

# Women of Color in Computing

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# My Personal Journey

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- Youngest of 3 children
  - Mom: school teacher
  - Dad: engineer, started his own company
- Always wanted an MS degree
- Journeyed into the PhD
- Journeyed into the academic position at Northwestern
  - Wanted family support
  - Married, have 2 children
- Journeyed into the department head position at TAMU
  - Single mom with 2 children



# Women of Color: Realities

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- Lens: ethnicity and gender
- Representation: ethnicity or gender
- Role models: neither ethnicity or gender



**Loretta Moore**  
**Professor & Dept. Head**  
**Jackson State University**

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# Women of Color: Issues

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- Isolation
  - Low numbers
- Self-doubt
  - Lack of role models
- Taxed
  - Represent women and ethnic minorities
- Misunderstood
  - Address only one aspect



**Manuela Veloso**  
**Herbert A. Simon Professor**  
**Carnegie Mellon University**

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# Women of Color: Strategies for Success

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- Mentoring/Networks
- Role Models
- Being True to Yourself



**Mishelle Coldren**  
**Executive Director of IT**  
**Verizon**

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# Women of Color: Networks

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- Key barrier:
  - Access to networks of influential colleagues
- Survey data from 1,735 Hispanic, Asian, and African-American women professional and managers in 30 Fortune 1000 companies
- “Blending in” versus “Sticking together”
  - “Blending in”: informal networks with those with power - often white and/or male
  - “Sticking together”: informal networks of those similar to themselves



**Ann Gates**  
Professor of CS  
UTEP

Source: Catalyst Report on Informal Networks of Women of Color

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# Catalyst Findings

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- African-American women followed a “sticking together” strategy
  - Most likely to have same-race members in their informal networks
  - Had the largest number of women of their race in their networks
- Latinas followed a somewhat “blending in” and “sticking together”
  - High numbers of white members in their informal networks
  - Also evidenced mainly female members
- Asian women followed a “blending in” strategy
  - More than  $\frac{1}{2}$  of network members were white and 53% male



**Sandra Johnson**  
**Senior Technical Staff**  
**IBM**

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# Recommendations: Networks

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- Have both networks
  - Sticking-Together
  - Blending-In
  - Goal: one day require only one network
- Be aware of the time commitments
- Communicate your goals with your networks



**Claudia Galvan**  
**Group Program Manager**  
**Microsoft Corporation**

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# Women of Color: Role Models

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- Key barrier: low number of minority faculty in science and engineering
- Survey data from top 100 departments
- Underrepresented Minority Professors at Top 50 CS Departments - FY 2007
  - Assistant: 3.1%
  - Associate: 2.9%
  - Full: 1.9%
  - All Ranks: 2.5%



**Prachi Gupta**  
Software Engineer  
Google Inc.

Source: A National Analysis of Minorities in Science and Engineering Faculties at Research Universities, Dr. Donna Nelson

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# Tenured and Tenure Track WOC Faculty

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Top 100 CS Dept.	Black	Hispanic	Native American
Assistant Prof.	4 (12)	2 (12)	0 (0)
Associate Prof.	0 (8)	3 (13)	0 (1)
Full Prof.	2 (3)	0 (21)	0 (0)

**Total Number of Faculty: 2531**

**Source: A National Analysis of Minorities in Science and Engineering Faculties at Research Universities, Dr. Donna Nelson**



**Phoebe Lenear**  
Coord. Of Instr. Services  
UI-Global Campus

# PhD Statistics (CS)

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- Time Period of 1996-2004
- Black
  - PhDs: 3.2%
  - Assistant Professors: 1.8%
- Hispanic
  - PhDs: 2.9%
  - Assistant Professors: 1.8%
- Native American
  - PhDs: 0.5%
  - Assistant Professors: --



**Sapna Tyagi**  
**Program Manager**  
**Microsoft**

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# Recommendations: Role Models

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- Important to mentor WOC faculty through the tenure process
  - PURPOSE
    - Academic Workshops for Underrepresented Participants and People with Disabilities
- Advocates for academia
- Allow students to see the true person



**Jakita Thomas**  
**Research Staff Member**  
**IBM**

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# Women of Color: True to Yourself

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- Key barrier: myth that you must be like the white male to succeed
  - Lack of mentors
  - Lack of role model
- Data:
  - Based upon a number of years of personal experience



**Jessica Tseng**  
**Research Staff Member**  
**IBM**

Source: Catalyst Report on Informal Networks of Women of Color

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# Be True to Yourself

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- Your experiences shape the person that you are
  - Discrimination exists
- Conflicts are apart of life
  - Differences can bring about a better solution



**Danqing Wu**  
Software Engineer  
Tellme

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# Recommendations: True to Yourself

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- Allow time to identify your passions
  - Weave your passions into your career
- Allow your true self to be known by others
  - Allow others to get to know the real you
  - Utilize Emotional Intelligence
- Use your experiences to create better environments
  - Help you and others to follow



**Diana Jackson**  
**Software Engineer**  
**LANL**

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