



Voice

INTERNATIONAL
CS EDUCATION

The Voice of K-12 Computer Science Education and its Educators

Volume 2, Issue 1

June 2006

Inside This Issue

FEATURES

- CSTA Reaching Out to International Members*
- NCLB Impacts CS Education*
- Awakening Dragons*
- Groundhog Job Shadow Day*

COLUMNS

- Colleague Connection*
- Classroom Tools*
- Research Review*
- Membership News*

INFO BRIEFS

- Staff*
- Contact Info*
- Contribute to CSTA*
- CS & IT Symposium*
- Meet the Authors*
- Mark Your Calendar*
- Resources*

CSTA Reaching Out to International Members

Chris Stephenson, CSTA Executive Director

As CSTA's membership continues to grow, it is important to acknowledge that we really are an international membership organization. The challenge, however, is to find meaningful ways to address the diverse interests of K-12 computer science educators around the world.

There are now CSTA members in 80 different countries. While the United States provides the greatest number of memberships, 12.6% of our members live outside the United States. Of these, Canada represents our largest non-U.S. country with 79 members. India follows with 64 members, the Philippines with 27, Pakistan with 19, South Africa with 17, the United Kingdom with 14, and Israel with 11. There are countries where we have only a single member such as Switzerland and the Marshall Islands. There are also numerous countries such as Australia (currently with 4 members) from which we would welcome many more.

The challenge, we realize, is providing benefits that are of interest to all of our members, regardless of where they live. Toward this end, we have appointed a new Director to our Board. Dr. Judith Gal-Ezer will be helping us to improve our international outreach and to ensure that our international members are considered in all of our decisions.

While there are some issues and initiatives that appear specific to U.S. concerns (for example, the details of teacher certification), our hope is that our efforts in these areas can be shaped by the information shared by our international members and will result in solutions that can be generalized across borders and boundaries. At the same time, we recognize that teachers everywhere share the need for free resources, reliable information, and a supportive community. Our plan is to continue to improve those kinds of member benefits for all of our members around the world.

NCLB Impacts Computer Science Education

PREFACE: When sweeping federal education legislation was signed by President Bush in 2002, the importance of closing the achievement gap and providing quality education to all children was considered so central that the law was named *No Child Left Behind* (NCLB).

NCLB includes a requirement for teachers to be "highly qualified" by 2006 if teaching any of the core academic subjects—English, reading or language

arts, mathematics, science, history, civics and government, geography, economics, the arts, and foreign languages. To be "highly qualified" teachers must have a bachelor's degree, full state certification or licensure, and prove that they know each subject they teach. Since computer science (CS) is not present in this list, NCLB incidentally locates CS outside of the core curriculum, thereby discouraging state licensing for CS educators. While the

IN THE
NEXT
ISSUE OF
THE VOICE

Cool Teacher
Resources

Staff

Chris Stephenson
CSTA Executive Director
Phone: 1-800-401-1799
Fax: 1-541-687-1840
cstephenson@csta.acm.org

Pat Phillips
Editor

Phone: 1-608-436-3050
Fax: 1-608-756-5532
cstapubs@csta.acm.org

Standing Committees

Anita Verno
Curriculum
cstacurriculum@csta.acm.org

Michelle Hutton
Equity
cstaequity@csta.acm.org

Charmaine Bentley
Membership
cstahelp@csta.acm.org

Frances P. Trees
Professional Development
cstapd@csta.acm.org

Debbie Carter
Research
cstaresearch@csta.acm.org

Contact Info

The **CSTA Voice** welcomes your comments.

E-MAIL:
cstapubs@csta.acm.org

FAX:
1-608-756-5532

PHONE:
1-608-436-3050

Letters to the Editor may be edited for space or clarification.



ACM founded CSTA as part of its commitment to K-12 computer science education.

NCLB IMPACTS CS EDUCATION

continued

intent of the NCLB law has been to guarantee that students are learning from qualified teachers, it has had the unintended consequence of forcing some experienced CS teachers to quit teaching CS.

The impact of the law has been felt in the U.S. from coast to coast.

The Story From California

Joanna Goode, Ph.D.

NCLB has actually resulted in dramatically fewer opportunities for teaching and learning CS in California, especially in urban schools.

In California, there is no CS teaching certification, so educators must obtain a credential in another field—typically mathematics or business. This limits the availability of CS teachers, especially those who majored in the field and want to teach computing. The educators who pursue certification in another subject miss out on valuable CS educator networking, pedagogical content knowledge, and other design issues and methodological approaches specific to teaching in CS classrooms.

Along with highly qualified teachers, NCLB requires annual tests in mathematics and language arts to measure student performance. Federal funding is attached to meeting improvement goals, and thus, these tests often become the very focus of schooling to the detriment of other academic pursuits. Three years ago, I was told

by an East Los Angeles principal that unless CS would directly raise mathematics or language arts test scores, he had no resources available to offer the course. Unfortunately, these tests do not draw on the problem-solving approach of CS education.

Though NCLB claims to address issues of equity, its unintended consequences are narrowing learning opportunities for students, especially those in hard-to-staff schools. A talented teacher I work with had majored in programming and started a successful Advanced Placement (AP) CS course at her high school, considered one of the poorest and lowest-performing schools in the state. Anyone visiting her class would be inspired to see how she skillfully taught these Latinas and African American boys computing in a school often referred to as “failing”. After only one year, she was removed from teaching AP CS to serve as a highly qualified mathematics teacher for a remedial math course. But incidents of such curriculum constriction don’t impact all schools alike; a wealthier school across town in the same district has maintained its AP CS program despite NCLB legislation.

It is ironic that legislation aimed at equity has created more obstacles to studying the nation’s most segregated academic field. Since NCLB was signed in 2002, AP test-takers have declined by 27% in California. Meanwhile, the Bureau of Labor Statistics locates 5 of the 6 fastest growing professions requiring bachelor’s

CSTA Voice ISSN: 1555-2128

CSTA Voice is a publication of the Computer Science Teachers Association.

CSTA Voice is a quarterly publication for members of the Computer Science Teachers Association. It provides analysis and commentary on issues relating to K-12 computer science education, resources for educators, and information for members. The publication supports CSTA’s mission to promote the teaching of computer science and other computing disciplines.

Change of Address and Membership Questions: Contact Member Services via email at cstahelp@csta.acm.org, or call 1-800-342-6626 (U.S. & Canada) or +1-212-626-0500 (Global).

Reproduction Rights Information: No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical including photocopy, recording or information storage and retrieval system, without permission in writing from the publisher. Exception: permission to photocopy [individual] items for internal or personal use is hereby granted by CSTA.

Criteria for submitting articles: Potential writers for CSTA should send a brief description of the proposed article, estimated word count, statement of value to members, author’s name & brief bio/background info, and suggested title to the editor at cstapubs@csta.acm.org. The final length, due date and title will be negotiated for chosen articles.

Notice to Authors Contributing to CSTA Newsletter: By submitting your article for distribution in this publication, you hereby grant to CSTA the following non-exclusive, perpetual, worldwide rights:

- to publish in print on condition of acceptance by the editor
- to digitize and post your article in the electronic version of this publication
- to allow users to copy and distribute the article for noncommercial, educational or research purposes

However, as a contributing author, you retain copyright to your article and CSTA will make every effort to refer requests for commercial use directly to you.

degrees in the field of CS. This irony has recently been addressed by the introduction of the American Competitiveness Initiative, though it is unclear how successful this program will be alongside NCLB, especially in schools serving poor students of color. What is clear, though, is that until CS is recognized as a valued elective in high school and made equally

might be asked to teach other business classes if they passed.

The Department of Education told me that the Georgia Professional Standards Commission (GPSC) was requiring either a Business or Computer Science Education certificate for AP CS teachers. I checked with the GPSC and discovered that we do not have a Computer Science Education

Certificate in Georgia. So, the teachers would either have to pass the Business Praxis or quit teaching AP CS.

I informed the entire GPSC board in

We need to create tests that evaluate teacher competency and we need to create advanced certificates in CS.

accessible to all students, we will continue to leave most children, some groups more than others, behind.

The Story From Georgia Barbara Ericson, Director, CS Outreach, Institute for Computing Education, College of Computing, Georgia Institute of Technology

In Georgia, CS courses are offered in the Business and Computer Science Department. However, quite a few of the teachers of AP CS courses are certified in mathematics, rather than business. In the spring of 2005 some teachers were told that they would need to pass the Business Praxis exam to continue teaching AP CS in the future. A Georgia Department of Education employee assured me at that time, that teachers certified in mathematics could continue teaching the AP CS courses without taking the Business Praxis. One AP CS teacher took the Business Praxis and said that there was nothing about CS on the test.

In August 2005, two teachers quit teaching AP CS because they were certified in mathematics and were told they would have to take the Business Praxis. In November, I got a frantic message from an AP CS teacher that we were about to lose all 15 of the AP CS teachers in DeKalb County because they were being told they would have to take the Business Praxis to continue teaching AP CS. The teachers did not want to have to take the Business Praxis since they didn't have a background in business, didn't want to pay for the test, and were afraid that they

December of the situation and the projection of a shortage of CS professionals due to the 40% drop in majors since 2001, and asked that they allow mathematics certifications to qualify teachers for CS also. On December 16, 2005, I got a reply from the GPSC that they would allow teachers with mathematics certificates to teach AP CS. Later I learned that one of the AP CS teachers has a physics certificate so the GPSC modified the requirements to any teaching certificate appropriate for the grade level.

While we halted the loss of all of AP CS teachers, this isn't a great long-term solution. We need ways to verify that CS teachers are qualified. The NCLB Act allows teachers to prove that they know the subject by a major in the subject they teach, credits equivalent to a major in the subject, passage of a state-developed test, passage of a *High, Objective, Uniform State Standard of Evaluation* (HOUSSE) for existing teachers, an advanced certification from the state, or a graduate degree.

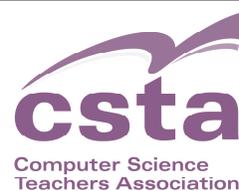
Most of the AP CS teachers in Georgia do not have a major in CS and most do not want to go back to school to get a degree in CS. We need to take advantage of the other options in NCLB. We need to create tests that evaluate teacher competency and develop advanced certificates in CS. We need to take advantage of the HOUSSE option which allows states to develop an additional way for current teachers to demonstrate subject-matter competency. Solutions are available and through leadership and dedication we can avoid the problems faced in Georgia and assure a quality CS education for our students.

Contribute to the CSTA Voice

The editorial board of the **CSTA Voice** is dedicated to ensuring that this publication reflects the interests, needs and talents of the CSTA membership. Please consider sharing your expertise and love for computer science education by contributing newsletter content.

Potential writers for the **CSTA Voice** should send a brief description of the proposed article, estimated word count, statement of value to members, author's name and brief bio/background info, and suggested title to the editor at: cstapubs@csta.acm.org. The final length, due date and title will be negotiated for chosen articles. Please share your knowledge.

Volunteer today.



Your First Year of CSTA
Membership is FREE!

Join Today

<http://csta.acm.org>

CS & IT Symposium

July 8, 2006

Learning with Colleagues

- ▶ Flash Programming
- ▶ Game Development
- ▶ Wiki Websites
- ▶ 3D Animation
- ▶ Web programming
with .NET
- ▶ Networking Simulation
- ▶ Kinesthetic Learning
- ▶ Pair Programming

Keynote Speakers

Ellen Spertus
(Google)

Kevin Schofield
(Microsoft)

See you in
San Diego!

[www.iste.org/profdev/
symposia/cs/2006](http://www.iste.org/profdev/symposia/cs/2006)

Awakening Dragons

Teaching in China

An interview with Sean T. Moroney, M.Ed

Sean Moroney is from Boston, MA. He began his career teaching computer science (CS) 12 years ago in Massachusetts before embarking on his adventure of teaching around the globe. He is currently teaching CS at the Qingdao International School in China.

CSTA: *How did you come to teach CS in China?*

Sean: I was teaching overseas in the Middle East when the Iraqi war broke out; however the war changed the nature of living and working there significantly. There was an opening in China that sounded intriguing, so I investigated and accepted it.

CSTA: *Describe your responsibilities.*

Sean: I was initially hired to build an IT teaching and learning program at the Qingdao International School. I work 5 days a week from 8:00 to 4:30 or 5:00, teaching about 5 hours a day.

CSTA: *Tell us about your school and students.*

Sean: Like many overseas international schools, the Qingdao International School is a privately-owned institution. It is located in a rapidly developing city on the northeastern seaboard of China in Shandong Province about 500 km from Beijing. The 6 year old school has about 200 students. The student body is about 70% Asian and 30% Western. The grades K-12 are divided into a lower and upper school and we teach an American-style curriculum with a pastiche of other elements including Mandarin Chinese, a government requirement of all schools.

CSTA: *In what ways is teaching in China different from your earlier teaching experiences?*

Sean: It's a whole different world! China is a vast and enigmatic nation with a complex history spanning over 6000 years. For much of this time it remained largely closed to the West.

Prior to the social upheavals of the Communist Revolution, the system of teaching and learning was rather static, having been defined in the Confucian era, circa 500 BCE. Unlike the West, with a humanistic-rooted tradition of critical inquiry, current Chinese scholarship places a priority on tradition and the concept of "learnedness." To become learned requires studying copious amounts of information, committing enough of it to memory to qualify in exams and then repeating the tasks in the next cycle of

Like students the world round, Asians are intellectually curious and want to learn, but they struggle against the set of customs and traditions.

schooling. One never questions the teacher, at least not openly, nor challenges the ideas or information being imparted, nor even asks "Why?"

I've not taught in any other Asian nations but colleagues of mine tell me it's quite similar in Japan and Korea. This traditional system is really a change from my experiences in Boston. Stylistically, I've found it a challenge working with many of my Asian students. They often appear passive, timid, or uninterested in the content and learning. However, I'm learning that like so much here, things are not what they always appear to be. Like students the world round, Asians are intellectually curious and want to learn, but they struggle against the set of customs and traditions.

Things are changing in science education. In a strange alchemy of economic fervor and post-socialist utilitarianism, the East is realizing that it is not enough to just throw money towards the construction of new, modern schools. They must begin to change the entire methodology of schooling. Positivist values, a necessity for good science, languish in a system that clings superstitiously to tradi-

tion, and discourages questioning or problem solving. More and more, international schools and western methods are being regarded as models for future educational reform and development.

In CS and related studies it's becoming understood that innovation, not mere imitation, is a key factor for any country interested in shaping 21st century technologies. Centuries ago, Chinese inventions such as the compass helped fuel an era of unprecedented exploration and the Chinese haven't forgotten this. The question is, "What conditions will it take here to reawaken this spirit in the present?" While there is no simple response, it is likely that part of the answer will include a new way of educating and learning. Nonetheless, as a Chinese saying goes, "All things are difficult in the beginning."

CSTA: *What do you most appreciate about this experience?*

Sean: Perhaps my greatest appreciation is being in China at such an exciting time, being a witness to history in the making.

CSTA: *What educational practices or attitudes, have you encountered that others would value?*

Sean: Perhaps what I've learned in all of my overseas teaching posts is that there is certainly more than one way of doing things. Despite the many shortcomings of the current system, it's no small feat to educate 1.3 billion people. I'm not sure what value fellow educators will take away from that except perhaps a sense of appreciation or possibly excitement about the future being defined here in the East.

CSTA: *What are your future plans?*

Sean: With another year's contract I have a feeling I'll be in China or at least Asia a while longer. I am also chronicling my experiences to share with others.

CSTA: *What else would you like to tell our readers?*

Sean: Long ago there was a land of many fiery and active dragons. Over time their numbers grew so large they could barely keep count or work together well enough to keep at bay the eternal enemies of sentient life, hunger, cold, and darkness. Fearful, they all huddled together and for a long while they slept. The world beyond them became only a dream, and to that world they were also a dream. Then one day they awakened...

Groundhog Job Shadow Day

Mike Kelley

On Thursday, February 2nd, Cisco Systems hosted a series of Groundhog Job Shadow Day events at five key sites across the United States to help young people learn about career opportunities in the information technology (IT) industry.

More than 3,000 students participated in events hosted on Cisco and Cisco Networking Academy campuses. The students heard from a panel of Cisco employees and graduates from the Cisco Networking Academy who described the paths that led to their current positions, and emphasized the importance of having qualified IT professionals to be competitive in the global economy. Following the panel discussion, students toured the Cisco labs, and viewed facilities and demonstrations.

"Hosting students from the Networking

Academy provides Cisco employees with a tremendous opportunity to give back to the community and to shape the future leaders of our industry. Job shadowing presents a wonderful chance for students to broaden their horizons. The program exposes young people to career opportunities and illustrates how what they learn in the classroom leads to success in the workplace" said Tae Yoo, Vice President of Corporate Affairs, Cisco Systems.

Nearly 200 students also attended the San Jose, California event which featured a Women's Leadership breakout during which professional women in IT partnered with female students.

National Groundhog Job Shadow Day 2006 was sponsored by Junior Achievement and the U.S. Department of Education.

Meet the Authors

Dr. Maureen Biggers

Assistant Dean for Diversity and Communities in the College of Computing, Georgia Institute of Technology.

Maureen has been instrumental in many equity initiatives at GT and coordinates the Institute for Computing Education, an outreach program for K-12 teachers. She currently serves as Vice President of CSTA and Chair of the Nominations Committee.

Barbara Ericson

Dir., CS Outreach, Georgia Institute of Technology

Barb has over 20 years experience in computing in both research labs and academia. She has taught undergraduate computing and continuing education courses for Georgia Tech and is on the committee to revise the Georgia Business/Information Technology curriculum.

Dr. Joanna Goode

Assistant professor at the University of Oregon's College of Education

Joanna previously worked as a mathematics and computer science teacher at an urban Los Angeles area high school. Her research examines why so few females and students of color study computer science in school.

Michael Kelly

Mike is associated with Nadel Phelan, Inc. and was an observer of the Cisco Groundhog Job Shadow event in San Jose on February 2, 2006.

Sean Moroney

CS Educator

Sean is from Boston, MA. He began his career teaching computer science 12 years ago in Massachusetts before embarking on his adventure of teaching around the globe. He is currently teaching CS at the Qingdao International School in China.

Chris Stephenson

Executive Director, CSTA

Chris is part of the Teaching Leadership doctoral program at Oregon State University's College of Education.

Colleague Connection

An Interview with Judith Gal-Ezer

Pat Phillips

Judith Gal-Ezer is a member of the Board of Directors of the Computer Science Teachers Association (CSTA) with special responsibility for international outreach and is a professor of computer science (CS) at the Open University of Israel. She served as Vice President for Academic Affairs at the Open University, and previously as head of the Mathematics and Computer Science Department. Gal-Ezer served on the committee that created the CS curriculum for Israel's high schools and today chairs the committee. After several years of research work on wave propagation and seismology as part of her M.Sc. and Ph.D. studies, her research activity turned to teaching of computer-integrated mathematics and CS education.

CSTA: *Tell us about your role as on the CSTA Board.*

Judith: My role is primarily reaching out to the international community of CS educators by bringing the message of CSTA to them and bringing worldwide information about CS education to CSTA members.

CSTA: *What special talents and insights do you bring to this position?*

Judith: Being a CS educator, being involved in the design of the Israeli high school curriculum, chairing the Ministry of Education CS committee for high school CS education, and conducting CS education research have given me a broad spectrum of experiences which enable me to see CS from many perspectives.

CSTA: *What challenges do you perceive for CSTA on an international level?*

Judith: The biggest challenges involve reaching out to the international community of CS educators, and convincing this community and computer scientists of the importance of developing and implementing a well designed high school CS curriculum. In turn, they will have to work with policy makers in their countries to achieve the goals.

CSTA: *What are your plans for addressing these challenges?*

Judith: My first step is to get as many worldwide contacts as possible and to recruit their efforts in building a large and active international CSTA membership. Secondly, I will work to spread the CSTA message. Currently I am organizing an international panel on high school CS programs for ITICSE2007, the European conference of SIGCSE, to be held in Scotland.

CSTA: *Please summarize your philosophy of CS education.*

Judith: CS is a full-fledged scientific subject and should be taught on the same par with physics, chemistry, and biology. Not only is CS a scientific discipline, but it is going to become the most important discipline, and as vital as math in physics, chemistry, and biology, as well as in all technology and engineering areas. Today, CS is not only an essential part of research in physics, chemistry, and biology, but also in the social sciences. Dual-disciplinary undergraduate degree programs which combine economics and CS, psychology and CS, or management and CS are very popular in Israel. If high school students do not get a sound CS education, they will lack one of the main skills they'll need for their professional life, whichever direction they will choose.

A well established program should concentrate on the key concepts and foundations of the field, emphasizing algorithmic

problem solving. The program should focus on lasting computer science concepts, not on changing technology. Each of the programs should have required units and electives, to achieve variety and flexibility.

Conceptual and experimental issues should be interwoven throughout the program. Various programming paradigms should be taught to provide different styles of algorithmic thinking or different ways of solving problems. Teachers certified to teach computer science must have an adequate formal computer science education to teach in this area.

Judith Gal-Ezer can be reached at galez@openu.ac.il

Classroom Tools

IBM Project Yields New Resources for Teachers and Students

Chris Stephenson

CSTA and IBM have developed three new resources for computer science (CS) teachers and students and will be distributing them free via their websites. The three free resources provide much needed content for students and help teachers address the ever-evolving and challenging discipline of CS.

The resources include:

- **Object Oriented Design Using Pong:** Teaches Java programming concepts by implementing a version of the classic video game Pong. Includes lesson plans, worksheets, solutions, and Java files.
- **Web Page Design and Development:** Introduces principles of Web design to students who already have a basic understanding of the Web. Includes a comprehensive set of lesson plans and handouts.
- **Project-Based Learning Model:** Serves as a professional development tool and provides teachers with an overview of project-based learning. It includes PowerPoint presentations, sample worksheets and templates, and links to additional readings.

The resources will be distributed to teachers free of charge via both the CSTA website (csta.acm.org/Resources/sub/RecommendedResources.html) and the IBM Academic Initiative Web site (www-304.ibm.com/jct09002c/university/scholars/).

The resources were classroom tested at pilot sites across the country, and designed to align with curriculum standards contained in the Association for Computing Machinery's (ACM) *Model Curriculum for K-12 Computer Science*.

Chris Stephenson, CSTA's executive director, noted the importance of this kind of project in demonstrating that business and industry partners can play an important role in supporting CS education and thus helping to ensure that students have the skills they will need to compete in an increasingly global economy. "This project really is the best example of how partnerships can work. IBM not only provided the funding for this project, but also provided us with experts who worked with our teachers to develop resources that would be truly classroom and workforce-relevant for a broad array of students."

Buell Duncan, general manager of developer relations at IBM, also noted the importance of working together to address pressing educational and economic needs. "This work is critical to helping fill the pipeline with engineers, computer scientists, and other professionals who will lead in the Innovation Economy. Our collaboration with CSTA is enabling us to identify and influence promising talent at a formative age."

EDUCATION PAYS

Relative earnings of adults based upon level of education completed
Various years 1998 – 2001 (Secondary education completed = 100%)

| | < SECONDARY | POST SECONDARY |
|----------------|-------------|----------------|
| Canada | 80% | 136% |
| France | 84% | 150% |
| Germany | 76% | 145% |
| Italy | 58% | 127% |
| United Kingdom | 67% | 159% |
| United States | 70% | 186% |

SOURCE: National Center for Educational statistics
<http://nces.ed.gov/fastfacts/display.asp?id=71>

Research Review

We Asked, You Told Us

Chris Stephenson

CSTA's first Membership Satisfaction Survey is providing interesting data on member perceptions of CSTA and how we can provide more and better member benefits. A total of 634 CSTA members (16%) completed the survey and indicated that overall, member satisfaction is very high.

- 86.9% rated the CSTA website as Good-Excellent
- 79.1% rated the *CSTA Voice* newsletter as Good-Excellent
- 69.4% rated the CSTA Advocate blog as Good-Excellent
- 71.1% rated the relevance of the Advocate blog postings Good-Excellent

We also learned that both awareness of and satisfaction with our JETT/TECS workshops and the Computer Science Information Technology (CS&IT) Symposium are very good.

- 63% of our members have been to a JETT/TECS workshop
- 50% plan to participate in future workshops
- 43% have attended a CS&IT symposium
- 62% plan to do so in future.

The survey also provided us with valuable information for planning. The top five requested new benefits for members are:

1. more online computer science resources
2. a national conference on K–12 computer science education
3. an online discussion forum
4. classroom posters
5. brochures for students and parents

We are happy to report that there are already projects underway to meet all of these requests in the near future. One of the most important things that we learned, however, is that we need to do a better job promoting CSTA benefits. As a result of this feedback, we will be working on new ways to let members know about all of our member benefits.

Joan Wheeler of Jackson Memorial High School in New Jersey was rewarded with a NavMan 100 Pocket GPS Locator for taking the time to complete the survey.

Membership News

CSTA Election

Dr. Maureen Biggers

Thank you to everyone who voted in the 2006 CSTA Board elections. Results are in and we are pleased to announce Leigh Ann Sudol as the At-Large Representative and Stephen Cooper as the University Faculty Representative. Their responsibilities will begin June 1, 2006.

Leigh Ann Sudol teaches math and computer science at Fox Lane High School in Bedford, NY, and advises a robotics club and a programming team. She has been an Advanced Placement Computer Science (AP CS) reader since 2002, co-authored two AP CS related books and written the teacher's guide to accompany *Java Software Structures AP Edition* textbook. She is an AP Central Consultant to the College Board for CS and has served as a consultant to the Cisco Networking Academy. Leigh Ann earned a B.S. from Pace University and an M.A. in Computing and Education from Columbia University Teachers College. Her professional life includes presenting at workshops and conferences and involvement in professional organizations for computer science.

In describing her plans for working with CSTA, Leigh Ann said, "I am motivated and passionate about what I do and truly love teaching computer science. I will bring this passion to CSTA and work to further goals of this organization. Through this organization I can help to nurture the development of best practices in CS education. In addition, I can foster curriculum changes that will result in students achieving not only success in computer science, but also gain a love for problem solving."

Stephen Cooper currently serves as Associate Professor of Computer Science at Saint Joseph's University in Philadelphia, PA. He has been recognized at the university level for his excellence in teaching and has created an outreach program for attracting minority public school students to careers in math and CS. He earned a B.A. in math and chemistry from Cornell University and an M.S. and Ph.D. in CS from Syracuse University. Stephen's professional life also includes authoring articles, refereeing conference proceedings, and presenting at teacher workshops focusing on the classroom use of Alice. Additionally, he is Co-Principal Investigator on several National Science Foundation grants to study and measure the outcomes of introductory CS courses.

Stephen said, "I am concerned about the drying up of the pipeline of students choosing to major in CS in college and the under-representation of women and minorities. Solving this problem will require changes to K–12 computer science education," in summing up his motivation to work with the CSTA Board of Directors.

Robb Cutler, President, commented on the election, "An organization is only as strong as its members. In this election, CSTA's membership proved its strength—both in the slate of extremely qualified candidates and in voter turnout, which exceeded expectations by three to four times. Steve and Leigh Ann bring valuable talents and unbounded enthusiasm to the CSTA board. I look forward to working with them over the next year as we continue to fulfill the goals of CSTA and meet the needs of K–12 CS teachers."

Other Board members confirmed by acclamation include Robb Cutler, President; Michelle Hutton, Vice President; and Barb Ericson, Teacher Education Representative. For a complete listing of the CSTA Board, as well as information on each of the standing committees, visit the CSTA website (<http://www.csta.acm.org/About/sub/BoardofDirectors.html>).



We're on the Web! <http://csta.acm.org>

MARK YOUR CALENDAR

Teacher Enrichment in Computer Science (TECS) workshops

Summer 2006 (see website for dates)
tecs.acm.org/

National Education Association (NEA) Conference

June 30 - July 5 in Orlando, Florida
www.nea.org/annualmeeting/index.html

National Educational Computing Conference (NECC)

July 4 -7 in San Diego, California
center.uoregon.edu/ISTE/NECC2006/

CSTA/ISTE Symposium for Secondary CS & IT Teachers

July 8 in San Diego, California
www.iste.org/profdev/symposia/cs/2006

Advanced Placement National Conference

July 12 - 16, 2006 in Lake Buena Vista, Florida
www.collegeboard.com/apac/2006/index.html

International Conf. on Education and Information Systems, Technologies and Applications (EISTA)

July 20-23 in Orlando, Florida
www.conf-info.org/eista06/website/default.asp

International Conference on Interactive Computer Aided Learning (ICL)

September 27-29 in Villach, Austria
www.icl-conference.org/index.htm?http://www.icl-conference.org/cfp.htm

Grace Hopper Celebration of Women in Computing 2006

October 3-7 in San Diego, California
www.gracehopper.org/

Computers and Advanced Technology in Education (IASTED)

October 4-6 in Lima, Peru
www.iasted.org/conferences/2006/peru/cate.htm

Special Interest Group for Information Technology Education (SIGITE)

October 19-21 in Minneapolis, Minnesota
www.sigite.org/content/events/sigite06

Frontiers in Education Conference (FIE)

October 28-31 in San Diego, California
fie.engrng.pitt.edu/fie2006/

Upcoming TECS Workshops

One, two, and three-day workshops

Supports *A Model Curriculum for K-12 Computer Science*

Hosted by college and university computer science faculty

Promote sharing of resources

Broad and flexible curricula

TOPICS OF STUDY CAN INCLUDE:

- Relationship between math and computer science
- Principles of computer organization
- Introduction to programming languages
- Issues of equity and ethics in computing
- Careers in computing

Learn about locations near you.

<http://tecs.acm.org>

RESOURCES

Here's more information on topics covered in this issue of the CSTA Voice.

PROFESSIONAL DEVELOPMENT

Page 1: New No Child Left Behind Flexibility: Highly Qualified Teachers
www.ed.gov/nclb/methods/teachers/hqtflexibility.html

Page 3: Georgia Professional Standards Commission www.gapsc.com/caps/caps.asp

Page 3: Institute for Computing Education www.cc.gatech.edu/ice

Page 4: Qingdao International School www.qischina.org/

Page 5: U.S. Department of Education www.ed.gov/index.jhtml

Page 6: Open University of Israel www-e.openu.ac.il/

Page 7: National Center for Educational Statistics nces.ed.gov/fastfacts/display.asp?id=71

Page 7: CSTA Survey csta.acm.org

Consortium for Computing Sciences in Colleges (CCSC) calendar of conferences
www.ccsc.org/events/conferences.htm

TEACHING RESOURCES

Page 5: Junior Achievement www.ja.org/

Page 5: Cisco Networking Academy Program www.cisco.com/edu/emea/index.shtml

Page 6: CSTA Recommended Resources csta.acm.org/Resources/sub/RecommendedResources.html

Page 6: IBM Academic Initiative www-304.ibm.com/jct09002c/university/scholars/



Computer Science
Teachers Association

CSTA Voice
past issues online!

Visit

[csta.acm.org/Publications/
Publications.html](http://csta.acm.org/Publications/Publications.html)