The Association for Computing Machinery founded CSTA in 2004 as part of its commitment to K–12 computer science education.

Annual Report 2015 - 2016

A Year of

COMPUTER SCIENCE

and

COOL STUFF

Made Possible By You!
2015-2016 was an exciting time in K-12 computer science education. President Obama's CSforAll initiative acknowledged the importance of CS education and made the funding and training of K-12 teachers a national priority. CSforAll represents the culmination of years of effort by the Computer Science Teachers Association (CSTA) and many other organizations to bring computer science education to the forefront. Now more than ever, it is essential that CSTA remain a strong voice for K-12 computer science educators.

As the landscape of K-12 CS education expands, CSTA is itself undergoing exciting changes. With more than 23,000 members worldwide, CSTA is revamping its organization and governance structures to be more responsive to its members and to the changing needs of K-12 educators. In 2015, Dr. Mark Nelson was hired as the new Executive Director, bringing a strong vision and outstanding organizational skills to the leadership of the organization. Dr. Nelson works closely with Deputy Executive Director Lissa Clayborn, program staff, the Board of Directors, and volunteers to represent and advocate for K-12 CS education. This annual report highlights many of the accomplishments of CSTA over the past year and provides insight into CSTA's vision for the year ahead.

As Chair of the CSTA Board of Directors, I am privileged to work with an amazing group of volunteers and staff to represent our members and advocate for their success. It truly is an amazing time to be in computer science education, and the efforts we all make to engage and prepare our students will have far-reaching impact on them and society as a whole.

David Reed, Ph.D.
Chair, CSTA Board of Directors
K-12 CS education is not your ordinary teaching gig. CS teachers are pioneers coming from many backgrounds and disciplines. They understand that CS is increasingly important for the future prosperity of individuals, organizations, and countries. They are not just witnesses to educational change – they are drivers of it. Thank you for being 21st century educational pioneers.

CSTA is at the forefront of this global movement, and we owe it all to you. Because of your support over the past year, we’ve been able to educate, inform, and inspire – more so and in more ways than we ever have before. Amid our successes of the past year, we are already taking steps toward an even more exciting year ahead.

So we invite you to help us in our own evolution. To help us better meet the needs of CS teachers and their students globally. To push us further than we’ve ever been pushed. We invite you to take the next step and support our mission to empower, engage, and advocate for K-12 CS teachers worldwide.

Thank you,

Mark R. Nelson, PhD, MBA, CAE
Executive Director
A vibrant mix of volunteers, supporters, and teachers passionate about computer science in K–12 education.

23,000+ Members
144 Countries
Thank you to CSTA’s 2015-2016 leading financial supporters!

Google
Microsoft
Oracle Academy
Infosys Foundation USA
David Cutler and Gordon Bell
Lockheed Martin
Birdbrain Technologies
Certiport
Code.org
NCWIT
The College Board
Pluralsight/Code School
Association for Computing Machinery

Thank you for lending a helping hand to CSTA and supporting CS teachers and K-12 CS education in all of its diverse forms.
What’s Next: 2016-2017 Priorities

Establish CSTA as the recognized member association for K-12 computer science educators.

a. Continue to be partners and leaders in national and international initiatives (e.g., CSforAll, K12CS, CSEdWeek, CSPDWeek).

b. Commit to maintaining the CSTA Standards and working with partners to make them consistent with similar efforts (e.g., Framework) and applicable to states and districts.

c. Continue to support and expand the CSTA Conference as a premier event for K-12 CS educators.

d. Identify and publicize influential work by CS educators (e.g., Administrator Impact Award, Educator of the Year) and students (e.g., Cutler-Bell Prize, Faces of Computing contest, possible CS Honor Society).

e. Advocate for CS education and CS teachers through public awareness (e.g., PSA videos, I am... campaign) and career resources (e.g., posters, infographics).
INCLUSIVITY

Promote the issues of diversity and equity in computer science, and work to incorporate best practices into our own activities.

a. Encourage the greater engagement of CSTA members (e.g., committee and task force service, volunteers for CSTA activities, expanded social media and blog activities).

b. Work with sister organizations and initiatives in other countries to ensure that our activities help address the needs of international members.

c. Strengthen partnerships with industry (e.g., Oracle, Microsoft, BirdBrain) and sister organizations (e.g., ACM, NCWIT, Code.org).
STABILITY
Work closely with the stakeholders to ensure the organizational and financial stability of CSTA.

- Pursue full 501(c)(3) status, while maintaining and strengthening our ACM affiliation.
- Build a sufficient funding pipeline and staffing to be able to take on projects and contribute to community initiatives.
- Develop a hybrid governance structure to ensure membership representation while also engaging sponsors & partners.
- Utilize an association management company to implement best practices, manage growth, and expand capacity and capabilities.
- Transition to a dues-based membership model, with tiers to ensure access to essential resources while encouraging member engagement (e.g., more volunteerism).
Provide concrete and meaningful benefits to members as we transition into a dues-based model.

What’s Next: 2016-2017 Priorities

a. Web-based resources, including customized experience via AMS.

b. Shared benefits with sister organizations (e.g., ACM, NSTA).

c. Professional development, including CSTA conference, local PD efforts, CPD Pipeline.

d. Supporting and disseminating research in K-12 CS education.

e. Chapter support, including Web-based tools for chapter activities and communication.

f. Provide infrastructure for sub-communities, via the Web site, listserv, and social media.
2016 is truly the Year of K-12 CS Education. President Obama led off his final State of the Union Address with a mention of CS education. A month later he announced the CS For All initiative. Taking a lead from Arkansas, many other states are enacting new CS-related legislation this year. Most of the 60 largest school districts in the country are following suit. The CS Education Coalition and Code.org are actively petitioning Congress for financial support for K-12 CS Education. Multiple corporations are making new large financial commitments to support CS education and teacher professional development. Globally, we continue to see increased emphasis on CS across a wide range of countries. Computer Science is becoming the lingua franca of a new age.

Thanks to you, we have more teachers engaging in teaching CS with plans to expand our reach and messaging in the year ahead. We plan to make it easier for teachers, schools, and parents to consistently and effectively advocate for CS education at local, state, or national levels. Every student deserves a quality CS education taught by teachers who are competent and confident in their knowledge of computer science. As the leading organization dedicated specifically to CS teachers, we thank you for your ongoing support and engagement of our mission.
International Members

- 1 in 3 CSTA members is outside of the US.
- CSTA members represent 144 different countries.
- 2 of CSTA’s 12 elected board members are from outside the US. 5 of the 12 were born outside the US.
- CSTA will take a comprehensive look in the year ahead to see how we can better serve and engage our international members.

CSTA is engaging in conversations and potential partnerships with groups in Australia, Canada, the Netherlands, New Zealand, Singapore, South Korea, and the UK.
Communications and Awareness

CSTA is beginning a comprehensive rebranding effort. A new logo, a new website, and more great things to follow.

COMPUTER SCIENCE: COOL STUFF

CSTA launched a new website in January. A second phase went live in July with new tools for chapters, volunteers, and the member portal. A third phase later in 2016 will bring additional features and enhancements – further updating the look and feel, and activating more ways for members to engage with each other and CSTA.
The “CS Is…” Campaign

CSTA is preparing to launch a media campaign to inform and inspire students, parents, teachers, administrators, and the public on the nature of CS education. The campaign will feature variable length video content, career posters, and other media that highlights a diverse range of individuals engaged in CS across a range of jobs and industries beyond just coding.

We thank Google for being our first sponsor of this initiative, with funding to help create advocacy resources to accompany the campaign. Contact us to find out how you can help us tell the story of what “CS is.”

CS is...
Sports
Fashion
Cybersecurity
Computational Thinking
Elementary
Latino
Women
Entertainment
Health Care & Medicine
Government
Creative
(and much more....)
Professional Development
Supporting access to CS PD for K-12 teachers is our #1 strategic priority.

Annual Conference Scholarships
Thanks to Oracle Academy we were able to offer 20 first time attendees to the CSTA annual conference scholarships to cover their expenses. We received more than 300 applications from teachers—most of whom otherwise would not be able to attend the annual conference.

CS PD Week
Thanks to collaboration and support from Infosys Foundation USA, the National Science Foundation, NCWIT, Donors Choose, the Colorado School of Mines, CS Principles, Exploring Computer Science (ECS), Counselors for Computing (C4C), Bootstrap, and CSTA, we were able to support the first CS PD Week taking place this summer.

CS PD Week provides access to quality PD, a community-building experience, and full scholarships to attend. CS PD Week makes high-quality PD available for every teacher and counselor, regardless of where they teach, what program they teach, or how well-funded their district.
Continuing Professional Development (CPD) Pipeline Project

Expand access and support to assist our members in getting the highest return from their PD experiences. This initiative provides measurable value to CS Teachers, PD providers, districts, and companies interested in developing the future CS workforce.
In partnership with LifeJourney, CSTA launched the Cyber Teacher PD Program. An engaging cybersecurity educational experience linked to the NSA Day of Cyber.

The program will soon be opening up to its first set of countries outside of the US.

In July 2016 CSTA, LifeJourney, and their partners will be announcing corporate-funded scholarships for teachers interested in earning the Cyber Teacher Certificate, making the program free to teachers. Other announcements will follow later in 2016.

The NSA Day of Cyber is a FREE interactive, web platform that will enable students to test drive and experience a day in the life of six NSA cyber professionals and introduce them to challenging real-life cyber scenarios, while engaging students to explore the growing number of careers in computer science and cybersecurity.
CSTA is working together with partners in new ways to update and enhance the curricular guidelines for K-12 CS Education. A particular thanks to Code.org and Google for their financial support, to Deborah Seehorn and Tammy Pirmann for leading the Standards Task Force, to the writers for their quality work and effort, and to the reviewers and other individuals and groups who contributed to this project.

**STANDARDS**

The CSTA Standards Task Force released an interim version of its popular K-12 Computer Science in July 2016. This is the first major update since 2011. The standards provide a guide to State Education Departments and Districts for revising their CS curricula at various K-12 grade bands. Following completion of the Framework, CSTA will establish a timeframe for incorporating further alignment between the two resources.

**FRAMEWORK**

The K-12 CS framework serves as an input into the 2016 revision of the CSTA Standards to ensure alignment and allow for the CS education community to speak with a coherent voice about what K-12 students should know and be able to do. Half of the CSTA standards writers (including all of the CSTA lead writers) are also serving as writers of the framework. CSTA is also a participant on the Framework Steering Committee, along with Code.org, NMSI, CIC, and ACM.
A New Research Agenda

A strength of the CSTA community is that it brings K-12 teachers together with researchers from around the globe who work in colleges and universities, government, other non-profits, and industry.

There is a widely acknowledged gap in our understanding of the epistemological foundations of K-12 CS education today. In the year ahead we will be seeking partners so that CSTA can begin to close that gap. We will be looking to set a new research agenda, establish a peer-reviewed journal focused on K-12 CS education, and draw in more researchers from a range of sectors and countries to exchange knowledge and ideas with our members.
Awards & Honors

2015 CSTA Administrator Impact Award
Dr. Betsy Hargrove

2015 CSTA Advocate of the Year
Carl Frank

Dr. Chris Stephenson
2016 ACM Presidential Award Winner

As the architect and first executive director of CSTA, Chris Stephenson is a true visionary and teaching advocate who spirited ACM’s lifelong commitment to computer science education.

Later this year we will be announcing a new CS Teacher of the Year Award in partnership with ACM

2016 Recipients of the ACM/CSTA Cutler-Bell Prize for Excellence in High School Computing
Cherry Zou, Karthik Rao, Matthew Edwards, and Valerie Chen

Current Executive Director, Dr. Mark Nelson was recognized in June 2016 as Alumnus of the Year by Saint Michael’s College.
CSTA Staff 2015-2016

(Total: 4.25 FTEs)

<table>
<thead>
<tr>
<th><strong>Full-time</strong></th>
<th><strong>Part-time</strong></th>
<th><strong>Volunteer &amp; Contract</strong></th>
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<tbody>
<tr>
<td>Mark R. Nelson, Ph.D., MBA, CAE</td>
<td>Lindsay Bradley</td>
<td>Pat Phillips (C)</td>
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<tr>
<td>Executive Director</td>
<td>Project Manager</td>
<td>Voice Editor</td>
</tr>
<tr>
<td>Lissa Clayborn</td>
<td>Clayton Smith</td>
<td>Fran Trees (V)</td>
</tr>
<tr>
<td>Deputy Executive Director/COO</td>
<td>Web Support</td>
<td>Chapter Relations</td>
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<tr>
<td>Tiffany Nash</td>
<td>Betsy Simpkins</td>
<td>Mindy Hart (V)</td>
</tr>
<tr>
<td>Events and Communications Manager</td>
<td>Awards Manager</td>
<td>Volunteer Coordinator</td>
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Plus support from many great professionals at ACM!

Improving CSTA operations to improve CS education

Starting July 1, 2016 CSTA will be partnering with Capitol Hill Management Services, Inc. for a full suite of services that will augment existing staff, and further enhance the CSTA member and community experience in the months ahead.

CSTA selected its first Association Management System. This changes our website, provides new support for chapters, and enables a range of new benefits for all membership groups and sponsors. Several new features going live soon.
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<thead>
<tr>
<th>Ways to Support CSTA and K-12 CS Education</th>
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<tr>
<td>Volunteer</td>
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<td>Sponsor PD Scholarships for Teachers</td>
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<td>Participate in chapters, committees or other parts of the community.</td>
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<td>Join the upcoming “CS Is...” Awareness Campaign</td>
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<td>Provide PD for teachers online, at a conference, or at a chapter meeting.</td>
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<tr>
<td>Sign in at CSTeachers.ORG and complete your member profile</td>
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<tr>
<td>Tell others about CSTA and attend the annual conference.</td>
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<tr>
<td>Get engaged! Contact us for more ideas!</td>
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</table>
Thank you!