

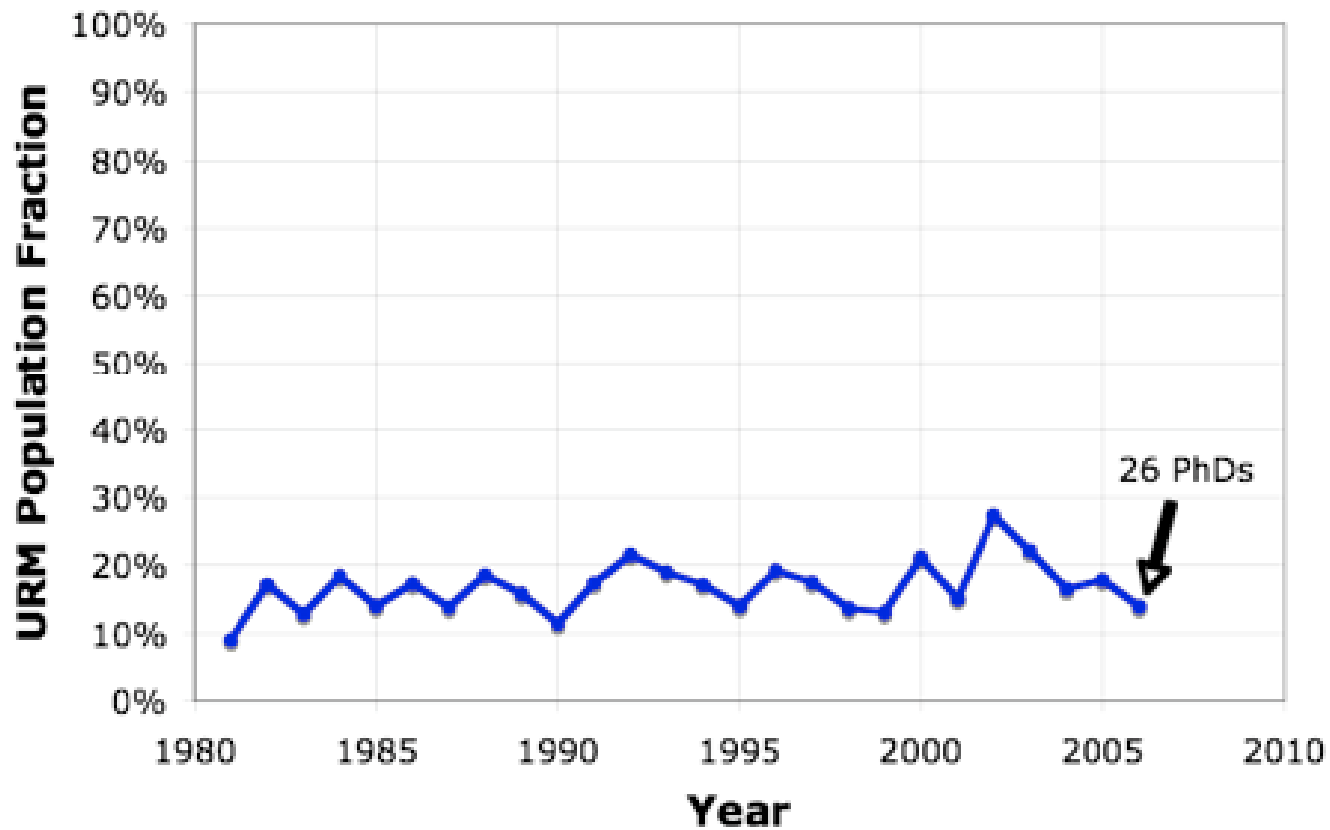
Chair's Conference 2012

Jesús Pando
DePaul University

Status

- 1989: just over **15,000** PhDs in science and engineering were granted, **387** to Hispanic (~**2.6%**) and **55** to Native American (~**0.4%**)
- 2009: nearly **21,000** PhDs in science and engineering granted, **1,131** to Hispanics (~**5.4%**) and **79** to Native Americans (~**0.4%**).
- *Source: National Science Foundation (NSF) report, [Doctorate Recipients from U.S. Universities, Table 21.](#)*

Status



Sources: US Census Bureau, IPEDS Completion survey

Status

- Labor Department reports that with 14 million unemployed, there are 3.4 million jobs unfilled (*Dated*)
 - Skills gap (Mostly **STEM** skills)
- 22% of entering college students major in a **STEM** discipline, 14% of college grads graduate in a **STEM** discipline.

What We *Know*

- Research shows that attrition has been consistently higher among students from underrepresented groups.
- Research has shown for doctoral candidates attrition primarily the result of institutional policies, procedures, and environment rather than the “fault” of students who begin doctoral studies.

What We *Know*

- Undergraduates face similar issues
- Plus, many underrepresented students enter university more poorly prepared.
 - Under-performing public schools
 - Access/exposure to science-like activities
 - Digital Divide
 - Lack of college-life awareness

What / Think / Know

- Recruitment of underrepresented students should mirror local environment.
- Mentorship is central to success.
- Active involvement in extra-curricular **STEM** activities increases chances of success.
- Support services cannot be centered at the university level, but must include a strong discipline specific component.
- Exposure to the many career paths and opportunities in **STEM** fields has an intangible positive effect.

What / Think / Know

- Professional minority societies can play the role of mentor.
 - These societies must have a local champion in order for them to be effective
 - If there is not a critical mass in physics (very likely), then other science professional societies should be used.
 - National Society of Black Physicists, National Society of Hispanic Physicists, SACNAS, NOBCHE, SHPE,