SUPERB-IT
Summer Undergraduate Program in Engineering Research at Berkeley – Information Technology

Electrical Engineering and Computer Sciences
College of Engineering
University of California, Berkeley
www.eecs.berkeley.edu/Programs/superb/superb.html

Program Overview

Objective:
- To increase diversity in the information technology graduate school pipeline by affirming students’ motivation for graduate study and strengthening their qualifications

Strategy:
- Offer talented underrepresented undergraduate engineering students the opportunity to gain research experience by participating in ongoing research with electrical engineering and computer sciences faculty and graduate students

What makes SUPERB-IT unique?
- The goal of serving underrepresented minority and underserved students
Program Components

Undergraduate Research
- 8-week research project in IT
- Faculty and graduate student mentors
- Written technical reports and oral presentations

Educational Activities
- Expose students to the various research areas at UCB
- Industry Field Trips, tours of research facilities, and research group presentations

Graduate Study Preparation
- Workshops: Graduate application process, fellowship and financial aid information, graduate academic life
- GRE preparation course

Faculty Participation

Frequency of Faculty Participation
SUPERB-IT 1990-2002

- 56 Faculty SUPERB-IT Mentors
  - 50% are repeater mentors
- Many repeat faculty mentors have served as leaders of the EECS Department

The significant faculty representation demonstrates departmental buy-in and confidence in SUPERB-IT
Evaluation Methodology

♦ Pre-Program
  – Short-term corrections such as research mismatches, insufficient mentoring, or logistic difficulties

♦ Post-Program
  – Students’ and graduate mentors’ perception of the value of SUPERB-IT experience

♦ Longitudinal follow-up
  – 1990-1998
  – 1996-2001 (67% response rate)

Participants & Graduate Study

♦ 66% of participants pursued graduate study

<table>
<thead>
<tr>
<th>Degree Type</th>
<th>No. of Participants</th>
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<tbody>
<tr>
<td>PhD</td>
<td>4</td>
</tr>
<tr>
<td>MS</td>
<td>18</td>
</tr>
<tr>
<td>JD</td>
<td>1</td>
</tr>
<tr>
<td>MBA</td>
<td>1</td>
</tr>
<tr>
<td>PhD Pipeline</td>
<td>18</td>
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<tr>
<td>MS Pipeline</td>
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<tr>
<td>Applying to Graduate School</td>
<td>12</td>
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**Key Accomplishments**

♦ Program is perceived by students to have increased their motivation to aspire to graduate school

♦ Students from smaller institutions with no Ph.D programs were learning about research universities for the first time

♦ Students Leverage Research
  – Continuity of research at undergraduate institution
  – Dissemination of research: presentations, publications

♦ Support for graduate applications

**Challenges**

♦ Anti-affirmative action legislation and its affect on SUPERB-IT student diversity

♦ Faculty Availability

♦ Fiscal Sustainability
California Anti-Affirmative Action Legislation

UC Board of Regents Standing Policies SP1, SP2 – July 1995
- SP-1 eliminated consideration of race and gender in the admission of students to the university.
- SP-2 eliminated race and gender as considerations in UC’s hiring and contracting practices, except where such action would result in the university’s loss of federal or state funds.
- The first full entering freshman class admitted under SP-1 enrolled at UC in fall 1998.

Proposition 209 – November 1996
- Prohibits consideration of race and gender in state employment, education and contracting programs – regardless of the University of California’s Regental or administrative policies.
SUPERB-IT Demographics

Proposition 209 becomes State Law

SP1 & SP2 become UC Policy

Proposition 209 becomes State Law

SUPERB-IT 1990-2000
% Men and Women Overall

<table>
<thead>
<tr>
<th>Year</th>
<th>Male %</th>
<th>Female %</th>
</tr>
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<tbody>
<tr>
<td>1990</td>
<td>59</td>
<td>41</td>
</tr>
<tr>
<td>1993</td>
<td></td>
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<td>1996</td>
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<td>1999</td>
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<td>2002</td>
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SUPERB-IT 1990-2002
Number of Men and Women By Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Students</th>
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<tbody>
<tr>
<td>1990</td>
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<td>1993</td>
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<td>2002</td>
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SUPERB-IT 1990-2002 % Ethnicity Overall

- African-American
- Latino
- Chicano
- Native American
- Other
- Asian
- Caucasian

SUPERB-IT 1990-2002 Ethnicity By Year

SUPERB-IT 1990-2002 Institution Type

- PhD Granting Institution vs. Non-PhD Granting Institutions

- Underrepresented Institutions include Historically Black Colleges and Universities (HBCUs), Hispanic Serving Institutions, and All-Women Colleges

SP1 & SP2 become UC Policy

Proposition 209 becomes State Law