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## CEO message: Opportunities, news, updates...

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To: CEO &lt;education.outreach@lists.berkeley.edu&gt;

### Opportunities

**UC Berkeley Education Research Day-Friday, April 3, 9am-5pm**, Tolman Hall. The Graduate School of Education and the Berkeley Review of Education hosts Education Research Day to share the tremendous diversity of education-related research projects and initiatives that students, faculty, and professionals engage in across the Berkeley campus and to promote thoughtful dialog and partnership at all different stages of our work. Education Research Day supports thoughtful dialog about educational issues through a range of presentation formats - including paper presentations, poster sessions, consultation roundtables, group presentations, interactive sessions, and mini-workshops.

**CEO Monthly Meeting—Close up on the Jacobs Institute for Design Innovation, Tuesday, April 21**, 303 Doe Library. The new Jacobs Institute aims to expand the role of design in engineering education at Berkeley. This undergraduate-focused Institute offers hands-on practice with design automation, rapid prototyping, team-based learning, and commercial development across all engineering disciplines and spanning the entire cycle of design, testing and manufacturing. The Institute will be housed within Jacobs Hall, a new 24,000 SF building on the northside of campus and will open in August 2015. Emily Rice, an engineering graduate and the Jacobs Institute's Director of Programs & Operations, will present.

**High impact outreach opportunities for faculty, grads & postdocs** The Oakland Unified School District's **Dinner with a Scientist (April 29, May 26, 27 & 28)** and **K12 District Science Fair (May 20)** are engaging, high-impact outreach opportunities for faculty, grad students and postdocs. See descriptions below. Caleb Cheung, the District's Manager of Science Instruction, is seeking a keynote speaker for the **April 29 Dinner with a Scientist** event who has an engaging narrative about his/her work and scientific career. To model diversity, the keynote speaker would ideally be an African American or Latino scientist. The 20-minute talk would be similar to a TED talk, designed to motivate, inspire, and entertain the audience of 175 guests. For detailed information: <http://science.ousd.k12.ca.us/>

- **Dinner with a Scientist** brings together local scientists, teachers, and students to learn about science over a semi-formal dinner. Four events will take place on April 29, May 26, 27, and 28 at the Oakland Zoo with 175 people each. We are seeking researchers, graduate students, professors, engineers, doctors, and other professions that use science in their daily work. Our ideal candidate is someone who has an engaging personality, is excited about their work, and wants to share it with teachers and students. We particularly welcome a diverse group of scientists and historically underrepresented ethnic groups, such as African Americans and Latinos.
- **K-12 Oakland Unified School District Science Fair** takes place on May 20, 5-8 pm at the Chabot Space and Science Center. The event will feature ~300 student projects and is expected to draw over 1000 teachers, students, families, and community members. We invite you to volunteer or table at the event if your organization has a program for students and families or can provide a few quick activities for our guests. More details are also on our website at <http://science.ousd.k12.ca.us/sciencefair.htm>.

**Techbridge Summer Institute, July 29 - July 31** in Oakland/Alameda. While primarily geared toward after-school program staff and youth development leaders, the Institute will prove helpful to museum educators, teachers, parents, and others interested in supporting youth in STEM. The Institute will explore Techbridge's proven science-and-engineering-focused, inquiry-based curriculum (designed for grades 4-12) while we delve into best strategies, including: how to design a successful after-school STEM program; recruiting and engaging youth; implementing effective family outreach to support your students' emerging STEM identities; integrating career exploration to connect STEM learning to your students' lives. Register [here](#).

## News & updates

**National Academies Press** announces a suite of resources designed to help educators communicate, implement, and assess teaching for Next Generation Science Standards. 1) [Next Generation Science Standards: By States for States](#) identifies the science all K-12 students should know. These new standards are based on the National Research Council's A Framework for K-12 Science Education. 2) [Guide to Implementing the Next Generation Science Standards](#) gives guidance needed to align curricula, instruction materials, professional learning opportunities, and assessments with the new standards. It lays out recommendations for action around key issues and cautions about potential pitfalls. 3) [Developing Assessments for the Next Generation Science Standards](#) outlines an approach to science assessment to meet the vision of science education for the future as it has been elaborated in A Framework for K-12 Science Education (Framework) and Next Generation Science Standards (NGSS). These documents are brand new and the changes they call for are barely under way, but the new assessments will be needed as soon as states and districts begin the process of implementing the NGSS and changing their approach to science education.

**What we're missing in measuring who's ready for college** (Five Thirty Eight)—Shaun Harper, a researcher at the University of Pennsylvania, found that in numerous instances, college recruiters tend to concentrate on high schools with an established track record of talented students, overlooking schools with predominantly black and Latino students, regardless of whether those students are ready for the rigors of college. Identifying the factors that make someone ready for college can help steer black and latino students — those who otherwise wouldn't attend college or would enroll in a weak institution — toward a degree.

**High School Student Perceptions of the Utility of the Engineering Design Process: Creating Opportunities to Engage in Engineering Practices and Apply Math and Science Content.** Berland L, Steingut R, Ko P. UTeachEngineering MSP, Journal of Science Education and Technology, 2014. Research and policy documents increasingly advocate for incorporating engineering design into K-12 classrooms in order to accomplish two goals: (1) provide an opportunity to engage with science content in a motivating real-world context; and (2) introduce students to the field of engineering. The present study uses multiple qualitative data sources (i.e., interviews, artifact analysis) to examine ways in which engaging in engineering design can support students in participating in engineering practices and applying math and science knowledge. This study suggests that students better understand and value those aspects of engineering design that are more qualitative (i.e., interviewing users, generating multiple possible solutions) than the more quantitative aspects of design which create opportunities for students to integrate traditional math and science content into their design work (i.e., modeling or systematically choosing between possible design solutions).

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**Coalition for Education & Outreach (CEO)** is an informal group of staff, faculty and students on the Berkeley campus who work in education and outreach projects related to science, technology, engineering and math. We host an elist and meet monthly during the academic year (October-May). Meetings are designed to encourage networking, professional development, and mentoring within the educational and outreach community at Berkeley. [Click here](#) to subscribe or unsubscribe to the **CEO** elist.