The Gender Divide & Minority Abyss
A Roundtable Discussion
Background/The Problem
(~10 minutes)
Background/The Problem
(~10 minutes)

Introductions
(~5 minutes)
Background/The Problem
(~10 minutes)

Introductions
(~5 minutes)

Brainstorming/Questions
(~30-45 minutes)
Evidence of under representation


- White Men: 29%
- White Women: 30%
- Asian Men: 1%
- Asian Women: 2%
- Black Men: 5%
- Black Women: 5%
- Disabilities: 17%
- American Indian: 1%
- Hispanic Women: 5%
- Hispanic Men: 5%

Percentage S&E Population (1999)

- White Men: 64%
- White Women: 19%
- Asian Men: 8%
- Asian Women: 3%
- Black Men: 2%
- Black Women: 1%
- American Indian: 0%
- Hispanic Women: 1%
- Hispanic Men: 2%

Data from NSF, SETAT, Census Bureau, Current Population Survey - March 1999, and NSB 2002. Totals may not add up to 100% because of rounding.
Evidence of under representation

White vs. Minority in S&E

- White: 81%
- Minority: 19%

Percentage S&E Population (1999)

- White Women: 19%
- White Men: 64%
- Asian Men: 8%
- Asian Women: 3%
- Black Men: 2%
- Black Women: 1%

American Indian: 0%
Hispanic Women: 1%
Hispanic Men: 2%

Data from NSF, SETAT, Census Bureau, Current Population Survey - March 1999, and NSB 2002. Totals may not add up to 100% because of rounding.
Evidence of under representation

Men vs. Women in S&E

- Men: 76%
- Women: 24%

Percentage S&E Population (1999)

- White Men: 64%
- White Women: 19%
- Asian Men: 8%
- Asian Women: 3%
- Black Men: 2%
- Black Women: 1%
- Hispanic Men: 2%
- Hispanic Women: 1%
- American Indian: 0%

Data from NSF, SETAT, Census Bureau, Current Population Survey - March 1999, and NSB 2002. Totals may not add up to 100% because of rounding.
Bachelor degrees awarded to women in the sciences by major

Bachelor degrees awarded to women in the sciences by major

Bachelor degrees awarded to women in the sciences by major

Bachelor degrees awarded to women in the sciences by major

Bachelor degrees awarded to women in the sciences by major

Engineering degrees by level and group, 2003

Source: CPST, data derived from EWC

From “If your not there, You Can’t Do It: Advancing Arguments for Diversity in Computing” by Dr. Shirley Malcom
Why do we need women & minorities in computing?

- Program design is improved when designers better understand users.
- Having designers from a diversity of gender and ethnic backgrounds will improve designs.


Is Diversity in Computing a Moral Matter? In Inroads, by Deborah G. Johnson & Keith W. Miller
What can we do?

• Recruitment
• Retaining
We can recruit by dispelling some common stereotypes

- CMU Roadshow
- IU’s Just Be
- Invite guest speakers
- Be a positive role model
We can create a supportive department to *retain* students

- Educate parents, counselors, and teachers
- Create opportunities for interdisciplinary work
- Provide a safe, positive lab environment
- Create a community/support structure for underrepresented students
- Encourage *all* students
Dr. Gloria Childress Townsend

- Taught @ DePauw U for 25 years
- Professor & Chair of Computer Science Department
- Three degrees from IU Bloomington in mathematics and computer science
- Research in Evolutionary Computing
- Advocate for Women in Computing Issues
Eden Miller Medina

- Assistant Professor of Informatics at IU
- Doctoral Student at MIT
- Research interests in intersection of Latin American Studies and the history and social studies of technology
- Graduated from Princeton with a degree in Electrical Engineering and certificate in Women’s Studies
Stephanie Rose Gato

- Senior computer science major at Indiana University
- Founding member and current president of WIC@IU
- Undergraduate instructor
- Interned at Argonne National Laboratories
- Working on Fluency Project http://fluency.knownspace.org
Discussion Time

• Discussions we had:
  – How can CS teachers compete with other electorates when colleges don’t let us write recommendations and the NCAA does not count it as an elective?
  • We recommend contacting ACM Education and ACM-W about this issue
  • This was a new question for us, but we are interested in seeing what happens
Discussion Time

• How did Gloria, Eden, Stephanie, and Katie get interested in computing? How old were you?
• How can we compete with other electorates? Students want to sample all the electorates to know what they want to do.
  – We recommend getting technology integrated into other courses (photograph art, video tape guest speakers, look at population growth simulations in history classes, etc.)
Discussion Time

• How can we get students in the class room?
I lost a student because she was only going to take the class if her friend took the class. Since her friend did not take the class, she dropped.
  – We recommend creating a community, so she can meet other people interested in computing at her school
  – Create a newsletter inviting students to your class
  – Extracurricular activities, such as technology clubs could get people interested
You mention role models - where can we find them if we don’t have girls taking our classes?

- Local universities are great places to start. For younger high school students, nothing is cooler than to have an upper class woman as a friend. For upper class women, college women are cool to hang out with. Try your local university.

- Get other female faculty involved in technology related projects.