Diversity in Engineering:

Understanding and Addressing Stereotype Threat
What do engineers look like?
But is that really all??!
Still, we could do better...

(UW College of Engineering Bachelor's Degrees, 2008)
Why do we care about diversity?

- Different ideas of problems and solutions
- Awareness of diversity issues for collaborators
- Don't want to miss out on talent!

- Why is diversity hard to get?
  - Stereotype Threat: Peixian
- What do we do about it?
  - Solutions: Brian
Stereotype Threat
What is stereotype threat?

Stereotype Threat refers to being at risk of confirming, as self-characteristic, a negative stereotype about one's group.

Photo from Isaac Lee's Weblog: http://isaaclee.wordpress.com/
Stereotype Threat &

Its Consequences

- Awareness of a stereotype can lead to
  - Decreased academic achievement
  - Self-handicapping: Individuals erect barriers to performance to provide attributions for failure
    - Stereotype as an excuse for failure
    - Reduced preparation and efforts
      - Example: practicing basketball
Stereotype Threat Affects Diversity

- Altered Professional identities and aspirations
  - Affecting career choices early in schooling
  - Redirecting aspirations and career paths

- Example: Woman may change their major to a less male-dominated one or even never consider science and engineering fields
Minimizing Stereotype Threat

- Deemphasize threatened social identity
- Offer high standards and assurances of capability
- Provide role models
  - Example: Test Proctors
- Discourage attributions of difficulty to one's social identity.
  - Example: Lego Robots
Conclusions

- Engineer stereotype overlooks diversity in the field
  - Still a need for more diversity
- Stereotypes affect
  - Individual performance
  - Ultimately, the diversity of the field
- We can reduce the negative effect of stereotypes
  - Inside and outside classrooms
  - Targeting both adults and children
http://www.reducingstereotypethreat.org
