

California Online Mathematics Education Times (COMET)

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COMET Archives (2000-2015): <http://comet.cmpso.org>

California Mathematics Project: <http://www.cmpso.org>

California Online Mathematics Education Times (COMET) is an electronic news bulletin providing STEM-related news from California and across the nation, as well as information about professional events and opportunities, current educational issues, and online resources.

Issue Overview (5.8.15):

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ARTICLES & ANNOUNCEMENTS (CALIFORNIA FOCUS)

(1) Call for Presenters: Third Annual California STEM Symposium

URL: <http://cdefoundation.org/stemsymposium/>

The third annual California STEM Symposium will be held at the Anaheim Convention Center on October 29-30. The Symposium plans to bring together 3000 teachers,

administrators, students, higher education faculty, program providers, philanthropic representatives, and industry representatives to explore ways to make STEM subject matter relevant and engaging for all students and to discuss effective ways to build the workforce of tomorrow through collaborative partnerships. The Symposium has a special focus on increasing and supporting the participation of underrepresented groups in STEM fields. It also highlights leaders in classroom innovation from across the state and attracts student teams to showcase critical thinking, problem solving, and teamwork.

To submit an application to speak at the STEM Symposium, visit http://cdefoundation.org/stem_symposium/2015-stem-symposium/call-for-presentations/ Applications are due by June 15. Symposium strands include the following:

- STEM Learning Across Disciplines
- Diversity, Girls, and Inclusion in STEM
- Business, Community, and Post-Secondary Partnerships
- STEM in Out-of-School Time/Expanded Learning and Pathways
- STEM and the Arts
- Leadership in STEM

Contact Emily Oliva at STEMSymposium@cde.ca.gov or 916-319-0198 with any questions, or visit http://cdefoundation.org/stem_symposium/ for more information.

(2) Next Phase of NGSS Rollouts Has Begun

Over the past year, nearly 2000 teachers and administrators from around the state participated in one of the 2-day symposia (“Rollout I”) designed to acquaint them with the Next Generation Science Standards (NGSS). “Rollout II” 2-day symposia began last week in Stockton. The dates, locations, schedules, and contact information for the next eight symposia can be found at <http://www.regonline.com/builder/site/tab1.aspx?EventID=1694944>

The sessions build on those in Rollout I and include the following:

- NGSS 103: Deepen Your Understanding of the NGSS
- The Tool: Designing for Learning
- But What Does it Look Like? (Multi-day lessons)
- Teaching Through the Practices
- Administrator Strand
- High School Session
- The 3rd Dimension – Crosscutting Concepts
- Engineering in a Three Dimensional Lesson

For more details about these sessions, visit <http://tinyurl.com/NGSS-PhaseIIRollouts>

The rollouts are produced by the California NGSS Collaborative: California County Superintendents Educational Services Association (CCSESA), California Department of

Education, California Science Teachers Association, California Science Project, and the K-12 Alliance/WestEd.

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Related Website

California Department of Education's NGSS website:
www.cde.ca.gov/pd/ca/sc/ngssintrod.asp

(3) New WestEd STEM Webinar Archive

WestEd has launched a new section on its website where archived webinars on topics of interest can be easily searched. A listing of archived webinars on STEM topics can be found at <http://tinyurl.com/WestEdSTEMWebinars>

(4) Three California Teams on Winning Alliance in World Robotics Competition

URL: www.usfirst.org/

On April 22-25, over 18,000 students from around the world competed at the annual *FIRST* (For Inspiration and Recognition of Science and Technology) Robotics Competition Championship, which was held at various venues throughout St. Louis, Missouri (schedule: <http://tinyurl.com/FIRST-Schedule2015>). The exciting conclusion to the four-day, 900-team competition came on Saturday afternoon when an alliance of four teams (including three from California) emerged victorious in the championship match before a cheering crowd of 40,000 spectators.

The Alliance consisted of the following teams: Buchanan Bird Brains from Clovis (in Fresno County), Citrus Circuits from Davis, Gryffingear from Palmdale, and Robonauts from League City, Texas. In addition to these three California teams, the Wolverines from Los Angeles won the Chairman's Award, the highest honor given at the FRC Championship, recognizing the team that best represents a model for other teams to emulate and best embodies the purpose and goals of *FIRST*. (Visit www.usfirst.org/roboticsprograms/frc/awards for more information about the various awards given.) An article detailing the Clovis team's journey to the national competition is available at www.cusd.com/cusdtoday/documents/May2015Issue.pdf (page 6).

In this year's recycling-themed game, "Recycle Rush," alliances of teams scored points by having their robots stack totes on scoring platforms, capping those stacks with recycling containers, and properly disposing of pool noodles, which represented litter: www.usfirst.org/roboticsprograms/frc/2015-game A local television news station provided video coverage of this challenge on <http://fox2now.com/2015/04/23/first-robotics-championship-at-americas-center-apr-25-26/>

Singer will.i.am (The Black Eyed Peas) strongly supports *FIRST*. He attends the world championship competitions and sponsors *FIRST* teams in his home neighborhood of Boyle Heights in East Los Angeles. See <http://iamangelfoundation.org/programs/i-am-steam/i-am-first/> for his Foundation's *FIRST* initiatives, including funding robotics teams for students in Ferguson, Missouri: <http://iamangelfoundation.org/will-i-am-to-help-fund-first-robotics-teams-for-ferguson-students>

Next year's competition will be held in St. Louis on April 27-30. Visit www.usfirst.org/ for more information about *FIRST*.

(5) California Commission on Teacher Credentialing Tackles Strengthening and Streamlining of the State's Teacher Accreditation System

At its April meeting, the California Commission on Teacher Credentialing was presented with an update on the work to strengthen and streamline the Commission's Accreditation System. (See (www.ctc.ca.gov/commission/agendas/2015-02/2015-02-4D.pdf for the February update and www.ctc.ca.gov/commission/agendas/2015-04/2015-04-4B.pdf for the April update.) "The overarching purpose of this work is to revise the present Accreditation System to be a more streamlined, coherent system of educator preparation and program quality oversight purposefully focused on the transparent demonstration of quality outcomes. The result of this work should be a seamless system of high quality educator preparation, accountability and support."

Following are the names and charges of the six task groups:

- **Preliminary Teacher Preparation Standards** -- Charged with recommending revisions to the preliminary Multiple and Single Subject program standards
- **Induction Standards, Policies and Regulations** -- Charged with reviewing recent policy changes and recommending revisions to induction standards and regulations governing the General Education (Multiple Subject and Single Subject) Clear Credential
- **Performance Assessments - Teacher and Administrator** – Charged with providing guidance regarding teacher and administrator performance assessments, including standards governing the development and implementation of performance assessments.
- **Accreditation Policy and Procedures** – Charged with recommending needed changes in accreditation policy and procedures based on new standards, assessments, and outcomes data.
- **Outcomes and Survey Data** – Charged with reviewing and redesigning surveys based on changes in standards, making recommendations regarding useful reporting practices and formats, and standardizing the use of this information in accreditation.

- **Public Access and Data Dashboards** – Charged with recommending ways to improve public access to information about preparation programs and institutions.

For more details and a list of members of the “Accreditation: Strengthening and Streamlining Task Group” and Accreditation Advisory Panel, see Appendix A of the agenda item posted at www.ctc.ca.gov/commission/agendas/2015-04/2015-04-4B.pdf

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Related Item:

Applications for Educator Preparation Student Liaison to the Commission on Teacher Credentialing are Now Being Accepted

URL: www.ctc.ca.gov/commission/educator-prep-liaison.html

The Policy Manual for the California Commission on Teacher Credentialing provides for the appointment of a student enrolled in an educator preparation program to represent the views and experiences of students as a liaison to the Commission. The student liaison appointment will be made by the Commission's Executive Committee at the August 2015 Commission meeting. Preservice teachers who are interested in this position must complete the application form and submit it along with all requested documentation to the attention of the Executive Office at the address provided on the form. **Applications must be received by 30 June 2015.**

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**ARTICLES & ANNOUNCEMENTS (NATIONAL FOCUS)**

**(1) PBS Presents “The Great Math Mystery**

URL: [www.pbs.org/wgbh/nova/physics/great-math-mystery.html](http://www.pbs.org/wgbh/nova/physics/great-math-mystery.html)

A new, interesting 53-minute program produced by NOVA entitled “The Great Math Mystery” can be viewed online at the website above. The program description follows below:

“Join NOVA on a mathematical mystery tour--a provocative exploration of math's astonishing power across the centuries. We discover math's signature in the swirl of a nautilus shell, the whirlpool of a galaxy, and the spiral in the center of a sunflower. Math was essential to everything from the first wireless radio transmissions to the prediction and discovery of the Higgs boson and the successful landing of rovers on Mars. Astrophysicist and writer Mario Livio, along with a colorful cast of mathematicians, physicists, and engineers, follow math from Pythagoras to Einstein and beyond. It all leads to the ultimate riddle: Is math a human invention or the discovery of the language of the universe?”

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**(2) Video Promoting Mathematics and Science Teaching Hopes to Go Viral**

**Source:** Ed Dickey, University of South Carolina – [edickey@mailbox.sc.edu](mailto:edickey@mailbox.sc.edu)  
**URL:** <https://www.youtube.com/watch?v=i60KEyHtwgA&feature=youtu.be>

In honor of National Teacher Week and to help promote mathematics and science teaching, the University of South Carolina's College of Education released a music video, "All the STEM Teachers," created in the style of Beyonce's hit "Single Ladies (Put a Ring on It)." The song was recorded by C.A. Johnson High School teacher Chanda Jefferson who teaches A.P. Biology, Biology I, and Chorus. Jefferson is a past recipient of South Carolina's outstanding Biology Teacher Award. Her students, as well as dancers from the university, participated in the music video's creation.

The video features lyrics and dance choreography focusing on the importance of STEM teaching, spotlighting the career choice as one that is fun, high-energy, and innovative. The producers of the video hope it will "go viral" and generate more interest in one of today's most important and rewarding careers.

"This was such a fun project for me," Jefferson said. "I was able to combine my passion for singing with my love of teaching to help promote a career that is vital to our students' future."

The promotional video effort is part of the university's Teach Science and Mathematics program, spearheaded by Ed Dickey, a professor in the Department of Instruction and Teacher Education.

"Our number one goal with this video was to shine a bright and positive light on teaching careers," said Dickey. "Playing off the hit Beyonce song, we intend to connect with a younger generation interested in science and math. Communicating through the use of a fun viral video is more likely to reach and impact our target audience than traditional means of communication."

Visit <https://www.youtube.com/watch?v=i60KEyHtwgA&feature=youtu.be> to view the video. Also visit the Teach Science and Mathematics Facebook page: <https://www.facebook.com/teachscienceandmath>

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### **(3) NSF 2015 Teaching and Learning Video Showcase: Improving Science, Math, Engineering, and Computer Science Education**

**Source:** National Science Foundation

**URL:** <http://resourcecenters2015.videohall.com/pages/about/about-event>

Visit <http://resourcecenters2015.videohall.com/> to view a short video about next week's online event where seven resource centers funded by the National Science Foundation (MSPnet, CADRE, CIRCL, CAISE, STELAR, CS10K, and ARC) will present videos showcasing cutting edge projects designed to improve the teaching and learning of STEM subjects. Over 100 project leaders have volunteered to enter 3-minute videos about an intervention, research, or an innovation related to their NSF awards.

From May 11-15, resource center personnel will participate in facilitated discussions of each video. Project personnel, teachers, administrators, professional developers, and the public at large are invited to watch the videos, post comments to the presenters' discussions, and vote for "Public Choice" awards.

For more information, visit the websites above.

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#### **(4) Northrop Grumman Foundation Hosts Competition for Middle School "Fab Labs"**

**URL:** [www.FabSchoolLabs.com](http://www.FabSchoolLabs.com)

**URL (Contest Guidelines):**

[www.fabschoollabs.com/files/Content%20Guide\\_3.19.15.pdf](http://www.fabschoollabs.com/files/Content%20Guide_3.19.15.pdf)

Northrop Grumman Foundation is welcoming submissions through June 12 for its Fab School Labs online contest. The five public middle schools that win the competition will team up with contest partner Flinn Scientific, Inc., to design a state-of-the-art lab complete with all of the tools, resources, and furnishings needed.

"Tell us your vision for a dream lab makeover, share a video about your current classroom, and if you are one of our 25 finalists, invite your local community to vote for your video to help you win. Be creative and get ready to make your dream STEM lab a reality."

Visit [www.FabSchoolLabs.com](http://www.FabSchoolLabs.com) to learn more about the contest. In addition to this website, teachers are also encouraged to follow the competition at [www.Facebook.com/FabSchoolLabs](http://www.Facebook.com/FabSchoolLabs)

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#### **(5) Secretary Duncan Announces Education Department's Guide for Ed Tech Developers**

**URL:** <https://tech.ed.gov/developers-guide/>

Last month, U.S. Secretary of Education Arne Duncan announced the release of the "Ed Tech Developer's Guide: A Primer for Developers, Startups and Entrepreneurs," a free guide that addresses key questions about the education ecosystem and highlights critical needs and opportunities to develop digital tools and apps for learning.

Richard Culatta, Director of Educational Technology (<http://tech.ed.gov/richard-culatta/>), stated, "The demand for high-quality educational apps is increasing as communities become more connected, devices become more affordable, and teachers and parents are looking for new ways to use technology to engage students. Yet many existing solutions don't address the most urgent needs in education. Opportunities abound for software designers and developers to create impactful tools for teachers, school leaders, students, and their families."

Education tools are needed to improve mastery of academic skills, foster and measure non-cognitive skills, embed formative assessments, engage families, support college

and career exploration, provide job-embedded professional development, improve educator productivity, increase access for all students, and close achievement gaps.

“All students have the right to an equitable education,” Culatta said. “This right should not be affected by geographic location, family income, or any other demographic factor. Ed tech tools have the potential to close the opportunity gap by providing access to rich educational experiences not available in all communities, for example, virtual labs and field trips, advanced coursework, access to field experts, and opportunities to interact with students around the world.”

The guide also stresses the importance for developers and entrepreneurs to work with educators at every stage of development to make the best possible educational tools and apps.

For additional information, visit <http://tech.ed.gov/developers/>

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### **(6) National Council of Teachers of Mathematics: Annual Conference and Video Series on the Common Core**

**URL (Videos):** <http://tinyurl.com/NCTM-CCSS-Videos>

Nearly 10,000 educators attended the 2015 Annual Meeting and Exposition of the National Council of Teachers of Mathematics (NCTM) on April 15-18. Cathy Carroll, Senior Research Associate and Project Director of WestEd’s STEM program, headquartered in San Francisco, served as Chair of the Program Committee.

The meeting’s “Daily News” publications for April 16-18 can be viewed at [www.nctm.org/Conferences-and-Professional-Development/Annual-Meeting-and-Exposition/Daily-News/](http://www.nctm.org/Conferences-and-Professional-Development/Annual-Meeting-and-Exposition/Daily-News/) The program booklet is available at <http://tinyurl.com/nctm-boston2015> Archived webcasts are available of the Opening Session, the President’s Address, and the Ignite session, where 10 educators each talked on a topic of personal passion for 5 minutes while 20 presentation slides automatically advanced each 15 seconds (see [www.nctm.org/Conferences-and-Professional-Development/Annual-Meeting-and-Exposition/Conference-Highlights](http://www.nctm.org/Conferences-and-Professional-Development/Annual-Meeting-and-Exposition/Conference-Highlights)).

NCTM President Diane Briars addressed the topic of “Five Years of Common Core State Mathematics Standards: Essential Actions for Moving Forward.” During her session, she described one of NCTM’s new projects undertaken in collaboration with the Hunt Institute and with the support of the Boston, Howard County, and Baltimore County Public Schools. These short videos are available on the NCTM website free of charge. The topics of the videos follow below:

- Building Conceptual Understanding for Mathematics
- Mathematics in the Early Grades
- Developing Mathematical Skills in Upper Elementary Grades
- Mathematical Foundations for Success in Algebra
- Preparation for Higher Level Mathematics
- Standards for Mathematical Practice

- Parents Supporting Mathematics Learning

To view the videos, visit <http://tinyurl.com/NCTM-CCSS-Videos>

NCTM's 2016 Annual Meeting will be held on April 13-16 in San Francisco.

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