CEO Updates is a newsletter for science educators. It is disseminated twice a month by the Coalition for Education and Outreach (CEO), a community of STEM educators based at the University of California at Berkeley. Subscription is free and open to all. Click here to subscribe.

Coming up

12/8/15 CEO monthly meeting: noon to 1:30 pm—Close-up on the Berkeley Public Service Center (PSC). Featured speaker: UC Berkeley Public Service Center director, Sandra Bass. Founded by students in 1967, the PSC partners with the community, student leaders and faculty to engage over 5,000 students each year as volunteers, and through jobs, internships, and courses. Sandra joined the PSC in early 2015. At this session, she will discuss the PSC’s mission and work and her top priorities for the Center. As a graduate student at Berkeley, Sandra’s doctoral research explored police behavior, community organizing, and the dynamics between police and communities of color in Oakland and Seattle. She served as Assistant Professor of Criminology and Political Science at the University of Maryland, College Park. In 2002 she joined the David and Lucile Packard Foundation, and in 2010 she was selected to lead the Foundation’s girls’ education, women’s leadership, and reproductive health program in Sub-Saharan Africa. Sandra left the Foundation to work for the Obama campaign in the battleground states of Nevada and Colorado and later was appointed Executive Director of Teach With Africa. Location: 303 Doe Library. View the CEO event and meeting schedule.

STEMinist Power Panel Presentation, Monday, 11/16/15, 5:00-6:30 pm, Men’s Faculty Club, Great Hall—Outstanding female STEM leaders share their stories and advice, and answer questions on how students can develop strategic STEMinist skills. Presented by the UC Berkeley Bergeron Scholars Program and Cal Nerds. This is an excellent opportunity for UC Berkeley undergrads, grad students and postdocs to tap into role models from industry, academia, health care, and business. Featured speakers include Sandra Bergeron (F5 Networks, Sophos, and Qualys Computer Science and Technology); Elizabeth Babcock (CalAcademy); Lisa Guerra
(Silicon Valley Social Venture Fund); **Natalie Roe** (Lawrence Berkeley Lab); **Shyamali Singhal** (El Camino Cancer Center Health Care); and **Wendy Young** (Genentech).

An appetizer buffet will be provided. Open to UC undergrads, grad students and postdocs. RSVP via e-mail to justinemann@berkeley.edu.

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**Funding**

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**NSF Discovery Research PreK-12 Program (DRK-12) Deadline: 12/7/15** The DRK-12 seeks to significantly enhance the learning and teaching of science, technology, engineering and mathematics (STEM) by PreK-12 students and teachers, through research and development of STEM education innovations and approaches. Projects in the DRK-12 program build on fundamental research in STEM education and prior research and development efforts that provide theoretical and empirical justification for proposed projects. Projects should result in research-informed and field-tested outcomes and products that inform teaching and learning. Teachers and students who participate in DRK-12 studies are expected to enhance their understanding and use of STEM content, practices and skills. DRK-12 invites proposals that address immediate challenges that are facing preK-12 STEM education as well as those that anticipate radically different structures and functions of preK 12 teaching and learning. The DRK-12 program has three major research and development strands: (1) Assessment; (2) Learning; and (3) Teaching. The program supports five types of projects: (1) Exploratory, (2) Design and Development, (3) Impact, (4) Implementation and Improvement, and (5) Conferences and Syntheses. All 5 types of projects apply to each of the 3 DRK-12 strands.

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**Opportunities & resources**

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**Nov 17-18, The Virtual E Conference**, presented by the Boston Museum of Science. This virtual conference is all about putting Engineering Back in STEM. Too often, the Capital "E" is treated like a convenient vowel as opposed to a critical part of education. This will empower those involved in K12 Education to help change this by covering advocacy, curricula, grant funding, university partnerships, informal science initiatives, and more. Cost is $249. Learn more/register.

**11/19/15, 1:00-2:30 pm, Understanding Your audience using Google Analytics.** Free. Presented by the Foundation Center. Who are your website visitors and where are coming from? When they get to your site, what pages do they visit? And what do they do from there? When you know these things, you can strategically craft content, make content hierarchy decisions, and be more informed about where and how to buy ads for maximum impact. Join Crispin Bailey from Kalamuna to find out how to optimize your content and target your website's visitors using Google Analytics. Register here to attend the workshop in San Francisco. Can't join in-person? Watch the event by livestream here. (No need to register).

**Apply by 12/15/15: Cooke Foundation Undergraduate Transfer Scholarship Program** is now open. Community college students who wish to continue their studies at a four-year institution in fall 2016 can apply now through December 15, 2015. Cooke Scholars receive up to $40,000 for each year, plus college planning support, ongoing advising, and opportunities for study abroad and internship stipends. They also become eligible for a $50,000 per year Cooke Graduate Scholarship.
Enroll now: Introduction to evidence-based undergraduate STEM teaching This free 8-week Massive Online Course (MOOC) is presented by the Center for the Integration of Research, Teaching and Learning (CIRTL). The course explores effective teaching strategies for college or university STEM teaching, and features professors at Vanderbilt University, Boston University, and Michigan State University. Enroll here.

1/28/16, 7:30 am-3:15 pm, Conditions of learning symposium: engage, teach and lead. Sponsor: Contra Costa County Office of Education. Location: San Ramon Valley Conference Center. Registration fee: $175.00 (includes continental breakfast, lunch, and parking). As educators move forward with meeting the demands of the California Standards, this symposium will enhance and strengthen best practices for teachers and their students. The symposium will highlight and showcase early learning, literacy, English language development, mathematics, science, technology integration, integrated learning. Keynote speaker: Nirvan Mullick, an award winning filmmaker, speaker, and social entrepreneur. Register here.

-->New UC-wide data resource<--

2015 UC Accountability Report This report provides a comprehensive assessment of the University's progress in meeting key teaching, research and public service goals across its 10 campuses. The 2015 version includes an executive summary, and over 100 individual indicators across 14 chapters, assessing progress in areas like undergraduate success, financial aid, diversity, research and finance. Data in the report is accessible via the UC Information Center which has developed new tools, filters, and sortable tables to allow easy access to the data.

Education news

Governor Brown has signed AB 288 College and Career Access Pathways Act, allowing high school students, especially those in underserved communities, greater access to college courses and career tech classes at both high school and college campuses. The legislation will increase college opportunity for thousands of California high school students and will go into effect January 1. More-->

The leadership and boards of California STEM Learning Network (CSLNet) and Children Now have announced that they are joining together to better promote STEM education in California. For years, the two organizations have partnered closely to promote the adoption and implementation of California's 21st century math and science and engineering standards. The expanded partnership will continue to support the extensive network and STEM expertise CSLNet has built, while simultaneously leveraging the robust policy, communications and advocacy platform, diverse networks and expertise Children Now has developed on a wide range of issues impacting children's lives, including STEM. More-->

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'No Child' endgame. Now that the House and Senate have passed different versions of the Elementary and Secondary Education Act reauthorization (ESEA), the STEM Education Coalition is worried that a key provision could be left out of the final bill. "The Senate bill contains a program . . . to provide each state with dedicated funding to support improvements in the STEM subjects, with a strong focus on improving access and quality for high-need student populations," says the advocacy group. The program represents the only direct formula-based funding "for the exclusive purpose of supporting STEM-related learning." The House bill "does not place any priority on STEM-related activities or provide any form of dedicated funding for STEM activities." More–>

New & noteworthy

GradSciComm report and recommendations: mapping the pathways to integrate science communication training into STEM graduate education This report from the NSF-funded #GradSciComm project, assesses the landscape of science communication training for graduate students and provides recommendations for further integrating science communication skills into graduate education.

Identifying and supporting productive STEM programs in out-of-school settings There has been increasing awareness of the value of afterschool, summer, and informal programs in sparking and extending interest in and understanding of STEM. To help policy makers, funders and education leaders in both school and out-of-school settings make informed decisions about how to best leverage the educational and learning resources in their community, this report identifies features of productive STEM programs in out-of-school settings. The report was released in October 2015 and is authored by the Committee on Successful Out-of-School STEM Learning; the Board on Science Education; the Division of Behavioral and Social Sciences and Education; and the National Research Council.

Education reform and the failure to fix inequality in America Persistent gaps in educational access across race, socioeconomic class, ethnicity, and gender are laid out in this brief history. J Mujic, The Atlantic, 10/29/15.

Graduates of four-year universities flock to community colleges for job skills A surprising one out of every 14 of the people who attend community colleges — widely regarded as low-tuition options for the less-well-prepared — has already earned a bachelor’s degree, according to the American Association of Community Colleges. That's 770,000 students. At some community colleges, the proportion is as high as one in five. Many bachelor’s degree holders attending community colleges are seeking new careers, especially in health-related disciplines such as nursing, while others are looking to upgrade their skills in computer-related professions or other job-rich fields including biotechnology.

The phenomenon also has exposed a failure by some four-year universities to prepare their graduates for the kinds of jobs available in their surrounding regions, a longtime focus of community colleges, experts and observers say. M Krupnick, Hechinger Report, 10/28/15
The growing correlation between race and SAT scores: New findings from California This paper presents new findings on the relationship between race and SAT scores. The findings, based on a sample of over 1.1 million students, show that socioeconomic background factors – family income, parental education, and race/ethnicity – account for a large and growing share of the variance in students’ SAT scores over the past twenty years. More than a third of the variance in SAT scores can now be predicted by factors known at students’ birth, up from a quarter of the variance in 1994. Of those factors, moreover, race has become the strongest predictor. S Geiser, Center for Studies in Higher Education, UC Berkeley, October 2015.

Opening the doors to opportunity for all: setting a research agenda for the future In 2014, the Equity Project at American Institutes for Research (AIR) hosted its first Research Roundtable. There, some of the nation’s top educational researchers drafted a research agenda addressing some of the long-term challenges facing American public schools educating students from low-income and minority families. Leaving micro-reforms to others, the group asked tough questions that researchers could answer for those working to make public education as the gateway to opportunity for all. What research priorities emerged? They ranged from finding new ways to measure civic engagement to studying districts that are models of equity and access to opportunity. JA Banks, AW Boykin, PW Cookson Jr., et al. American Institutes For Research, January 2015.

About CEO

The Coalition for Education & Outreach (CEO) is a volunteer-led community of educators, program administrators, faculty, and students who work in science, technology, engineering, and math (STEM) education and outreach. Our mission is to further professional development, facilitate the dissemination of best practices, and encourage information exchange among STEM educators. CEO co-chairs Kate Spohr and Dan Zevin welcome your questions, comments, and ideas.

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