



December 6, 2011

From: The 2011 Coalition of Underrepresented Engineers (CUES)
To: The 2011 College of Engineering College Executive Committee

We, the undersigned students and supporters of the College of Engineering, are outraged and appalled by the overt sexism and the coldness to equity, inclusion, and diversity that has resulted in students such as Ms. Parkos feeling unwelcomed and discriminated against. (*California Watch*, Oct 27, 2011)

Sadly, the cold climate to diversity experienced by Ms. Parkos is **emblematic** of the experiences that other students encounter in the College of Engineering. We feel that this climate, created intentionally or unintentionally, is due in large part to the **low numbers** of women and underrepresented minority students being admitted, enrolled, and mentored in the College of Engineering.

Enrollment Rates of Women in the College of Engineering (Undergraduate)

The enrollment of freshmen women into the College of Engineering has dropped from **144 students enrolled in 2008** (26% of 563 freshmen students enrolled in 2008) to **109 students enrolled in 2009** (23% of 481 freshmen students enrolled in 2009) to **100 students enrolled in 2010** (21% of 474 freshmen students enrolled).

Enrollment Rates of Underrepresented Minority Students in the College of Engineering (Undergraduate)

The number of African American freshmen students enrolling in the College of Engineering remained at **3 students enrolled** in 2008 (0.5% of 563 freshmen students enrolled in 2008), **3 students enrolled** in 2009 (0.6% of 481 freshmen students enrolled in 2009) and dropped to **2 students enrolled in 2010** (0.4% of 474 freshmen students enrolled).

The number of Native American freshmen students enrolling in the College of Engineering dropped from **2 students enrolled** in 2008 (0.4% of 563 freshmen students enrolled in 2008) to **1 student enrolled** in 2009 (0.2% of 481 freshmen students enrolled in 2009) and rose to **3 students enrolled in 2010** (0.6% of 474 freshmen students enrolled).

The number of Hispanic freshmen students enrolling in the College of Engineering has dropped from **33 students enrolled** in 2008 (6% of 563 freshmen students enrolled in 2008) to **24 students enrolled** in 2009 (5% of 481 freshmen students enrolled in 2009) to **10 students enrolled in 2010** (2% of 474 freshmen students enrolled).

Enrollment and Admission Rates of Women in the College of Engineering (Graduate)

The number of women admitted into the College of Engineering has dropped from **240 students admitted in 2008** (28% of 855 total students admitted in 2008) to **191 students admitted in 2009** (25.6% of 744.5 total students admitted in 2009) and rose to **218.5 students admitted in 2010** (27.2% of 801.0 total students admitted in 2010).

The enrollment of women into the College of Engineering has dropped from **109.5 students enrolled in 2008** (25.2% of 434.5 students enrolled in 2008) to **83 students enrolled in 2009** (21.4% of 387.5 students enrolled in 2009) to **103 students enrolled in 2010** (25.4% of 404.5 students enrolled in 2009)

Admission Rates of Underrepresented Minority Students in the College of Engineering (Graduate)

Furthermore, since the closure of the Center for Underrepresented Engineering Students (CUES) in 2009 the number of African Americans admitted into the College of Engineering has dropped from **14 students admitted in 2009** (1.8% of 744.5 total students admitted in 2009) to **5 students admitted in 2010** (0.6% of 801.0 total students admitted in 2010).

The number of Native Americans admitted into the College of Engineering has dropped from **3 students admitted in 2009** (0.4% of 744.5 total students admitted in 2009) to **1 student admitted in 2010** (0.1% of 801 total students admitted in 2010).

The number of Hispanics admitted into the College of Engineering has dropped from **40 students admitted in 2009** (5.3% of 744.5 total students admitted in 2009) to **35.5 students admitted in 2010** (4.4% of 801 total students admitted in 2010).

Enrollment Rates of Underrepresented Minority Students in the College of Engineering (Graduate)

Moreover, the number of African American students enrolling in the College of Engineering has dropped from **6 students enrolled in 2009** (1.5% of 387.5 students enrolled in 2009) to **2 students enrolled in 2010** (0.4% of 404.5 students enrolled in 2010).

The number of Native Americans students enrolling in the College of Engineering has dropped from **2 students enrolled in 2009** (0.5% of 387.5 students enrolled in 2009) to **0 students enrolled in 2010** (0% of 404.5 students enrolled in 2010).

The number of Hispanic students enrolling in the College of Engineering has dropped from **22 students enrolled in 2009** (5.6% of 387.5 students enrolled in 2009) to **18 students enrolled in 2010** (4.4% of 404.5 students enrolled in 2010).

We feel that the low numbers of women and underrepresented minority students within in the College of Engineering is **untenable** and we can **no longer tolerate** the inaction of the College of

Engineering to systematically address this issue. The College of Engineering **can and must** take steps now to reverse the decline and/or consistently low numbers in women and underrepresented minority students within its departments.

We call upon the College of Engineering's leadership to realize that the data presented in this letter makes "it apparent that the College of Engineering **is not making any demonstrable progress in increasing** its gender diversity, and is **losing ground dramatically** with its underrepresented minorities" and that "there **is clearly an urgent need to rethink**" the College of Engineering's **recruiting strategies for both women and underrepresented minorities**, particularly with the latter group, and **act aggressively over the next few years to reverse recent declines**". (*Doyle, Admissions and Registrations Trends in the College of Engineering 2005 to 2009 – Women and Underrepresented Minorities, 2009*)

We do not understand why the College of Engineering's leadership has **failed** to follow their own advice to **correct** the recognized **problem** of recruitment, admission, and retention of women and underrepresented minority students that it identified back in 2009.

We feel that the current efforts of the College of Engineering **fail** to meet the University of California's "*commitment to the full realization of its historic promise to recognize and nurture merit, talent, and achievement by supporting diversity and equal opportunity in its education, services, and administration, as well as research and creative activity,*" and that current efforts are in **direct conflict** with the University of California's acknowledgement "*of the acute need to remove barriers to the recruitment, retention, and advancement of talented students, faculty, and staff from historically excluded populations who are currently underrepresented.*" (*Regents' Policy 4400 University of California Diversity Statement, September 2010*)

We feel that the current efforts of the College of Engineering **fail** to meet the 2011 National Academies' Expanding Underrepresented Minority Participation: America's Science and Technology Talent at the Crossroads report (pg. 12) that declared top priority actions of implementing "*policies and programs that seek to increase undergraduate retention and completion through strong academic, social, and financial support,*" providing "*financial support for underrepresented minorities that allows them to focus on and succeed in STEM,*" and providing financial assistance to underrepresented minorities in STEM "*along with programs that simultaneously integrate academic, social, and professional development.*"

Additionally, we feel that the current efforts of the College of Engineering **fail** to meet the National Science Foundation's (NSF) commitment "*to expand efforts to increase participation from underrepresented groups and diverse institutions throughout the United States in all NSF activities and programs.*"

Moreover, we feel that the College of Engineering **fails** to meet UC Berkeley's Strategic Plan for Equity, Inclusion, and Diversity (pgs. 22, 12) by (1) not implementing and publishing findings from "*regularly occurring climate surveys for graduate students, faculty, and staff,*" (2) not creating and sustaining "*a healthy campus climate by providing the conditions necessary for all campus community members to feel welcomed, supported, included, and valued by the University and each other,*" and (3) not recruiting, retaining, and mentoring "*a critical mass of talented students, faculty and staff that will fully represent California's excellence and diversity and provide an environment in which all can thrive academically and professionally.*"

We call on upon the College of Engineering's leadership to **again** realize that the Center for Underrepresented Engineering Students (CUES) was more than a **mere collection of NSF funded programs**, but rather, CUES was a **home** where students who felt **alone and unwelcomed** could

come and find the support of someone who could relate to their experiences, both positive and negative.

Furthermore, we call upon the College of Engineering's leadership to realize that their decision to **degrade** CUES from a center to a collection of programs was **misguided** and signaled a **de-emphasis** by the College of Engineering to recruit, retain, and graduate women and underrepresented minority students, which is in **direct conflict** with both UC Berkeley's Strategic Plan for Equity, Inclusion, and Diversity as well as one of NSF's core values stated in FY 2006-2011 Strategic Plan, *Investing in America's Future*: to be "*Broadly Inclusive: seeking and accommodating contributions from all sources while reaching out especially to groups that have been underrepresented.*"

We ask that Dean Sastry and the Chairs of the Departments **directly engage** with the women and underrepresented minority student groups in order to have an **open discussion** of the best practices used by departments to support equity, inclusion, and diversity within the college (e.g., EECS's successful hiring of the only African American faculty within the College of Engineering).

Furthermore, we call upon Chancellor Birgeneau to **live up** to his "commitment to diversity, equity and inclusion and to the integration of public service as an essential component of the academic experience" signified by his Shinnyo-en Foundation's 2009 Pathfinders to Peace Prize by working with the College of Engineering to implement the following recommendations:

1. Securing additional funding and staff support for Engineering Student Services (ESS) to assist with the **creation and implementation** of a "coherent recruitment and retention plan" for women and underrepresented minority students in the College of Engineering and its departments. **Deadline: March 2012** (*Dubon, Report on Broadening Participation to the CoE Faculty, April 24, 2011*)
2. Securing funding to send ESS staff, graduate and/or undergraduate students **to recruit** women and underrepresented minority students for Bachelors, Masters, and Ph.D. studies within the College of Engineering. **Deadline: March 2012**
3. The **annual publication and dissemination of information via the web** about the total enrollment, new enrollment, admissions, and applications of women and underrepresented minority students in the College of Engineering for both undergraduate and graduate programs. We should not have to depend upon the ASEE or concerned patriots to **secretly piece together and pass statistics** to us about the number of women and underrepresented minority students in the College of Engineering. **Deadline: January 2012**
4. The creation of "**more competitive financial packages**" and fellowship monies from donors and corporate sponsors to support women and underrepresented minority students applying and currently enrolled in the College of Engineering at UC Berkeley. **Deadline: March 2012** (*Dubon, Report on Broadening Participation to the CoE Faculty, April 24, 2011*)
5. The creation of a physical "**home base**" similar to the Center for Underrepresented Engineering Students (CUES) under ESS that would be "endowed by a corporate partner to

promote diversity and excellence and is presented for operation to groups such as HES and BESSA (and their graduate student counterparts),” e.g., BGEES, LAGSES, SACNAS, and SWE, etc. **Deadline: August 2012** (*Dubon, Report on Broadening Participation to the CoE Faculty, April 24, 2011*)

6. The **immediate stop** of the **planned demolition and removal** of the Cal NERDS facilities in 230 Stephen Halls that is utilized to create a **pipeline for graduate studies and support diversity, equity, and inclusion through research experiences** for the College of Engineering undergraduate women and underrepresented minority students. **Deadline: January 2012**
7. **Active engagement** with other NSF funded programs such Berkeley Edge and COINS, the SMASH program funded by the Level Playing Field Institute, the Mitchell Kapor Foundation, and the Cal NERDS program to **create a pipeline** of women and underrepresented minority students for undergraduate studies in the College of Engineering. **Deadline: March 2012**
8. Securing funding and staff support from the College of Engineering to **recreate a college wide SUPERB program to serve as a pipeline** of women and underrepresented minority students for graduate studies in the College of Engineering. **Deadline: May 2013**
9. The creation of Equity, Inclusion and Diversity officer positions on par with or equivalent to a Vice Chair position complete with **office space and staff support in all of the College of Engineering departments** to oversee departmental SUPERB research activities, recruitment, and mentorship of women and underrepresented minority students in concert with the Engineering Student Services. **Deadline: September 2012**
10. The creation of a College of Engineering **wide minority faculty recruitment model** (similar to that of EECS) in which relationships are established with potential minority applicants prior to faculty positions being available. **Deadline: September 2013**
11. The creation of an **independent** committee composed of women, underrepresented minority students, and members from the Berkeley Senate Committee on Status of Women and Ethnic Minorities to review **the equity, inclusion, and diversity, education and outreach activities** of the College of Engineering and its NSF-funded centers. **Deadline: March 2012**
12. **Two rotating seats**, selected by the Coalition of Underrepresented Engineers (CUES), on the College of Engineering Broadening Participation Committee. **Deadline: November 21st 2011**
13. A **letter of support** from the 2011 College of Engineering College Executive Committee for the recommendations stated in this proposal and **clarification of exact support** the College

of Engineering will utilize to achieve these recommendations. **Deadline: November 21st 2011**

We realize that we are asking the College of Engineering and the UC Berkeley campus at large to have a painful discussion about the low number of women and underrepresented minority students in the STEM fields, but **we feel that this discussion must happen now or it will not happen at all.**

To be clear, we are not looking for **empty promises, lengthy reports, more data collection, town halls, or mere press statements** affirming the College of Engineering or UC Berkeley's commitment to recruitment, admission, retention and mentorship of women and underrepresented minority students. **This has been done already to no avail.** (*AAAS Science Insider, Aug. 17, 2009 & Aug. 18, 2009*)

Nor are we looking for College of Engineering or UC Berkeley to cite **budget issues** as the reason why recruitment, admission, and retention of women and underrepresented minority students has been scaled back. According to UC Berkeley's Sponsored Projects Office, Annual Report Fiscal Year 2011 (pg. 13), the National Science Foundation (NSF) awarded UC Berkeley **\$142,793,198** in FY 2011.

Given that most NSF proposals state that "funds allocated for research, education, **broadening participation, and outreach activities** must be discernible," it stands to reason that **money should not** be the **primary driver** behind the low number of women and underrepresented minority students within the College of Engineering **if the funding is used properly.**

We feel that the current approaches used by the NSF funded PIs has **not resulted** in the broadening participation of women and underrepresented minority students within the College of Engineering based on the numbers cited in this letter and that the PIs should **revise** their approaches.

We ask the National Science Foundation (NSF) to **clarify** how the principal investigators (PIs) within the College of Engineering **report and justify** the NSF funding they use, **if any**, to support broadening participation of women and underrepresented minority students in engineering.

We ask the National Academy of Sciences to **send advisors** to aid UC Berkeley College of Engineering's leadership in "*removing systemic barriers to the participation of underrepresented minorities in college by developing admissions and financial aid policies that promote diversity in the campus population*" in order to correct the low numbers of women and underrepresented minority students cited in this letter. (*2011 National Academies' Expanding Underrepresented Minority Participation: America's Science and Technology Talent at the Crossroads, pg. 153-154*)

In summary, we are seeking to **actively** work with NSF, NAE, AAAS, the leadership and faculty within the UC Berkeley College of Engineering starting on November 21st to **co-design and implement** the recommendations listed in this letter. Further, we seek to work as a **true partnership** in order to most effectively secure the continued success of UC Berkeley and the College of Engineering.

CC: Mark Yudof, President, University of California

Robert J. Birgeneau, Chancellor, UC Berkeley
Gibor Basri, Vice Chancellor for Equity, Inclusion, and Diversity, UC Berkeley
Carla Trujillo, Director, Graduate Diversity Program, UC Berkeley
Pheng Cheah, Chair, Berkeley Senate Committee on Status of Women and Ethnic Minorities
Andrew J. Szeri, Dean of the Graduate Division, UC Berkeley
Carlos Fernandez-Pello, Associate Dean of the Graduate Division, UC Berkeley
S. Shankar Sastry, Dean, College of Engineering, UC Berkeley
Fiona Doyle, Executive Associate Dean, College of Engineering, UC Berkeley
Melissa Nidever, Assistant Dean, College of Engineering, UC Berkeley
Phil Kaminsky, Chair, Industrial Engineering & Operations Research, UC Berkeley
Ronald Gronsky, Chair, Materials Science & Engineering, UC Berkeley
Lisa Alvarez-Cohen, Chair, Civil & Environmental Engineering, UC Berkeley
David Dornfeld, Chair, Mechanical Engineering, UC Berkeley
Costas Spanos, Chair, Electrical Engineering & Computer Sciences, UC Berkeley
Per Peterson, Chair, Nuclear Engineering, UC Berkeley
Kevin Healy, Chair, Bioengineering, UC Berkeley
Vanessa Rivera, Executive Director, Engineering Student Services, UC Berkeley
Dale Masterson, Director, Engineering Student Services, UC Berkeley
Lisa Pruitt, Chair, Broadening Participation Committee, UC Berkeley
Ruzena Bajcsy, Committee Member, Broadening Participation Committee, UC Berkeley
Oscar Dubon, Committee Member, Broadening Participation Committee, UC Berkeley
Daniel Fletcher, Committee Member, Broadening Participation Committee, UC Berkeley
Shaofan Li, Committee Member, Broadening Participation Committee, UC Berkeley
Dorian Liepmann, Committee Member, Broadening Participation Committee, UC Berkeley
Claire Tomlin, Committee Member, Broadening Participation Committee, UC Berkeley
Jasmina Vujic, Committee Member, Broadening Participation Committee, UC Berkeley
Sabina Del Rosso, President, Engineering Student Council, UC Berkeley
Karen Rhodes, Executive Director, Marketing & Communications, UC Berkeley
Craig Matthews, Director Annual Fund and Development Operations, UC Berkeley
Mitchell Kapor, Founder and Board Member, Mitchell Kapor Foundation
Freda Kapor Klein, Founder and Board Member, Level Playing Field Institute
Subra Suresh, Director, National Science Foundation
Wanda E. Ward, Broadening Participation Program, National Science Foundation
Margaret E. M. Tolbert, Office of Integrative Activities, National Science Foundation
Charles M. Vest, President, National Academy of Engineering
Lance A. Davis, Executive Officer, National Academy of Engineering
Freeman A. Hrabowski III, Chair, Committee on Underrepresented Groups and the Expansion of the Science and Engineering Workforce Pipeline, The National Academies
Sandra Begay-Cambell, Member, Committee on Underrepresented Groups and the Expansion of the Science and Engineering Workforce Pipeline, The National Academies
Linda Sue Warner, Member, Committee on Underrepresented Groups and the Expansion of the Science and Engineering Workforce Pipeline, The National Academies
John Brooks Slaughter, Member, Committee on Underrepresented Groups and the Expansion of the Science and Engineering Workforce Pipeline, The National Academies
James Ammons, Member, Committee on Underrepresented Groups and the Expansion of the Science and Engineering Workforce Pipeline, The National Academies
Shirley M. McBay, Member, Committee on Underrepresented Groups and the Expansion of the Science and Engineering Workforce Pipeline, The National Academies
Diana S. Natalicio, Member, Committee on Underrepresented Groups and the Expansion of the Science and Engineering Workforce Pipeline, The National Academies

John C. Nemeth, Member, Committee on Underrepresented Groups and the Expansion of the Science and Engineering Workforce Pipeline, The National Academies
Beatriz Chu Clewell, Member, Committee on Underrepresented Groups and the Expansion of the Science and Engineering Workforce Pipeline, The National Academies
Eduardo J. Padrón, Member, Committee on Underrepresented Groups and the Expansion of the Science and Engineering Workforce Pipeline, The National Academies
Nancy Grasmick, Member, Committee on Underrepresented Groups and the Expansion of the Science and Engineering Workforce Pipeline, The National Academies
Willie Pearson, Jr., Member, Committee on Underrepresented Groups and the Expansion of the Science and Engineering Workforce Pipeline, The National Academies
Carlos Gutierrez, Member, Committee on Underrepresented Groups and the Expansion of the Science and Engineering Workforce Pipeline, The National Academies
Sidney A. Ribeau, Member, Committee on Underrepresented Groups and the Expansion of the Science and Engineering Workforce Pipeline, The National Academies
Evelynn M. Hammonds, Member, Committee on Underrepresented Groups and the Expansion of the Science and Engineering Workforce Pipeline, The National Academies
Wesley Harris, Member, Committee on Underrepresented Groups and the Expansion of the Science and Engineering Workforce Pipeline, The National Academies
Richard Tapia, Member, Committee on Underrepresented Groups and the Expansion of the Science and Engineering Workforce Pipeline, The National Academies
Sylvia Hurtado, Member, Committee on Underrepresented Groups and the Expansion of the Science and Engineering Workforce Pipeline, The National Academies
Lydia Villa-Komaroff, Member, Committee on Underrepresented Groups and the Expansion of the Science and Engineering Workforce Pipeline, The National Academies
James S. Jackson, Member, Committee on Underrepresented Groups and the Expansion of the Science and Engineering Workforce Pipeline, The National Academies
Don Giddens, President, American Society for Engineering Education
Walter Buchanan, President Elect, American Society for Engineering Education
Norman Fortenberry, Executive Director, American Society for Engineering Education
Alice Huang, Chair, American Association for the Advancement of Science
Nina V. Fedoroff, President, American Association for the Advancement of Science
William Press, President Elect, American Association for the Advancement of Science
Jeffrey Mervis, Staff Writer, American Association for the Advancement of Science
Telle Whitney, President & CEO, Anita Borg Institute for Women and Technology
Jerri Barrett, Vice President of Marketing, Anita Borg Institute for Women and Technology
Josh Keller, California/West Correspondent, The Chronicle of Higher Education
Eric Hoover, Senior Writer, The Chronicle of Higher Education
Jennifer González, Senior Writer, The Chronicle of Higher Education
Doug Lederman, Editor, Insider Higher Ed
Allie Grasgreen, Reporter, Insider Higher Ed
Erica Perez, Higher Education Reporter, California Watch
Betsy Vincent, Staff, DailyCal