csta Voice

Professional Development

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

Volume 11, Issue 1 **March 2015**

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VOICE

Advanced Placement Computer Science

2015 CSTA Annual Conference

Heating up in Texas

Philip East and Doug Peterson

Come July, things are going to heat up in Grapevine, Texas. The 2015 CSTA Annual Conference, which moves to locations throughout the U.S., lands in the Lone Star State, July 12–14.

We'll celebrate the 15th year of the conference as it continues to grow and evolve to meet the ever-changing needs of computer science (CS) educators. The planning committee examined over 75 submissions and reviewed the feedback from last year's event to create another outstanding program.

The 2015 program will include some exciting, new elements, as well as bring back a few of the best from past conferences.

- **Sunday Events** – Early arrivers will have several options, including a welcome session, a CS4HS "reunion," and workshops.
- **Expanded Workshops** – By popular request, there will be more hands-on workshops beginning on Sunday evening and more on Monday. The workshops are first-come, first-served. Space is limited. Register early!
- **K–8 Strand** – To meet the increased demand for professional learning opportunities for elementary teachers, we've planned K–8 sessions in every time slot.
- **Exhibitors Hall** – The exhibitors will again be featured at the 2015 Conference after a successful debut in 2014.
- **Monday Night Event** – The popular social and learning event initiated a couple of years ago will return as another fun feature.

All of this, plus the high-quality, innovative, inspiring, and collegial features you've come to expect from the CSTA Annual Conference–keynote speakers, hands-on workshops, one-hour presentations, mini-sessions, and surprising door prizes–await you this summer in Texas.

Make plans now for July 12–14, 2015. Registration is open. Complete details, registration link, and housing information are available at the conference site (*cstaconference.org*).

See you in Texas!

Beyond Hour of Code–Computing Camps

Barbara Ericson

The Hour of Code and other innovative computer science (CS) projects have increased interest in computing. But to be successful in computing, kids need more than an hour to learn computing concepts, increase their confidence, and overcome negative stereotypes. Computing summer camps are an ideal way to build skills and positive attitudes.

Why should you offer a computing summer camp? Computing summer camps are effec-

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Beyond Hour of Code – Computing Summer Camps

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tive in giving kids a deeper introduction to computing and we know that early exposure to engaging computing experiences is especially important for underrepresented minorities and girls.

At Georgia Tech, one of the African American males that attended our high school computing camps said that he resisted attending the camp because he thought it would be "geeky kids who memorize digits of pi." But because of his camp experiences, he decided to major in CS at Georgia Tech. As a teaching assistant for an introductory computing course, he worked to convince other students to major in CS. Computing camps can ignite a lifelong interest in computing and change lives.

Georgia Tech has been running non-residential computing summer camps for elementary through high school students since 2004. Evaluations show significant increases in confidence and knowledge of computing concepts, as well as a decrease in negative attitudes towards computing.

So, where do you start to offer a computing summer camp? It takes months of planning to do it well. We recommend that you start planning in the fall and open registration from early February into the spring. Eager parents start looking for summer camps in January and February.

What can you do this summer if you haven't started preparation for a summer camp? You can start by offering computing content at existing camps. We have offered training to the Girl Scouts at their residential summer camps and worked with the 100 Black Men of Atlanta at their drop-in summer camps. The Boys and Girls Clubs, Girls Incorporated, YWCA, YMCA, and other youth-serving organizations offer summer programs as well. These youth-serving organizations often have computers but don't know how to teach computing concepts.

What should you teach in the computing camps? While boys flock to computing camps with robots, we have also had great results with free software like Scratch, Alice, and App Inventor. Some camps have attracted a high percentage of girls with web design and jewelry creation using 3D printers. If you offer robotics, be sure to include activities, such as teaching the robot to dance or creating a kinetic sculpture with the robot kit using Artbotics, which will appeal to girls also. If you choose to use a robotics kit or other kit that costs money, include free tools so that the students can continue to learn after the camp.

Some camps have attracted a high percentage of girls with web design and jewelry creation using 3D printers.

It is important for camps to earn enough money to be financially self-sustaining. What is the secret to making the camps financially self-sustaining? The trick is to offer camps for elementary and/or middle school students. We have found that parents are willing to spend more for computing camps for younger kids, because they also need day-care. You can typically charge at least $100 more than the cost of quality day-care in your area. Our camps for fourth through sixth graders are the first to fill every year. Additionally, sustainable camps can provide summer jobs for teachers,

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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.

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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.

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undergraduates, and high school students.

Some summer camps have been initially supported through projects funded by the National Science Foundation (NSF). Project Georgia Computes!, a funded project from 2007 to 2010, offered workshops and "seed" funds to help 11 other colleges and universities in Georgia start or expand computing summer camps. The NSF Expanding Computing Education Pathways (ECEP) Alliance is providing workshops and "seed" funds to start or expand computing summer camps at colleges, universities, and high schools in California, Massachusetts, and South Carolina.

Learn more about starting or expanding camps at *coweb.cc.gatech.edu/ice-gt/1091*.

Materials used in the six-hour workshop on "How to Plan and Run Computing Summer Camps" are available at *bit.ly/1AtwYci*. Materials include a timeline, sample budget, flyers, and activities.

LEARN MORE:
Artbotics: *artbotics.cs.uml.edu/wordpress/?page_id=177*
LEGO NXT: *nxtprograms.com/index1.html*
Video tutorials: *ice.cc.gatech.edu/dl*
Google resources: *www.madewithcode.com*

IMPORTANT NOTE: CSTA members can list their summer camps (both student and teacher events) on the CSTA website. Contact customerservice@csta-hq.org.

Be an Advocate for your CS Program

Dean Johnson

How good are you at promoting your computer science (CS) program? If your response is, "not very good," then I can identify with you. At least, I used to be able to identify with you. Let me explain…

I have been teaching CS for over 25 years and for the majority of the early years, recruiting students was not a challenge. They simply signed up and the class ran just fine. Then, something weird happened in the early 2000's. In the same decade when programming began to impact our everyday lives, interest in my programming class plummeted.

I used to have two courses in programming; an introduction to programming and C++. In 2003–2004, the introductory enrollment had dwindled to one section of nine boys. The C++ course didn't even run. I was busy teaching math also, so just I ignored it and hoped it would change all by itself.

After a few more years of doing the same thing while expecting different results, I decided it was time to take some action. That's when I changed everything. And I mean everything!

In the summer of 2007, I began teaching Alice in my introductory course. I scrapped the console-based programming in C++ course and moved to Java. The interest and enthusiasm began to grow. The following year, enrollment grew to 78 students. I added Advanced Placement (AP) CS. Enrollment continued to grow and I decided to add mobile app development. Currently there are 133 students enrolled across four courses. We now have an AP CS scholarship program, a new lab, and two CS teachers in our high school.

These changes are a direct result of the ways in which I revised how I communicated about the importance of CS. My wife would say to me, "Dean, nobody knows what CS is, so you have to tell them." And tell them, I did.

As a math teacher, I never had to promote my courses because everyone knows what math is. But CS is different and needs be defined and sold to the public. I use a variety of strategies:

1. High-performing math students are recruited with personal letters of invitation.
2. CS students give presentations to the upper-level math courses.
3. Energetic speakers visit my classes.
4. Students participate in hackathons at the local university.
5. Prominent software companies in the area and the CS program at the local university host field trips.
6. Trips and activities are publicized by submitting pictures to our local newspaper, the school newspaper, and the yearbook.
7. An annual "Alice fair" is organized. Administrators and the school board members are invited to see what the students are doing in CS.

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BE AN ADVOCATE FOR YOUR CS PROGRAM

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8. I speak at school board meetings about the state of CS in our country and at our high school.
9. The superintendent is invited to participate in our Hour of Code event.
10. We host hackathons with sponsorship from local businesses.
11. A successful former student is a partner in promoting CS and sponsors a scholarship program for AP students.
12. Students intern at a local software start-up.
13. Private sponsorships are sought (such as the one that built our new CS lab).

Trust me, if I can do this, anyone can. It doesn't take any special talents, just a firm belief in the importance of CS for our students and the willingness to communicate it passionately to everyone.

Computational Thinking at the Heart of CS

Mark Dorling

Computational thinking (CT) sits at the heart of the new English statutory program of study for computing: "A high quality computing education equips pupils to use CT and creativity to understand and change the world."

Yet in contrast, there is an interpretation, led by the popular media, implying that the new computing curriculum focuses on "coding." This gives a misleading message, especially to those teachers who are new to the discipline.

Computer science (CS) is an academic discipline with its own body of knowledge that can equip pupils to become independent learners, evaluators, and potentially designers of new technologies. By studying CS, pupils gain not only knowledge, but also a unique way of thinking about and solving problems: CT.

The challenge for teachers is that there isn't an agreed definition, list of concepts, or defined set of classroom practices for CT. Additionally, there are not techniques to support teachers in understanding what CT is, how into integrate it into their lessons, how to evidence it, and its relationship to assessment. Unless teachers are provided with such guidance, CT is in danger of becoming simply a "buzz" word.

The Progression Pathways assessment framework (*community.computingatschool.org.uk/resources/1692*) was offered as one interpretation of the breadth and depth of the program of study for computing in England. But given its focus on concepts and principles, the framework could be relevant beyond England. The framework has been updated to include CT concepts and strategies for developing CT in the classroom.

The four-step framework helps teachers by setting out practical way to both understand CT and introduce the ideas. It can be used both to support the planning of activities to increase opportunities for pupils to develop CT skills and to assess their progress in doing so.

LEARN MORE:
English Curriculum: *community.computingatschool.org.uk/resources*

Institutional Member Alert

Are you aware that you can post your K–12 CS professional development and K–12 CS student events on the CSTA website?

Don't delay! Send the details today: *customerservice@csta-hq.org*

www.csta.acm.org/ProfessionalDevelopment/sub/TeacherWorkshops.html
www.csta.acm.org/Resources/sub/CSEventsforKids.html

PD Advice from the Experts

Editor's Note: The following ideas were gathered from CSTA Chapter leaders when asked to describe successful professional development (PD) events.

What type of PD is most popular with your members?
SuperQuest three-day summer workshops and one-day SuperQuest workshops in the spring and fall.
~Terrel Smith, Oregon
Shorter sessions during regular meetings covering new technologies or teaching strategies.
~Rebecca Dovi, Central Virginia

What formats work well?
Meet & Greets for our members and our post-secondary partners are popular. We invite students to attend during the first hour to meet both members and college computer science (CS) instructors. Our members, plus 72 students and representatives from16 colleges, attended in November.
~Scott Horan, Kentuckiana
Sharing sessions are popular with our members. Attendees bring instructional, curricular, assessment, or other artifacts to share with other members. The spirit of the sharing session is to give every participant multiple "take-aways" that they can use in their classrooms.
~Steve Svetlik, Chicago Suburban
We are creating partnerships with newly formed STEM hubs around Oregon to provide PD. Our message to the STEM people is: "we train the heart of STEM–the T and E."
~Terrel Smith, Oregon
Conference events are popular; keynote speaker, networking, presentations, and PD hours, all in one neat package.
~Carl Alphonce, Western New York

How do you encourage attendance?
Chapter members bring non-member guests.
~Eugene Lemon, Golden Gate
We use Evite to gather RSVPs.
~Rebecca Dovi, Central Virginia
Make the content relevant, such as a state representative talking about CS education-related legislation.
~Carl Alphonce, Western New York

Where do you get ideas and presenters?
We developed an extensive network of teachers and CS education supporters (administrators and industry representatives) and have a database with 900 contacts.
~Marie desJardins, Maryland
A good source of potential presenters can be found in conference programs. Look for workshops that might be of interest to your audience.
~Fran Trees, CSTA Chapter Liaison
We poll our members for ideas and topics. We determine the topics FIRST and then find the instructors to deliver the content. Instructors are typically chapter members.
~Terrel Smith, Oregon

Do you have other PD words of wisdom?
When you have really energetic people who want to get involved, find ways for them to contribute!
~Marie desJardins, Maryland
Make sure your speaker knows your audience – background experiences, teaching level, PD needs.
~Fran Trees, CSTA Chapter Liaison
Start a chapter in your area. It only takes a few like-minded teachers to become the catalyst for the formation of a CSTA Chapter. A chapter encourages CS teachers to get "off their islands" and is immensely rewarding.
~Steve Svetlik, Chicago Suburban

Gather more PD ideas and resources on the CSTA website by perusing the menu options (*www.csta.acm.org*).

Check the Teacher Workshop page regularly for announcements of upcoming PD (*www.csta.acm.org/ProfessionalDevelopment/sub/TeacherWorkshops.html).*

Learn more about forming a local CSTA Chapter (*www.csta.acm.org/About/sub/CSTAChapters.html*).

Congratulations, CSTA Members

Recently recognized as Teacher of the Month by Code.org

Steve Isaacs, Bernards, NJ

Elizabeth Bacon, Los Angeles, CA

Dr. Thomas Reinartz, St. Paul, MN

Meet the Authors

Mark Dorling
Langley Grammar School, UK
Mark is the Digital Schoolhouse project co-lead and National CPD Coordinator at CAS.

Philip East
University or Northern Iowa
Philip is an Associate Professor of Computer Science Education and Workshops Chair for the CSTA 2015 Conference.

LeAnn Erickson
Temple University, Philadelphia
LeAnn is a professor of film and video production and has been a filmmaker for over 25 years.

Barbara Ericson
Georgia Tech, Atlanta
Barbara is a senior research scientist and a part-time PhD student. She works to increase the diversity of CS students.

Mo-Yun Lei Fong
Google
Mo-Yun is the Director of K–12 Education Outreach which inspires students to pursue studies in CS and STEM.

Dean Johnson
Fort Atkinson, WI
Dean has been teaching math and CS for over 25 years. He also works part-time as a software developer.

Lynne Kesselman
Egg Harbor Township HS
Lynne teaches CS and advises the Coding Club. She is a member of the South Jersey CSTA chapter.

Doug Peterson
University of Windsor, Ontario
Doug is a former CS teacher. He is a long-time CSTA Volunteer and Program Chair for the 2015 Conference.

Adam Swift
Egg Harbor Township HS
Adam teaches CS and advises the Coding Club. He is a member of the South Jersey CSTA chapter.

csta Voice

Equity Matters

Women Who Choose CS – What Really Matters

Mo-Yun Lei Fong

Computer science (CS) is critical to our future—from the health of nations to an individual's ability to actively engage in the technology that is now embedded in nearly everything we do. At Google, we work to expand access to CS education in order to excite and retain students from all backgrounds. So in 2014, we conducted a study of over 1,600 students across the U.S. to guide our outreach and investments in CS education. We found that, for high school girls, 95% of the decision to pursue CS or related fields is comprised of factors that can be influenced: social encouragement, career perception, academic exposure, and self-perception. Building upon existing efforts and research this study provides a foundation for how educators can work together with students, parents, and the community to improve CS education for girls.

This study comes at an exciting time: CS is gaining momentum globally as a priority area for education. With the increasing prevalence of technology, the economy has shifted and educators are taking notice that CS is a fast-growing, high-paying, creative field with potential and relevance for all students. CS is more than just coding; it also builds the critical thinking skills needed to solve complex problems and drive innovation in technology, as well as in fields as diverse as medicine and music. The demand for CS workers is further projected to increase by 1.4 million this decade while the supply of qualified workers would fulfill only 400,000 of those positions, according to the U.S. Bureau of Labor Statistics (*www.bls.gov/emp*).

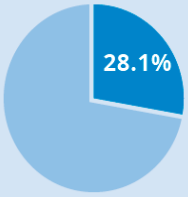
In addition to a shortage of students pursuing computing careers, there is an issue of underrepresentation of women. At the high school level, the latest AP CS participation statistics show that girls represent only 20% of exam-takers (*research.collegeboard.org/programs/ap/data/participation/ap-2014*). At universities, the percent of science, technology, engineering and mathematics (STEM) degrees awarded to women has been trending upwards over the last several decades, but the percent of CS degrees awarded to women has been declining–at 18% now from a 37% peak in the mid-1980s (*nces.ed.gov/programs/digest/d12/tables/dt12_318.asp*). And with the recent release of diversity data by top technology companies (e.g., Google, Microsoft, Facebook, Apple, eBay, Pinterest, Pandora, LinkedIn), the lack of diversity is sounding the alarm for action. We need to provide access to more opportunities for girls to pursue CS and help highlight role models and the relevance of CS to other interests. This will not only lead to a more diverse tech industry, but also to better tech solutions for all users.

In order to understand the most critical variables that influence a girl's decision to study CS or related fields, Google first identified 91 statistically relevant variables from a comprehensive review of the literature. We then surveyed over 1,600 high schoolers and recent college graduates representative of students across the U.S. to test these variables. After grouping the variables into similar factors and controlling for significant variables, we ranked the importance of the factors.

We found that social encouragement, career perception, academic exposure, and self-perception are the key controllable indicators for whether or not young women decide to pursue a CS or related degree. For each of these four areas, our results show that regardless of technical abilities, family income, or ethnicity, we can all have a part in increasing female participation in CS.

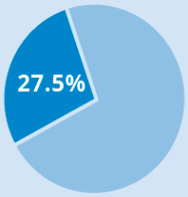
The chart below details the top four factors and their percent contribution of influence for a high school girl's decision to pursue a technical degree and provides recommendations.

1. SOCIAL ENCOURAGEMENT



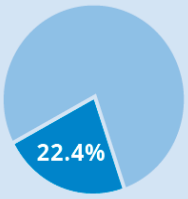
Encouragement from family, friends, and educators, regardless of their technical expertise, reinforces existing interest and can foster interest where none exists. This is especially true for parental encouragement. Outreach programs should include a parent education component, so that parents learn how to actively encourage their daughters, especially early on.

2. CAREER PERCEPTION



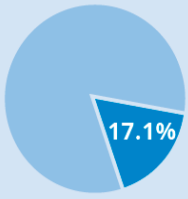
The familiarity with and perception of computer science as a relevant career with diverse applications and potential for societal impact can broaden the perception of CS. Visibility of women role models, showing the positive social impact of careers in computing, and integrating computer science into diverse fields and subjects can enable young women to visualize themselves in the field.

3. ACADEMIC EXPOSURE



The availability of and opportunity to participate in academic and informal computer science activities is a positive influencer. Support for organizations expanding these opportunities to more schools can increase access, provide a greater understanding of computer science, and help young women make informed decisions about degree and career options.

4. SELF-PERCEPTION



Interest in puzzles, problem solving and tinkering can lead to a passion for, and personal confidence in, computer science abilities. Providing young women with the opportunity to practice these skills in a supportive environment in activities related to their passions and offering truly introductory classes without prerequisites can help build confidence and interest.

Spotlight

Finch Robots - An integrated STEM experience

Adam Swift and Lynne Kesselman

Editor's Note: BirdBrain Technologies is a CSTA Corporate Sponsor. To find out more information about the Finch and BirdBrain Technologies visit: *www.birdbraintechnologies.com*.

STEM (science, technology, engineering, and mathematics) is hot in education as districts attempt to provide students with skills necessary to succeed in the 21st century. Sadly, technology is sometimes the overlooked element in STEM.

How do you convince administrators of the importance of teaching technology in today's world of standardized testing? How do you engage students in more than just using technology? How can we break down the stereotypes and barriers that hold students back? These are the questions the Egg Harbor Township Finch Robot Project set out to answer.

In the fall of 2013, we submitted an application to participate in the BirdBrain Technologies Finch Robot Loan Program. Through a competitive application process, BirdBrain Technologies loaned 50 Finch Robots to U.S. school districts for a one-month period. The goal of the program was to use the robots to introduce students at all grade levels to computer science (CS) in a fun and engaging manner while supporting the increasing and encouraging participation in STEM. We were chosen as one of 76 districts.

Our plan for putting technology at the forefront of the STEM conversation involved many steps:

- Gain support and buy-in from district technology teachers.
- Secure financial support from an Egg Harbor Township Education Association Mini-Grant.
- Train high school CS students to serve as Finch programming tutors.
- Coordinate with technology educators to create a rotating schedule for small groups to work with robots in each of the six K–8 schools throughout the month.
- Provide opportunities for all high school CS students to participate in the tour with tasks, including setting up labs, tutoring, and recording/archiving the event.
- Develop a schedule to provide student transportation, staffing needs, related classroom activities, and tutoring by high school students.

During an October in-service, we presented the opportunity to teachers of grades one through eight. We detailed the goal of getting the robots in the hands of the greatest number of students possible during the month when we would have the robots, and we asked for their support. We described how this activity would provide our students with basic CS knowledge to further support the district participation in the Hour of Code. Support from our teachers was immediate and excitement grew across the district, including widespread administrative support.

In preparation for the arrival of the Finch Robot Tour, CS students used their free time to practice coding with the two Robots received in preparation to the delivery of the complete set. Students eagerly spent lunch periods, study halls, and after-school time to "play" with the robots. The Finch Robot program was turning into a student-driven project.

The month of March arrived and a gigantic box of Finch robots was delivered. Accompanied by their high school CS student tutors, the Finches began their district wide tour. As each school was visited, the number of students participating exceeded our expectations.

The Finch Robot Project in the Egg Harbor Township School District was truly an inspiring initiative with lasting impacts. Students are now excited and motivated to learn more and administrators recognize the impact and value of CS. The Egg Harbor Township Finch Robot Project was a hit and our goals were reached.

- Robotics is now part of the K–12 STEM curriculum
- Seventy-six robots will be purchased.
- Due to enrollment increases in CS courses ranging from 50% to 70%, the high school program added three sections, including one honor and one college prep section of the Introduction to CS course, and one Advanced Placement section.

Interest in CS is growing by leaps and bounds in Egg Harbor Township. The Finch Robot Project has encouraged new students to delve into CS while influencing those already enrolled to continue their exploration with additional courses. The largest impact has been on the incoming freshmen class with 74 enrolling in high school CS courses– more than triple the previous year's enrollment of 20!

This is just the beginning for the Egg Harbor Township CS teachers. We recognize that a one-time event is not enough to solve all of our challenges. The Finch Robot Project was impactful and we will continue to gather data to track the impact over the next few years. But now, on to planning our next project! We're putting technology at the forefront of the STEM conversation in Egg Harbor Township and hope someday to open an Egg Harbor Township School District Technology Academy.

Curriculum Resources

The Tale of Top Secret WWII Women "Computers"

LeAnn Erickson

Their story is told in *The Computer Wore Heels* book application (*thecomputerworeheels.com*).

In 1942, when computers were human and women were underestimated, a group of teenage girls used their math skills to help win a war and usher in the modern computer age. 2015 will mark the 70th anniversary of the end of WWII and their compelling story has finally been told. The interactive book app is based on the award winning documentary *Top Secret Rosies: The Female Computers of WWII*. *The Computer Wore Heels* shares the little known story of a group of female mathematicians, some as young as 18, who did secret ballistics research for the U.S. Army during WWII. A handful of these human "computers" went on to serve as the programmers of ENIAC, the first multi-purpose electronic computer.

Computers, in all their various configurations, are the crayons of today's young students and clearly a technology crucial to the future of society. Yet, despite this, many girls shy away from the areas of math, science, and computer science, with a dramatic drop in interest starting in middle school. Elementary and middle school teachers will tell you that the time to attract girls to the study of math, science, and computers is during their fourth through eighth grade years. This book app can help girls get excited about computing.

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We're on the Web: csta.acm.org
Like our Facebook page!

Attention Job Seekers and Employers

The CSTA Career and Job Center is the perfect place for job seekers and employers in K–12 computer science (CS) education to find each other!

Job Seekers: The CSTA Career and Job Center will help you find your next great career opportunity in our searchable database of CS education jobs. Search CS education jobs in academia and corporate including: CS teacher, technical coordinator/administrator, curriculum developer, K–12 CS education outreach coordinator, and others. Post your resume, and take advantage of free career tools for job searchers. These services are provided FREE to CSTA individual educator members.

Employers: Begin your search for an exemplary educator by creating a company profile and posting your available jobs, and, while you're waiting for applications to arrive, search through the resumes in the database. What better place to find talent than your own CS community?

To access the CSTA Job Board, visit: *http://cstajobs.acm.org* or click the Job Board button from the CSTA homepage.

K–8 Twitter Chats

Join the CSTA K–8 task group for the #CSK8 Twitter chats every other Wednesday. Future Dates:

February 25, 8:00 pm EST
March 11, 8:00 pm EST
March 25, 8:00 pm EST
April 8, 8:00 pm EST
April 22, 8:00 pm EST

Join the CSTA K–8 Google+ community at *ow.ly/DIjGI* for K–8 resources including more information on these Twitter chats. Topic, questions, and past chat archives are posted online.

Questions? Contact CSTA K–8 Board Representative, Sheena Vaidyanathan: *sheena@computersforcreativity.com*.

For the latest and greatest tips & tricks and news & views, check out
The Advocate Blog
blog.csta.acm.org

MARK YOUR CALENDAR

SIGCSE 2015
March 4–7, 2015, Kansas City, Missouri
sigcse2015.sigcse.org

ACSL Contest #3 Deadline
March 13, 2015
www.acsl.org

Consortium for Computing Sciences in Colleges
(Southwestern)
March 27–28, 2015, Claremont, California
www.ccsc.org/southwestern

Consortium for Computing Sciences in Colleges
(Central Plains)
April 10–11, 2015, Point Lookout, Missouri
www.ccsc.org/centralplains

Consortium for Computing Sciences in Colleges
(Mid-South)
April 10–11, 2015, Conway, Arkansas
www.ccsc-ms.org

ACSL Contest #4 Deadline
April 17, 2015
www.acsl.org

Consortium for Computing Sciences in Colleges
(South Central)
April 17–18, 2015, Austin, Texas
www.ccsc.org/southcentral

Consortium for Computing Sciences in Colleges
(Northeastern)
April 17–18, 2015, Worcester, Massachusetts
http://ccscne.org/conferences/ccscne-2015/

ACSL All-Star Contest
May 23, 2015, Orlando, Florida
www.acsl.org

2015 CSTA Annual Conference
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