ballot nominees for the positions of president-elect, first vice president, and second vice president and the names of those nominees shall then be published in a Society publication nominally reaching the entire membership. In the same issue there shall be a request for petitions for additional nominees. Additional nominees may be named by petition of the voting members of the Society, with each member eligible to sign one petition for each office. The number of signatures required is specified in Bylaws Article II, Section 11.1, the IEEE Policy Manual.

Section 6: Officer Qualifications

In order for a nominee to be qualified as a candidate for a member-elected officer position, the nominee must meet all the constitutional and the following requirements:

1. His/her vita must be submitted for publication in a Society publication nominally reaching the entire membership in a timely manner.

2. The nominee must affirm willingness and availability to serve.

3. The nominee must, at the time of candidacy, meet the Society’s requirements for service.

4. No individual may shall be elected to the office of president-elect more than once, nor may an elected vice president be elected to a fifth year as an elected vice president. For this purpose, occupying an office for a period of less than one-half of a normal term shall not be construed as holding that office.

Section 9: IEEE Delegate-Director-Elect Nominations

In accordance with IEEE Bylaws, IEEE Computer Society members annually elect a Division Delegate-Director-Elect. This individual will shall automatically become Delegate-Director after serving a one year term as Division Delegate-Director-Elect.

When an IEEE Division which represents the IEEE Computer Society is to elect a Division Delegate-Director-Elect, the Nominations Committee shall nominate recommend can-
candidates in compliance with IEEE Bylaws. The timing of IEEE Board of Directors elections requires that the Board of Governors provide nominations early in the year. Therefore, the Nominations Committee is required to prepare a list of two or more candidates for the annual (end of year) Board of Governors meeting, where a slate will be selected to propose for the subsequent year’s Board of Governors without further Nominations Committee action. This list of candidates shall be submitted to the Board of Governors at least four weeks prior to the Board meeting at which the selection is to occur. Additional nominees may be submitted by written petition signed by one-third of the franchised Board members and received by the secretary at least 10 days prior to the Board meeting. The Board of Governors shall act as the Divisinal Nominating Committee for the IEEE Computer Society, selecting select by secret ballot a slate of not less than one nor more than three nominees from the proposed candidates. The approved name(s) shall be transmitted as required by IEEE Bylaws, as Society nominee(s).

A notice that nominations for the position of Delegate-Director-Elect may be placed on the ballot by petition shall be published in a Society publication normally reaching the entire membership. This shall be done sufficiently in advance of the IEEE deadline for receipt of petitions to allow a reasonable time to obtain the necessary signatures. Petitions shall be submitted to the IEEE in accordance with IEEE Bylaws and Policies.

ARTICLE III – BOARD OF GOVERNORS

Section 1: Board of Governors Responsibility

The Board of Governors is shall be responsible for providing guidance, at the policy level, to all of the organizational entities within the Society. The Board should shall set direction and strategy for the Society, and should shall review the performance of the program boards and other committees and entities to assure compliance with its policy directions.

Operational issues should not normally be considered by the Board except in exceptional cases, or when there are requests for policy clarification or change related directly to operational or other program board matters.

Section 3: Meetings

The Board shall hold its annual meeting during September, October, November, or December in the last third of each year. Additional meetings shall be held each year as required. The Board of Governors meeting and election schedule for each year shall be approved at or before the annual Board of Governors meeting of the preceding year.

Section 5: Quorum

A roll call shall be taken at the beginning of each Board meeting. The secretary shall record the names of those franchised members present and announce whether a quorum exists. If less than a quorum is present for a vote at a duly called meeting, tentative actions may be taken which shall become effective upon subsequent ratification, either at a future meeting, or by an electronic ballot by a majority of all the franchised members of the Board.

Individuals holding more than one position on the Board or any committee thereof, shall be limited to one vote on each matter being considered by the Board or committee.

Proxy voting is not allowed.

Minutes of such a meeting, with a separate ballot for each question to be ratified by electronic balloting, shall be sent by the secretary to each member of the Board. Ballots must be returned within 30 days to be counted.

Section 6: Action of the Board and Committees Thereof

1. All decisions of the Board and any subcommittees thereof shall be made by a The vote of a majority of the members present and entitled to vote at the time of vote, provided a quorum is present, shall be the act of the Board or any committee thereof.

2. The Board, or any committee thereof, may meet and act upon the vote of its members by any means of telecommunication. The normal voting requirements shall apply when action is taken by means of telecommunications equipment allowing all persons participating in the meeting to hear each other at the same time.

3. The Board, or any committee thereof, may take action without a meeting if applicable (e.g., email voting). An affirmative vote of a majority of all the voting members of the Board or any committee thereof shall be required to approve the action. The results of the vote shall be confirmed promptly in writing or by electronic transmission. The writings and/or electronic transmissions shall be filed with the minutes of the proceedings of the Board or any committee thereof. “Electronic transmission” means any form of electronic communication, such as e-mail, not directly involving the physical transmission of paper, that creates a record that may be retained, retrieved and reviewed by a recipient thereof, and that may be directly reproduced in paper form by such a recipient.

Section 7: Vote of the Presiding Officer

The presiding officer of the Board shall have no vote on the Board
Section 6 8: Change of Meetings
Meetings of the Board may be advanced, postponed, or canceled only by consent of a majority of all the voting members of the Board not less than 14 days before the original date or the new date set for the meeting, whichever is earlier. The annual meeting cannot be canceled.

Section 7 9: Recording of Board Activities
The secretary shall cause to be transmitted in writing within 20 days after their adoptions all motions, directives, and orders of the Board to the persons or members affected. He or she shall transmit a complete and accurate copy of the minutes of each meeting of the Board to all members of the Board and designated IEEE groups, Boards, and committees within 30 days after the meeting.

Section 8 10: Policies and Procedures
Policies and procedures, including the Society dues and fees, may be established or modified by a majority vote of the franchised members of the Board (not simply a majority of those present at a particular meeting). Policies and procedures shall be codified in the appropriate manuals of the Society.

Section 9 11: Parliamentary Authority
Parliamentary authority, procedure and conduct of the Board meetings shall be governed by Robert’s Rules of Order insofar as they are applicable and not inconsistent with the Society Constitution and Bylaws, Policies & Procedures Manual, or the Constitution, Bylaws and Policies of the IEEE.

Section 10 12: Suspension of Rules
Any provision in these Bylaws relating to the transaction of business may be temporarily suspended by the unanimous vote of the Board present consisting of not less than two-thirds of franchised Board members.

Section 11 13: Vacancies and Removal from Office
If for any reason the best interests of the Society require a change in the officers or the Board members during the year, the matter shall be duly and carefully considered by the Board. A majority vote of the entire Board or a petition signed by two percent of the members of the Society and submitted to the Board shall be necessary to call a Board meeting, denoting the purpose of the meeting in a meeting notice, or to consider and vote upon a recommended change. A two-thirds vote of the entire voting membership of the Board shall be required to declare an office vacant. The vacant office is shall be filled as defined in the governing documents of the Society, or if not so defined, may be filled for the unexpired term upon nomination from the floor. Positions for which the Board has the privilege of consent may be declared vacant at a meeting of the Board providing the procedures above are followed.

Section 12 14: Executive Committee
Executive Committee members shall be ex officio members of the Board, without vote, unless otherwise holding a vote as a franchised Board member.

Section 13 15: Franchised Members of the Board
Franchised members of the Board are the primary policy makers of the Society and, thus, shall have access to information relative to proposing and altering policy, and determining the adequacy of procedures that implement existing policy. Members of the Board shall respect the confidentiality of sensitive or personal information made known to them in executive session or other circumstances. Members of the Board must have access to appropriate means of contact by electronic communication.

Section 16: Vote to Remove a Board Member or Member of a Standing Committee

1. Vote to Remove an Appointed Member of the Society Board or Committee. A member of the Board

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.

Recipients of the Cray Award receive a crystal memento, an illuminated certificate, and a $10,000 honorarium. Fernbach award winners receive 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 2009 in Portland, Oregon, this November. Winners of the 2008 Cray and Fernbach awards were mini-supercomputer pioneer Steve Wallach and MPI innovator William Gropp, respectively.

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.
or Committee may be removed as a member of that Board or Committee, with or without cause, by affirmative vote of two-thirds of the members of the appointing body present at the time of the vote, provided a quorum is present, to remove such Board or Committee member.

2. Vote to Remove an Elected Member of the Board. An Officer/Elected Member elected by the voting members of the IEEE Computer Society may be removed from office, with or without cause, by a vote of the voting members of the IEEE Computer Society who elected that person within 30 days following either:
   (a) the affirmative vote of two-thirds of the members of the Board present at the time of the vote, provided a quorum is present, on a motion to remove such individual, or
   (b) the receipt by IEEE of a petition signed by at least 10% of the total number of voting members in the Society moving for the removal of such individual.
A ballot on such motion shall be submitted to the voting members of the Society. If a majority of the ballots cast by the voting members for or against such motion are in favor of removing such individual, that individual shall be removed from such positions.
(c) Any further procedures should be specified in this section.

Section 14.17: Position Statements
When voting matters are before the Board by means other than at a physical face to face meeting or before the membership by electronic ballot, such as for a constitutional amendment, the opportunity for presenting an opposing view shall be provided. The IEEE Computer Society Policies & Procedures Manual (PPM) shall prescribe the conditions and procedures for presenting opposing views.

25-F BL ARTICLE XII – STANDING COMMITTEES

Section 11: Nominations Committee
The Nominations Committee shall consist of six members of the Society, selected according to the following procedures and criteria, and selected or appointed in the order specified. At least two-thirds of the voting members of the Nominations Committee shall be elected or appointed by the Board of Governors.

1. The immediate past president of the Society shall be a member of the committee and shall serve as its chair. In the event of the incapacity or conflict of interest of the Chair, the most recent available Past Chair of the Nominations Committee shall reassume that position.

With extenuating circumstances, a different individual may be appointed to this position. Chairs shall not be eligible to be elected for election to the Board during their term of service.

2. One franchised member of the Board of Governors elected by the immediately previous Board of Governors.

3. The president-elect or his/her designee.

4. Two members appointed by the president, one of whom shall be a franchised member of the Board of Governors, and the other of whom shall not be a member of the Board of Governors. In addition, if at least two of the members determined by steps 1-3 do not reside outside IEEE Regions 1-7, one of these two members appointed by the president shall reside outside IEEE Regions 1-7.

5. One member appointed by the past president. If at least two of the members determined by steps 1-4 do not reside outside IEEE Regions 1-7, the member appointed by the past president shall reside outside IEEE Regions 1-7.

A member of the Nominations Committee cannot be a candidate in any of the slates submitted by the Nominations Committee.

6. A member of the Nominations Committee may be nominated and run for a position (for which the Nominations Committee is responsible for making nominations selecting nominees) only on the following conditions:
   a) the nomination is not made by a member of the same Nominations Committee and
   b) the member resigns from the Nominations Committee prior to its first meeting of the year in which the nomination shall be made.