

# Using Research and Data to Improve the Faculty Search Process in STEM Disciplines

**UC ADVANCE PAID Roundtable 1**  
**UC Berkeley Faculty Club, Heyns Room**  
**Wednesday, April 11, 2012**

## Roundtable Features

On April 11, 2012, UC ADVANCE PAID hosted the first Roundtable on the UC Berkeley campus, jointly sponsored by UC Berkeley and UC San Francisco. The campuses worked together with the PI and those UCOP Academic Personnel staff members on the Planning Committee and covered meal costs. The Roundtable, “Using Research and Data to Improve the Faculty Search Process,” included 60 participants composed of faculty, administrators (including Chancellors, UC’s system-wide Provost, Deans and Department Chairs), as well as staff from all ten UC campuses. Participants gathered to address best practices for improving diversity outcomes in faculty searches.

## Goals of the Roundtable

1. To learn how academic leadership can support efforts to diversify STEM faculty;
2. To learn about empirically-based research on search practices;
3. To examine and evaluate a list of search practices from the time of the specification of the position to the point of assembling a “short list” and eventually a finalist;
4. To create a research plan to gather empirically-based evidence of best practices to improve search outcomes throughout the UC system;
5. To return key elements of these discussions to campuses

## Roundtable Presenters

**Linda Katehi**, Chancellor & Professor of Electrical & Computer Science and Women’s & Gender Studies, UC Davis

**Susan Desmond-Hellmann**, Chancellor & Arthur and Toni Rembe Rock Distinguished Professor, UC San Francisco

**Lawrence Pitts**, Provost and Executive Vice President, UCOP

**Catherine Albiston**, Professor of Law & Professor of Sociology, UC Berkeley

**Susan Carlson**, Vice Provost, Academic Personnel, UCOP

**Leah Haimo**, Professor of Biology & Associate Dean of the Graduate Division, UC Riverside

**Sally Marshall**, Vice Provost, Academic Affairs & Distinguished Professor, Division of Biomaterials and Bioengineering, UC San Francisco

**Renee Navarro**, Vice Chancellor of Diversity and Outreach & Professor of Anesthesia and Perioperative Care, UC San Francisco

**Kimberlee Shauman**, Associate Professor of Sociology, UC Davis

**Angelica Stacy**, Associate Vice Provost for the Faculty & Professor of Chemistry, UC Berkeley

**Maureen Stanton**, Vice Provost for Academic Affairs & Professor of Evolution and Ecology, UC Davis

## Session 1: “Leadership and Accountability: How Can UC Build a More Diverse Faculty?”

PI and Vice Provost Carlson convened the Roundtable with a welcome and an outline of goals for the day. Session 1, a panel discussion moderated by Dr. Sally Marshall, Vice Provost, Academic Affairs and Distinguished Professor, Division of Biomaterials and Bioengineering, UC San Francisco, immediately followed, which featured:

- Linda Katehi, *Chancellor and Professor, Electrical and Computer Science and Women’s and Gender Studies, UC Davis and Chair of the UC ADVANCE PAID Steering Committee*
- Susan Desmond-Hellmann, *Chancellor and Arthur and Toni Rembe Rock Distinguished Professor, UC San Francisco*
- Lawrence Pitts, *Provost and Executive Vice President, UCOP*

The panelists answered three questions:

### Question #1: “What role did diversity play in your career path?”

**Chancellor Katehi** responded by stating that she was raised in a small community and never felt gender discrimination, adding that she was proficient in math and science. Her first encounter with discrimination was within a Greek university, where she majored in engineering. She was approached by a university official about the reason she selected the engineering field; the official went on to add that by selecting to work in this field, she was taking away an opportunity for someone (a man) who deserved it. Although she graduated five years later, she never received a diploma and never felt welcome. In an effort to pursue a career in engineering, she moved to the United States and served as one of 10 women on the engineering faculty at a major Midwestern university. She still encountered discrimination in the US and finally left that university in 2002 as the most senior woman faculty member. Following this, she entered administration at Purdue University as the Dean of Engineering. Chancellor Katehi chose to ignore the discrimination she encountered, but acknowledged the difference that it can make for young faculty in need of positive feedback and development of self-esteem.

**Chancellor Desmond-Hellmann** also felt no discrimination in her early life, and her affinity for science and math was attributed more to her supportive family environment, in which there was no fear of failure and a belief that “anything is possible.” Arriving at UCSF first as an intern, and then as chief resident, she felt that there were no barriers for her as a woman. Moving to Uganda to study HIV, however, was her first encounter with gender-based discrimination, where she was referred to as “Dr. Mrs. Hellmann” and viewed as trailing her husband. For a variety of reasons, she overcame some of those obstacles, and went on to Genentech, where she was treated well, and her evaluations were merit-based. Asked at this time to work on women’s issues, she initially declined, but recognized that other women were experiencing both overt and covert discrimination and changed her stance. She feels that taking leadership roles as a young woman helped her tremendously, and is honored when women approach her to say that when they see her, they can imagine themselves in a leadership role, as well.

**Provost Pitts** grew up in the southern United States and attended MIT where women comprised only 5% of the undergraduate population. While in the Navy, he encountered women in the roles of nurses, and in medical school, women comprised only about 8% of the student population. His residency at UCSF revealed a more diverse environment, and he began to understand how diversity influenced interrelationships with patients and colleagues. Although the UC system has placed a priority on diversity, there is still much work to be done, especially in the UC business schools. Provost Pitts feels that diversity has independent positive value in its inherent ability to help manage relationships with constituents, and states that faculty should add positive value to diversity.

### Question #2: “Diversity. What works best: carrots or sticks?”

**Chancellor Katehi** believes in the “carrots first” outlook when asking others to embrace diversity, and then holding them accountable in achieving it. Many may serve as recruiters, but they forget the importance of retaining. Training, commitment, funds, resources and incentives all play an important role in both recruitment and retention, and also provide an opportunity for reporting the success of one’s efforts.

**Chancellor Desmond-Hellmann** also believes in “carrots”, and in creating a culturally-sensitive environment that not only provides childcare and family-friendly policies/support, but also rewards those who make efforts towards diversity: promoting and visibly celebrating accomplishments. She believes in the importance of mentoring, as mentors and mentees have different backgrounds to share in the achievement of common goals.

**Provost Pitts** thinks that “carrots” may help but data is important and useful at the front end. He believes that deans should encourage their faculty members to embrace diversity, and deans should only be rewarded with additional faculty if they are making positive progress with diversity efforts; deans with low diversity numbers should also be held accountable.

### **Question #3: “Faculty Search Process Success Stories.”**

**Chancellor Katehi** noted that the UC Davis College of Engineering ranks third in the country for women faculty numbers. Ten years ago, the college was composed of 22% women faculty; that number has since increased to 41%, which proves that change can happen if administrators and faculty are committed to and focused on diversity responsibility. UC Davis Vice Provost Maureen Stanton made a commitment to scrutinize every search process in order to increase diversity.

**Chancellor Desmond-Hellmann** said that UCSF is proud to have a Department of Medicine chair (Talmadge E. King, Jr., MD) who is African-American. She feels that having women and URM in visible leadership positions has a positive impact both on students and in the hiring process. She noted that during the past three years, the UCSF Biochemistry/Physics lunchtime talks – traditionally male-dominated -- have recruited a very strong pool of young women faculty members.

**Provost Pitts** said that Gene Washington (dean of the David Geffen School of Medicine, UCLA) recognized the importance of increasing gender and ethnic diversity, and like Provost Pitts, felt that it is a leadership or “top down” issue. Provost Pitts also feels that it is important to have the right policies in place, such as APM – 210.

### **Session 2: “What Scholars Can Tell Us: Empirically-Based Research on Search Practices”**

Session 2, a panel presentation featuring three faculty members of the RSAB, was moderated by Dr. Renee Navarro, Vice Chancellor of Diversity and Outreach & Professor of Anesthesia and Perioperative Care, UCSF. The panel included:

- Kimberlee Shauman, *Associate Professor of Sociology, UC Davis*
- Catherine Albiston, *Professor of Law/Professor of Sociology, UC Berkeley*
- Leah Haimo, *Professor of Biology/Associate Dean of the Graduate Division, UC Riverside*

**Dr. Shauman** reviewed the research on structural causes that leads to a lack of diversity in hiring. Of these, she focused on three:

- Diversity in the pipeline and applicant pool
- Geographic and family constraints
- Network position and connections

**Diversity in the pipeline and applicant pool.** Evidence from the research shows an increase in diversity amongst STEM PhDs, with an upward trend in URMs (7.2% as of 2008). Despite this increase, recruitment into applicant pools is lagging in STEM hiring. She discussed the following factors:

- Image problem of academic science; women are likely to downgrade their aspirations from an academic career, perceiving it as incompatible with family roles (including an inflexible tenure clock)
- Competitive and chilly climate; perhaps easier to focus on independent research rather than collaborative research
- Dual career conflicts; time expected to publish coincides with childbearing years
- Regional preferences for URMs
- Reliance on traditional advertisements that do not reach into diverse networks

- Competition from non-academic fields that offer career track flexibility and competitive pay

**Geographic and family constraints.** Researchers at Stanford suggest that women are more likely than men to occupy dual career couples, and also tend to be younger than their male partners who also may be at more advanced stages in their careers. Possible results:

- Women may limit themselves geographically
- Women are more likely to have a series of postdoctoral positions
- A combination of these factors makes it more complicated to hire women

**Network position and connections.** Social networks tend to be segregated by gender and race/ethnicity. Network connections for men are usually denser, while networks for women and minorities are more peripheral and less connected. Additionally, women do not have the same high profile mentors, and women and URMs have different access to hiring committees. This data highlighted the importance of having diverse workgroups to create more innovative solutions.

**Dr. Albiston** focused her research findings on bias, specifically cognitive bias which operates unconsciously and is both persistent and constant. As an example, she used the Goldin/Rouse study, which revealed that blind auditions for female musicians (where a screen is used to hide the identity of the person without blocking any sound) actually benefitted the women who were auditioning for spots in orchestras. The research she shared with the group focused on examining different aspects of how a candidate may be evaluated for a position, specifically how the same qualities could be evaluated positively for men, yet at the same time negatively for women. She reviewed a) qualifications of the candidate both in education and common sense, b) the wording of the job advertisement, and c) how mothers were evaluated as compared to how fathers were evaluated.

Research shows that when evaluating criteria in a job for a particular candidate, there is often “constructed criteria” which are ambiguous, such as credentials rated more important when possessed by a male, yet less important when possessed by a female. Not surprisingly, perhaps, is that men and women fared well when they assumed traditionally gender-based roles. She also noted that gender-based wording in job advertisements is a big factor, particularly in the sciences, where more masculine words may be used, causing women to worry about fitting in and thus discouraging them from even applying for the position. When mothers were evaluated, they were perceived as less committed and competent, yet fathers were not perceived in the same way.

While all of these research findings suggest that unconscious forms of bias work to exclude women with families, the research also reveals that there is more bias among evaluators who perceived themselves as being objective.

**Dr. Haimo** discussed research on bias that exists in the actual selection process, which shows that women statistically seem to get lost in the pipeline, not making it to professorships at the same rate as men. Women are particularly under-represented among UC faculty in STEM fields:

- Less than 20% in computer science and engineering
- Less than 30% in life sciences
- Less than 20% in physical sciences

In examining whether this is a result of the search process, Dr. Haimo discussed a study which showed that women were less likely to be hired for a mechanical engineering internship than men. The bias against women in this case was derived from female, and not male, participants. Similarly, a faculty psychology position study showed that both male and female reviewers were more likely to hire a male applicant than a female applicant with the same credentials. In these cases, women were more likely than men to be biased against other women.

### Session #3: “Search Practices and UC Hiring”

The third session of the day began with a brief presentation of data collected system-wide from UC searches in fiscal year 2011, as well as several data slides from UC Berkeley research examining the correlation between search practices and outcomes. The session was moderated by Dr. Angelica Stacy, Associate Vice Provost for Faculty & Professor of Chemistry, UC Berkeley. Following the presentation, participant breakout groups examined and evaluated a list of search practices used from the time the position was posted, to choosing a “short list”, to selecting a finalist. The breakout groups raised many questions, including:

- What type of training is given to search committee members?
- How do faculty prioritize job criteria and how are criteria applied?
- Are job descriptions created in a way that avoids problematic wording or language?
- Is diversity merely a perception?

#### Session #4: “Research Proposal: Filling the Gaps”

The day’s final session focused on what questions remained regarding the efficacy of search practices and was moderated by Dr. Maureen Stanton, Vice Provost, Academic Affairs & Professor of Evolution and Ecology, UC Davis. Equal parts presentation and group discussion, this session sought to gather empirically-based evidence of best practices with the goal of carrying these messages back to campuses throughout the 10-campus UC system.

In discussions of what participants wanted to take from the Roundtable back to their campuses, consensus was that UC needs to communicate more with faculty and deans on faculty search issues. UC can influence the national debate in key ways and also has a responsibility to spread the word beyond UC. The *Chronicle of Higher Education* is a commonly used job posting vehicle for search committees, yet there was debate as to whether *Chronicle* placement of ads is voluntary or mandatory. As part of the group discussion, different campuses shared training practices, including the following:

- UCLA conducts training in person, does special training by department and includes meals. UCLA also asks equity advisors to review job postings prior to placement
- UCSD refers to training as “orientation” and invites deans and others to attend
- UCSD also asks for diversity statements from all applicants
- UCSF is moving toward the “equity advisor” model

The session culminated with a discussion of what tools should be included for search committees in order to increase diversity. While there were many suggestions, such as concise data, implicit bias data studies, search pool prioritization and statement of contributions to diversity, the practices of other universities also were mentioned, such as University of Virginia’s online certification which is required of anyone who wishes to participate on a search committee. Cornell University also was mentioned, as they “stop the clock” for both new mothers and new fathers. With UC Recruit (a web-based application for faculty searches) emerging as a key tool, there also was discussion concerning the following:

- What key data do we need to collect?
- What is the meaning of “supplementary” data collection?
- What other types of information do we want to extract?
- Can we collect data that measure the effect of implicit bias?
- How can we collect data that will be easily “updatable”?
- How can we collect data that allow us to look at issues of gender and race and their intersection?

The session concluded with the consensus that UC needs additional training and documents that can be utilized system-wide. The UC ADVANCE PAID program also was asked to collect data on the effectiveness of various “best practices” on diversifying the faculty; data was requested which would reflect the effect of particular interventions. After a discussion of how to take this conversation back to campuses, the meeting adjourned.