

# Oregon Teen Wins Computer Society Prize at Intel Science Fair

**F**or his cutting-edge health and safety project, “A Novel Treatment Using Ultrasound Sonication to Remove Food-Borne Microbes from Fresh-Cut Produce,” Yale Wang Fan, 15, of the Catlin Gabel School in Portland, Oregon, recently received a \$1,000 IEEE Computer Society prize at the 2007 Intel International Science and Engineering Fair (ISEF) in Albuquerque, New Mexico.

Intel ISEF, presented this year by Agilent Technologies, provides an opportunity for top young scientists from around the globe to share ideas, showcase cutting-edge science projects, and compete for more than \$4 million in awards and scholarships. The Intel ISEF Grand Awards are valued at nearly \$1 million in scholarships, tuition grants, and scientific field trips. The remainder of the prize money is offered by nearly 70 government agencies and other organizations, including the IEEE and the Computer Society.

Founded by nonprofit educational organization Science Service in 1950, Intel ISEF is the world’s largest precollege science fair. More than 600 individual and team awards were presented at Intel ISEF 2007. Each entry is judged at least four times, with category awards given in first, second, third, and fourth place. Awards are \$3,000, \$1,500, \$1,000 and \$500, respectively, in each of the 18 categories. The top three winners of Intel ISEF receive a \$50,000 scholarship.

## COMPUTER SOCIETY AWARDS

Seven competitors at Intel ISEF 2007 received cash awards from the IEEE Computer Society. Several students recognized by the Computer Society also won other honors at ISEF. First-place Computer Society honoree Fan also won a \$1,000 third-prize award in computer science from Intel. Computer Society second-place winner Adrian Veres won a \$1,500 second-prize award in biochemistry from Agilent, while the first-place Computer Society team of Arooshi Raga Kumar and Smriti Rajita Kumar garnered a \$500 fourth-prize team award from *Science News*.

Lowell Johnson served as head of the IEEE Computer Society’s team of volunteer judges at ISEF 2007. Winners of IEEE Computer Society Awards at ISEF 2007 were:



*IEEE Computer Society student winners (in alphabetical order) Yale Wang Fan, Arooshi Raga Kumar, Smriti Rajita Kumar, Miles McCullough, Lucia Moez, Charles Robert Myers, and Adrian Veres receive their awards from Computer Society judges Lowell Johnson and Guylaine Pollock at Intel ISEF 2007.*

### First Award, \$1,000:

“A Novel Treatment Using Ultrasound Sonication to Remove Food-Borne Microbes from Fresh-Cut Produce”

Yale Wang Fan, 15, Catlin Gabel School, Portland, Oregon

### Second Award, \$500:

“Design and Development of a Novel DNA Computer System for Advanced Genetic Analysis”

Adrian Veres, 17, College Jean-de-Brebeuf, Montreal, Quebec, Canada

### Third Award, \$400:

“Robot Vision: A Mutual Entropy-Based Algorithm through Scene Recognition from Image Sequences for Terrestrial and Planetary Exploration”

Lucia Moez, 16, Mililani High School, Mililani, Hawaii

### Team First Award, \$500 for each team member:

“Wireless Integrated Security Extension (WISE): A Novel Approach for Securing Supervisory Control and Data Acquisition (SCADA) Systems Against Cyber Attacks”

Arooshi Raga Kumar, 16, and Smriti Rajita Kumar, 16 duPont Manual High School, Louisville, Kentucky

### Team Second Award, \$400 for each team member:

“Strategic Sudoku Solutions”

Charles Robert Myers, 18, and Miles McCullough, 18 Little Rock Central High School, Little Rock, Arkansas



Award winners also receive a gift certificate for any Computer Society publication and a one-year subscription to a Society magazine of their choice.

**YOUNG SCIENTIST AWARD WINNERS**

Every year at ISEF, three Intel Young Scientist Award winners each receive a \$50,000 individual scholarship. The Young Scientist Award winners at this year's ISEF were Dayan Li, 16, of Eleanor Roosevelt High School in Greenbelt, Maryland, for "Thrombospondin-1 Switches Nitric Oxide Function from Inhibitory to Stimulatory for Gene Expression of Human Tumor Endothelial Cell

Markers"; Philip Vidal Streich, 16, home-schooled in Platteville, Wisconsin, for "Determining Carbon Nanotubes' Thermodynamic Solubility: The Missing Link to a Practical Supermaterial?;" and Dmitry Vaintrob, 18, of South Eugene High School in Eugene, Oregon, for "The String Topology BV Algebra, Hochschild Cohomology, and the Goldman Bracket on Surfaces."

In 2008, the Intel International Science and Engineering Fair moves to Atlanta. Further information about ISEF is available at [www.sciserv.org/isef](http://www.sciserv.org/isef).

## IEEE Computer Society Launches 2007 Elections

Each year, all members of the IEEE Computer Society have an opportunity to vote for the officers who will plan new activities and direct the Society's operations in the coming year. Volunteer posts include leadership roles for the Publications, Educational Activities, Conferences, and Electronic Products & Services Boards and membership on the IEEE Computer Society Board of Governors. The volunteers selected this year will serve under 2008 president Rangachar Kasturi, who was voted president-elect in last year's election.

Candidates for office reach the ballot in one of two ways: by Nominations Committee recommendation or by petition. The Nominations Committee accepts nominations from members until April. At a spring meeting, the current Board of Governors approves the slate of candidates brought forward by the Nominations Committee.

**PRESIDENT-ELECT AND VICE PRESIDENT CANDIDATES**

The 2007 IEEE Computer Society Board of Governors has approved James D. Isaak and Susan K. (Kathy) Land as candidates for 2008 president-elect/2009 president. The president oversees the Society's programs and operations and is a nonvoting member on most Society program boards and committees.

The board also approved George V. Cybenko and Sorel Reisman as candidates for first vice president. Candidates for second vice president are Antonio Doria and Michel Israel.

After the elections, 2008 president Rangachar Kasturi will appoint the two elected vice presidents to oversee two Society boards. At his discretion, Kasturi will select appointees to head the Society's other governing boards.

**BOARD OF GOVERNORS CANDIDATES**

The 21 members of the IEEE Computer Society Board of Governors serve rotating three-year terms. The 13 candidates for 2008 to 2010 terms on the Board of Governors are Alfredo Benso, Fernando Bouche, Joseph R. Bumblis, Andre Ivanov, Hai Jin, Philip A. Laplante, Gerard Medioni, Itaru Mimura, Raghavan Muralidharan, Jon G. Rokne, Christina M. Schober, Ann E.K. Sobel, and Jeffrey Voas.

The seven candidates who receive the most votes will assume seats on the Board starting in January 2008. The IEEE Computer Society elections begin on **7 August**, when paper ballots will be mailed to all Society members, and end on **2 October**. All members will have the opportunity to vote via paper mail, fax, or online.

The paper ballots, the election area of the Society's Web page, and the September issue of *Computer* will provide biographical sketches and candidate position statements for each nominee. The biographical sketches will detail the candidates' Computer Society and other professional activities, current employment, professional experience and accomplishments, degrees and majors, awards, and other honors.

We encourage all members to take part in electing the leaders of the Computer Society.

Visit [www.computer.org/election](http://www.computer.org/election) for complete 2007 election details.

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Editor: Bob Ward, [bnward@computer.org](mailto:bnward@computer.org)

# Society Board Amends Bylaws

**A**t a recent meeting in Los Angeles, the IEEE Computer Society Board of Governors voted to amend two articles of the Society's bylaws. Article XII was amended to clarify the scope and mission of the Electronic Products & Services Board. Article VI (formerly Article XI) was rewritten to reflect the merger of the Conferences & Tutorials Board and the Technical Activities Board.

The Technical Activities Board was originally set up to foster grass-root activities of volunteers in the IEEE Computer Society for technical committees, conferences, and workshops, while the Conferences & Tutorials Board was originally set up to oversee and set policy for the Society's conferences, symposia, workshops, and tutorials. In the last decade, these two boards have become intertwined in their activities. The proposed merger will improve the coordination of the operations of these two boards.

Society members are invited to comment before the next Board of Governors meeting, set for 5-9 November in Cancun, Mexico.

Article VI has been rewritten in its entirety, while Article XI (not shown here) has been deleted. Article XII deletions are marked in strikethrough text.

## PROPOSED CHANGES

### ARTICLE VI—TECHNICAL AND CONFERENCE ACTIVITIES

#### Section 1: Technical and Conference Activities Board

The Technical and Conference Activities (T&C) Board shall oversee and set policy for the Society's task forces (TFs), technical committees and technical councils (together, TCs), conferences, symposia, workshops and tutorials which shall be in accordance with the IEEE conference policies and procedures. The T&C Board shall be chaired by the vice president for technical and conference activities and consist of the following members: officers, committee chairs, and additional members as defined in the IEEE Computer Society *Policies & Procedures Manual*.

#### Section 2: Committees

Committees to advise and to implement the policies of the Technical and Conference Activities Board shall be defined in the IEEE Computer Society *Policies & Procedures Manual*. The vice president of technical and conference activities shall appoint the chairs of these committees.

#### Section 3: Appointments

The vice president for technical and conference activities shall appoint liaisons to other Computer Society program boards and committees as defined in the IEEE Computer Society *Policies & Procedures Manual*.

### ARTICLE XII—ELECTRONIC PRODUCTS & SERVICES BOARD

#### Section 1: Electronic Products & Services Board

The Electronic Products & Services Board shall formulate the policies related to the creation, and packaging of all Computer Society electronic products and services. This Board shall advise and monitor its subcommittees on the execution of these policies. The Board has the responsibility for recommending new electronic products and services, coordinating and encouraging efforts to provide electronic products and services, monitoring the quality of present

## Petition Candidate Materials Due

In addition to the previously announced candidates, the IEEE Computer Society welcomes the nominations of other contenders for office. To have a name added 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 signatures for Board term nominees and at least 1,000 signatures 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 office. Nominations were due to the Society secretary in early May.

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 nominee materials must be received by **31 July**. Send them to Computer Society Secretary Ann Gates at IEEE Computer Society, 1730 Massachusetts Ave. NW, Washington DC 20046-1992; a.gates@computer.org.



electronic products, reviewing the scope of new and existing electronic products, recommending changes in the scope of electronic products and making budgetary recommendations. It is also the responsibility of the Board to acquire and develop electronic tools and technologies to facilitate the development of new products or improve the production of current products. The policies related to the intellectual property of electronic products shall be formulated by the originating board. The policies related to periodicals and press products shall be the responsibility of the Publications Board.

The Electronic Products & Services Board shall be chaired by the Vice President for Electronic Products & Services and shall consist of the following voting members: the chairpersons of the operations committees, a representative from each program board, and additional members as defined in the Computer Society *Policies & Procedures Manual*.

### Section 2: Operations Committees

Operations committees to recommend and to implement the policies of the Electronic Products & Services Board shall be defined in the Computer Society *Policies & Procedures Manual*.

The chairs and members of the committees shall be appointed as defined in the Computer Society *Policies & Procedures Manual*.

### Section 3: Editor in Chief Appointment and Terms

~~3.1 There shall be an Editor in Chief appointed for the Computer Society web who will chair the Web Operations Committee, as provided in the Computer Society *Policies & Procedures Manual*. The Board of Governors may designate other chairs of committees of the Electronic Products & Services Board as being editors in chief.~~

~~3.2 The Electronic Products & Services Board shall recommend to the President, candidates for each Editor in Chief position, as specified in the Computer Society *Policies & Procedures Manual*, at various times as required.~~

~~3.3 The President, with the advice and consent of the Board of Governors, shall appoint each Editor in Chief for a term not to exceed two years. In the case of a new electronic product or service, the initial appointment may be for a maximum of three years.~~

~~3.4 Editors in Chief may serve a maximum of two consecutive terms in a given position.~~

### COMMENTS

To comment on the proposed changes, contact 2007 IEEE Computer Society Constitution & Bylaws Committee Chair Rangachar Kasturi at [cb2007@computer.org](mailto:cb2007@computer.org).

## Fall 2007 CSDP Testing Begins 1 September

In response to the growing demand for a comprehensive certification of general software engineering mastery, the volunteer leadership of the IEEE Computer Society, in cooperation with educational consultants Chauncey Group International, has moved to develop and offer the IEEE Computer Society Certified Software Development Professional testing protocol. To date, more than 625 software engineers have passed the certification exam.

Those who complete the CSDP regimen successfully receive the only software development credential that includes all three of the components of a professional certification. To be eligible for CSDP certification, applicants must pass an exam demonstrating mastery of a prescribed Body of Knowledge; verify extensive experience in the performance of the work or profession being certified; and engage in continuing, relevant, professional education.

The CSDP is intended for mid-level software engineers. Professional software engineers who hold a bachelor's degree can use the IEEE Computer Society CSDP credential to verify their skills to current or potential employers. Before taking the exam, candidates must have earned a baccalaureate or

equivalent degree and have at least 9,000 hours of experience in at least six of the 11 knowledge areas the exam covers, including at least two years of software engineering experience within the preceding four-year period.

Each year, the Computer Society offers two opportunities for members to take the CSDP exam: April through June, and September through November.

The CSDP examination is offered at all Prometric Testing Centers worldwide. For IEEE or Computer Society members, 2007 CSDP exam fees total \$450, including a \$100 application fee and a \$350 test administration fee. Nonmember fees total \$550. CSDP credentialing fees are approved by the GI Bill Education Benefits Program as a reimbursable expense.

Applications for the 1 September through 30 November testing window must be postmarked by **15 August**. The application form is available online at [www.computer.org/certification/bulletin.htm](http://www.computer.org/certification/bulletin.htm).

For general information on the IEEE Computer Society CSDP program, including a list of sample test questions and a compilation of software engineering terms, visit [www.computer.org/certification](http://www.computer.org/certification).