



Newsletter October, 2018 (V12 N2)

Your CSN (CTN, SIGCT, SIGCS) Officers and Leadership Team provide this publication which is intended to notify you about CSN activities, ISTE 2019 conference info, upcoming events, notable news, resources, links and just about anything else that is useful for CSN members. To contribute to this newsletter, please email Joe Knoch <joe@jknoch.com>. Social media information (Facebook, pbworks Wiki, LinkedIn and Twitter) is located at the end of this newsletter. The entire CSN Leadership Team is listed on our wiki: <http://istecsn.pbworks.com>

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Detroit, Michigan on October 6-8, 2018

The [program is live on the event site](#), and among the speakers are our President, Kimberly Lane Clark and Leadership Team member Jorge Valenzuela. The event's workshops will fall into one of the five following categories: AR, VR & Mixed Reality; CS Across the Curriculum; Make the Case for CS; CS for Young Learners; and Maker & Robotics. Each of these categories will have 5 workshops spread out across the weekend. Attendees can feel free to pick a track and stick with it, or explore all categories. There will also be interactive playgrounds and a CS Expo. Seats are limited, so don't miss out on [your chance to register!](#)



Important update on LiveStream of this event → The **CSforALL 2018 Summit** will be held in Detroit on Tuesday, October 9, 2018. This summit is designed to amplify the work of stakeholders engaged in building K-12 computer science education in the US, both in and out of school. It will be live-streamed nationally, and will include an in-person audience of carefully selected school district delegations, commitment-making organizations, and community leaders.

The Summit is an invitation-only event geared toward organizations making commitments to advance the national CSforALL movement as well as invited special guests. The event will be live-streamed nationally and will include an in-person audience of carefully selected school district delegations, commitment-making organizations, and community leaders. **To register for the LiveStream of the event please click on <http://bit.ly/CSlivestream>**



Computer Science Network Events Planning has begun for ISTE 2019 in Philadelphia, June 23-26, 2019

Consider volunteering for the following activities

*Please [fill out this form](#) if you are interested in volunteering...

- **CS Firehose** - Join the ISTE Computer Science Network as we open the valves and turn on the **CS FIREHOSE 2019 with a very special set of sessions totally focused on computer science and computational thinking**. If you have ideas about potential keynote presenters, or just love to help with logistical planning, this is the volunteer opportunity for you. **Prepare to get *drenched*** with new and exciting CS info, resources, and ideas.
- **CS/CT Playground** - We continue our goals to engage those registering and to increase interest in computer science (CS) and computational thinking (CT). Our intent with the exhibits is to not duplicate sessions and posters which will occur abundantly throughout ISTE 2019. Instead we find opportunities to engage students and adults to demonstrate exciting technologies being used in classrooms. We need volunteers to help organize

and facilitate the playground sessions during the ISTE conference.

- **CS/CT Strand** throughout the Conference - If you only have a few hours of time, but want to make a difference in CS education, volunteers will look for and recommend sessions to be identified as CSN Picks for the ISTE 2019 conference. We look for sessions we believe are particularly appropriate to CS and CT in addition to other CS-oriented strands based in other domains
- **The Third Annual CSN Excellence in Education Award.** This volunteer opportunity involves reaching out to 3-5 of your colleagues encouraging them to apply for this prestigious ISTE 2019 award. This award recognizes exceptional educators and leaders who are championing the cause of improved Computer Science and Information Technology education. Those recognized demonstrate exemplary work providing a model for teaching, learning and leading in this endeavor. Previous winners have been Kimberly Lane Clark (2017 and our current CSN President) and Jorge Valenzuela (2018 and now a CSN Leadership Team member)
- **CSN Members Discussion** -We are gathering volunteers who are passionate about discussing relevant CS topics. For this volunteer activity, ISTE Connect CSN members will be asked to moderate 1 question, 2 times per year on a topic you are passionate about. A calendar will be sent out so that you know which months you are responsible for.

Other CSN activities at ISTE 2019 will include:

- Focus on new ISTE Computer Science Educator Standards
- Involvement in the **ISTE Communities Networking Fair** (Professional Learning Networking Fair) on Sunday, June 23, 2019
- **Activities around our CS/CT book series**
- **Specific K-8 Activities** and Discussions.
- **Activities with our collaborators** - NCWIT, the local CSTA chapter, WeTeachCS.org, CS4TX.org and Code.org

If you are interested in helping develop these events or have additional ideas, please contact the editor of this newsletter <joe@jkmoach.com>

*** **Plan on exciting times at ISTE 2019!** ***

Computer Science Network News

Interactive 3-D Professional Development brought to you by...

ISTE

COMPUTER SCIENCE NETWORK

JOIN US FOR THE 2018-19 SCHOOL YEAR

Using Flipgrid and Google Docs, this PD model will provide you with evidence that can be aligned to any educator effectiveness model.

Join us at: <https://flipgrid.com>
Code: 629e42

Standard 1: Computational Thinker - Learner
Launch: 9/17/18

Standard 2: Computational Thinker - Facilitator
Launch: 11/12/18

Standard 3: Creativity & Design
Launch: 3/4/19

Standard 4: Collaborating Around Computing
Launch: 1/14/19

Standard 5: Communicating About Computing
Launch: 5/6/19

Standard 6: Equity & Inclusion
Launch: ISTE 2019

GRID Password = ISTE_csn (case sensitive)

Interested in an awesome Professional Development Opportunity?

updated → In September CSN launched our new PD model in which you can earn badges and a final certificate for your Professional Portfolio (Educator Effectiveness) during the month of May. There will be videos, resources and ideas GALORE for each one of the new ISTE computer science standards!



You still have time to sign-up! Please post a quick 60 sec or less video introducing yourself to our PD community.

As we develop our CSN Webinar series into the future, we certainly invite your ideas and interest in volunteering. Please contact our Professional Development chair, Heidi Williams <heidi@stretchinstructor.com>, with your ideas and your interests. Eight webinars from previous years are at our wiki site <<http://iste-ctn.wikispaces.net/Current+Webinars>>

Computing Education News

updated → **CS in K-8 #CSK8 Twitter Chats**. These popular hour-long Twitter chats continue on the 1st and 3rd Wednesdays of every month at 5pm PT/8pm ET for the 2018-2019 school year. Coming up: The October and November Twitter chats will be



- Oct 3: The Intersection of Computer Science & Language Arts in K-8
- Oct 17: The Intersection of Computer Science & Math in K-8
- Nov 7: Cross Curricular Connections
- Nov 21: CS Ed Week

The co-leaders are Vicky Sedgwick and Sheena Vaidyanathan. Vicky and Sheena host a Google+ community for K-8 CS

<<https://plus.google.com/communities/1118dsaaa03101139836526905>> and a Facebook group: <<https://www.facebook.com/groups/CSTAK8/>>. You can see their calendar at https://calendar.google.com/calendar/embed?src=8l8em5hfa1f8456abbicqac3r8%40group.calendar.google.com&ctz=America%2FLos_Angeles

New

HELP ISTE REFRESH THE CS EDUCATOR STANDARDS!

The ISTE **draft standards** are ready for your review!
Please take time to read over them.

Throughout 2018, ISTE will collaborate with the education community to update the ISTE Standards for Computer Science Educators. This process is an opportunity for thought leaders in computer science (CS) education and educators at all levels to help ISTE develop the next generation of computing education standards and define a new framework for problem-solving in K-12.

This refresh comes as we recognize that if CS must be an integral part of students' educational experience, it must also be a critical component of educator practice. The new standards will establish a vision for the knowledge, skills and dispositions educators need to effectively teach CS to all students and will guide professional learning for all educators.



new stuff → **CS for All Newsletter**. This excellent resource is available if you [Join the CSForAllTeachers Community](#) and sign up for the CS for All Teachers Notifications and the

Newsletter. Recent blog posts, upcoming webinars and resources are noted in their weekly newsletter. Here are recent entries:

BLOG POSTS:

- [Announcing the NSF 2026 Idea Machine Competition!](#) published on 09/04/2018
- [How Can Encouragement Increase Persistence in Computing?](#) published on 09/21/2018
- [Attend a CSforAll + Research-Practice Partnerships Workshop!](#) published on 09/27/2018

DISCUSSIONS:

- [After School Club? or In School Club](#) published on 08/26/2018
- [Hello Middle School World!](#) published on 09/25/2018

UPCOMING EVENTS:

- [ScratchEd meetups](#) Description: ScratchEd Meetups are peer-designed professional learning experiences inspired by the unconference model. This means that at any given event, you decide what your learning looks like! At a Meetup, you can share, create, and learn with other educators who are also passionate about teaching with Scratch in the classroom. Anyone who is interested in connecting with fellow educators and learning more about using Scratch in educational settings is welcome to participate. October ScratchEd Meetups Oct 2: Casselman, ON CA; Oct 6: San Marcos, TX; Oct 13: Minneapolis/St Paul, MN; Oct 17: Belo Horizonte, BR; Nov 7: Limerick, IE. Learn more about the ScratchEd Meetups Network and find one near you!
<https://www.meetup.com/pro/scratched>

RESOURCES:

- [\(Hello World\) The Magazine For Computing & Digital Making Educators](#) published on 09/18/2018

Student Opportunity

NCWIT Aspirations Application Period is OPEN to all HS females through November 5, 2018. Please see the NCWIT Resources section several pages down

reminder → [ACM/CSTA Cutler-Bell Prize in High School Computing](#). This prize is designed to recognize talented hs students intending to continue their higher education in the areas of computer science or technology. Up to four winners will be selected annually and each will be awarded \$10,000 prize which will be administered through the financial aid department at the university the student will attend. The application period is open now and will close January 5, 2019 and winners are expected to be announced in February 2019.

reminder → [Code Quest 2018](#). Grok Learning's Code Quest is a friendly five-week coding competition where thousands of school students come together to learn to code. Teachers can sign up their students, and students competing individually at home are also welcome! Streams available in Blockly, Python and micro:bit. The competition dates are from October 29, 2018 to December 2, 2018.



<https://groklearning.com/codequest/?utm_campaign=codequest-2018&utm_medium=email-non-users&utm_source=sci-com-today&short_url=get.gl%2Fcodequest18-sci-com>

reminder → [Bebras Challenge \(US\)](#). November 5-16, 2018 → Bebras US Computational Thinking Challenge. Bebras is an international **computational thinking** challenge that started in Lithuania more than 10 years ago. Last year about 1,000,000 students participated globally. You can register as a teacher at <http://challenge.bebraschallenge.org/admin>. All USA students are welcome. There are contests for about 20 other nations, also. You can find the other nations'



contests by going to <<http://www.bebas.org/?q=countries>>

If you go to <<http://bebraschallenge.org>> you can register for the November competition and can try the Practice Challenge (login not needed for practice). There is a document entitled Coordinators' Instructions available at <<http://bebraschallenge.org/files/CoordinatorsInstructions.pdf>>

More details→ Bebras is an international initiative whose goal is to promote computational thinking for teachers and students (ages 8-18 / school years 3-12). The challenges are made up of a set of short questions called Bebras tasks and are delivered via the cloud. The tasks can be answered without prior knowledge about computational thinking or computer science but are clearly related to computational thinking concepts. To solve the tasks, students are required to think in and about information, discrete structures, computation, data processing, and algorithmic concepts. Each Bebras task can both demonstrate an aspect of computational thinking and test the talent of the participant.

updated → [American Computer Science League](#) ACSL organizes computer science contests and computer programming contests for junior and senior high school students. In their 39th year of continuous operation, they are announcing an Elementary Division (grades 3-6). More information is available on their site.



Over 200 teams in the United States, Canada, Europe, Africa and Asia are participating. ACSL is on the approved activities list of the National Association of Secondary School Principals (NASSP) and is an institutional member of CSTA.

Their yearlong contest is in 4 rounds. The last day to give and score **round 1 is Friday, December 21, 2018**. This is worth checking into even if to just have access to their wealth of short answer and programming problems over the years. <<http://www.acsl.org>>

new → *Professional Development/Conference Opportunities*

[sySTEMnow-2018](#). This one day conference in Milwaukee, WI, is scheduled for Tuesday, November 7, 2018. Kelly List Wells, Executive Director for Education and Skills at the GE Foundation, is the keynote speaker. In its 15th year, this regional conference attracts both educators and businesses interested in raising awareness of STEM-related issues including best practices, developing education-workforce partnerships and providing networking opportunities for STEM stakeholders. In recent years there has been a strong strand of computer science sessions. Further information is available at <<http://www.stemforward.org/systemnow/>>



[FETC-2019](#). This is the 39th national Future of Education Technology Conference which will be held in Orlando, FL from January 27-30, 2019. Similar in some respects to TCEA and ISTE, FETC does include sessions involving computer science, computational thinking and teaching IT. There will also be a CS Firehose similar to the one at recent ISTE annual conferences. <<http://fetc.org>>





TCEA-2019. The 39th Annual TCEA Convention and Exposition will showcase over 1000 sessions and 450 exhibitors for every educator to discover new ways to engage students and enhance learning. The conference includes sessions related to computer science, computational thinking and teaching IT. TCEA-2019 runs from February 4-8, 2019 in San Antonio, TX. Registration opens September 13, 2018. <<http://tceaconvention.org>>



SIGCSE 2019. To be held in Minneapolis, MN, February 27-March 2, 2019, the theme for SIGCSE 2019 is Celebrating our 50th Anniversary. SIGCSE 2019 welcomes over 1500 colleagues from around the world to present demos, lightning talks, papers, panels, posters, special sessions, and workshops, and to discuss computer science education in birds-of-a-feather sessions and informal settings. The SIGCSE Technical Symposium addresses problems common among educators working to develop, implement and/or evaluate computing programs, curricula, and courses. The symposium provides a forum for sharing new ideas for syllabi, laboratories, and other elements of teaching and pedagogy, at all levels of instruction. <<http://sigcse2019.sigcse.org>>



CSTA 2019 Annual Conference. Get ready for this always excellent conference totally focused on K-12 computer science. The dates are July 7-10, 2019 in Phoenix, AZ. Plenty of workshops, sessions, opportunities to network and have fun together with colleagues from across the country who share the same joys. More info coming in the next several months.

For your future planning → Plans are already being made for the next Scratch Day on December 1, 2018 at Teachers College, Columbia University, New York City. There will be workshops on a wide range of Scratch topics for Scratch beginners and those who have been Scratching for years. Scratch Day is for people of all ages



- Children, bring your parents and teachers!

- Teachers, bring your students!
- Parents, bring your children!

Please go to <<http://logofoundation.org/scratchday>> to see what happened at Scratch Day in December, 2017 and in previous years.

NEW → *Your Reading Assignments*

From our 2018 CSN Educator of the Year Award Jorge Valenzuela
How-to blog(s) (Advocacy & Equity):

- [EdTech Advocacy in 3 Easy Steps](#)
- [Equity in Computer Science Education](#)

Technologeez: How computers store stuff. Blogger Natalie Mead is a San Franciscan software engineer, who is answering questions about technology she asked her readers to share with her. This post is a very good response to the question “*I don’t actually understand how memory works. How is it possible for so much information to be stored on a tiny chip?*” <<https://medium.com/@nlynnmead/technologeez-how-computers-store-stuff-69487e2c05db>> She has other posts that you might find interesting at <<https://medium.com/@nlynnmead>>

[The gender gap starts in ninth grade - why do fewer girls rise up the ranks in math class.](#)

While this obviously focuses on math many of our CS teachers are or have been math teachers. Also a lot of what's discussed applies to our computer science and information technology classes. Perhaps this could be a good basis for a discussion within our ISTE CSN Discussion group? <<https://www.marketwatch.com/story/the-gender-gap-starts-in-ninth-grade-2018-08-20>>

... From the September, 2018 issue of this newsletter

From our 2018 CSN Educator of the Year Award Jorge Valenzuela

How-to blog(s) (Computer Science & STEM):

- [How to Develop Computational Thinkers](#)
- [Computer Programming in 4 Steps](#)

[2018 \(Software\) Developer Skills Report](#)

The site Hackerrank surveyed their community to get a pulse on developer skills (when did they push code for the first time, how do they learn coding, what are the favorite languages and frameworks, what do they want in a job, what hiring managers want in a candidate, and more).

Some results I found interesting:

- Even though new languages arise frequently, it's most important for developers to master core, legacy languages. By and large, employers' most common requirement today are: JavaScript, Java, Python, C++, and C. (pg 3)
- Frameworks: JavaScript is ruling the web. Most often, employers want developers who know AngularJS, Node.js, and React. (pg 3)
- Demonstrating computational thinking or the ability to break down large, complex problems is just as valuable (if not more so) than the baseline technical skills required for a job. (pg 4)
- There's a popular belief that recruiters favor candidates with CS degrees from prestigious universities. But it turns out that they actually care about what you've done (pg 4)
- Companies are looking at GitHub and projects to supplement resumes and evaluate skills better (pg 4)

... From the June, 2018 issue of this newsletter

[Careers With Code.](#) Careers with Code is a magazine that inspires high school students to use problem solving computer science skills to create the future. Careers with Code redefines stereotypes around what a computer science career can be. It's a one-stop magazine for resources, step-by-step checklists and inspiring ideas to help students create their computer science pathway.



<<https://careerswithcode.com/careers-with-code-magazine/>>

Here's an assignment for you - find an article you'd like to have your students read and **create a little lesson around it** - encourage discussion, maybe do some research. If you send them to the editor Joe Kmoch <joe@jkmoch.com> we can include them in future Newsletter issues.

Note that you can purchase copies for \$5 each or \$4 each for 11-50 copies, down to \$2 each for 101+ copies. You can also purchase the 2016 version for \$1 each.

Monthly CSN Newsletter readings October 2012 - May 2018

<<http://istecsn.pbworks.com/w/page/125926169/Monthly-Newsletter-Readings>>

National Center for Women and IT (www.ncwit.org)



The National Center for Women & Information Technology (NCWIT) is a non-profit community of more than 1,100 universities, companies, nonprofits, and government organizations nationwide working to increase girls' and women's meaningful participation in computing. NCWIT equips change leaders with resources for taking action in recruiting, retaining, and advancing women from K-12 and higher education through industry and entrepreneurial careers. Find out more at www.ncwit.org/resources or email us at info@ncwit.org

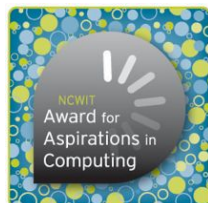
NCWIT Resources of the Month:

Resource #1:

Award for Aspirations in Computing - applications open

<http://www.ncwit.org/programs-campaigns/aspirations-computing>
and <http://www.aspirations.org>

NCWIT Aspirations in Computing (AiC) provides technical girls and women with ongoing engagement, visibility, and encouragement for their computing-related interests and achievements from high school through college and into the workforce. AiC Community members are supported by their peers, volunteers, and NCWIT Alliance member organizations that offer exclusive access to scholarships, internships, and professional work. Community members also give back to others by planning and leading computing experiences for middle school girls and high school women. These opportunities allow women of the Community to strengthen their leadership, technical, and entrepreneurial skills, further preparing and motivating them to participate in the computing workforce.



AiC serves 50 states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands, and all U.S. military bases overseas.

Find out more at www.aspirations.org/participate/high-school.

RESOURCE #2

TECHNOLOchicas

www.technolochicas.org

TECHNOLOchicas, co-produced with the Televisa Foundation, is a national initiative designed to raise awareness among young Latinas and their families about opportunities and careers in technology.



Powerful stories highlight the lives of Latinas from diverse backgrounds and environments who are in technology fields and recognize the power of innovation to change the world. These stories allow girls to perceive TECHNOLOchicas as “relatable” role models who are similar to themselves and are promoted through several communication channels, including broadcast television, local events, social media, and online videos.

Visit www.ncwit.org/resources for additional resources; email info@ncwit.org to request hardcopy resources.

Several links...

If you have favorite links you'd like to share (we could use some on IT topics such as networking, support, information systems and web design), please email Joe Knoch. <joe@jknoch.com>

This month...

CyberPatriot Facebook Group. A new Facebook group has very recently been set up for CyberPatriot Coaches and Mentors. This is a place to ask questions and share ideas and resources about this and other cybersecurity events: <<https://www.facebook.com/groups/2144261529225937/>>

Base.CS Podcast. These are fun, short episodes teaching you the basics of computer science. Most of these episodes are focused around data structures, recursion and other topics we used to teach in APCS AB. These are written and co-hosted by two female software developers, Vaidehi Joshi and Saron Yitbareki. You'll need to access the show notes. Together these are a fun way to learn or review many of these more advanced topics. <<https://www.codenewbie.org/basesc>>. I found the podcasts easier to access via iTunes <<https://itunes.apple.com/us/podcast/base-cs-podcast/id1304168963?mt=2>>, but maybe it was just my computer having problems.

Introduction to Computer Science and Programming. This is a free course from MIT OpenCourseware and available as a podcast through iTunes. It has been recommended by high school teachers; let us know if you learned from this series and if it might be usable for his students. <<https://itunes.apple.com/us/podcast/introduction-to-computer-science-and-programming/id341597455?mt=2>>

CS50 APCS A Principles course. This is Harvard University's introduction to the intellectual enterprises of computer science and the art of programming for students in high school, which satisfies the College Board's new AP CS Principles curriculum framework. It's a free course on edX. <<https://online-learning.harvard.edu/course/ap%20AE-computer-science-principles>>

Contact Joe Knoch <joe@jknoch.com> to include an item in the next issue.
Social media links:

- CSN Community: <http://bit.ly/computing_teachers_network> (site registration needed)
- CSN on Facebook: <<https://www.facebook.com/pages/ISTE-CTN/132261473482000>>
- CSN on ISTE Wiki: <<http://iste-csn.wikispaces.com>> also <<http://istecsn.pbworks.com>>
- CSN on LinkedIn: <<https://www.linkedin.com/groups/6784194/profile>>
- CSN on Twitter: <https://twitter.com/ISTE_CTN>

reminder → **Joining the ISTE Website and Communities.** If you have not already signed up for our Computer Science Network **please visit the site** <http://connect.iste.org/connect/learningnetworks>, choose Computer Science Network.