

Revitalizing Graduate STEM Education for the 21st Century

Third Committee Meeting North Carolina State University

Panel III: Creating institutional practices to improve support for all students

Dr. Christine S. Grant
Associate Dean Faculty Advancement
Professor of Chemical & Biomolecular Engineering
NC State College of Engineering



Dorothy and Roy Park Alumni Center 2450 Alumni Drive Raleigh, NC 27606
Chancellor's Board Room and Reception Room May 22 – May 23, 2017

Who's the Advisor?



Omoloia Eniola-Adefeso
Full Professor (CHE) U.Mich



Rhonda Franklin
Full Professor (ECE) UMN





“I could focus on telling you about my participation in graduate initiatives focused on broadening participation such as: AGEP, IMSD, GEM and SREB.”



THE
COMPACT *for*
FACULTY
DIVERSITY

LSUIMSD
Initiative for Maximizing Student Development

GEM
THE NATIONAL GEM CONSORTIUM

PROMISE
Maryland's Alliance for Graduate
Education and the Professoriate



Incentivizing REAL Reform

- **Reframe faculty success**
- **Train Faculty as mentors**
- **Get faculty out of the lab**
- **Incentivize Career Development**
- **Alter graduate courses/programs**
- **Give Junior scientists a voice**



Based on information found here: <http://sites.nationalacademies.org/PGA/bhew/graded/index.htm>

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

BOARD ON HIGHER EDUCATION
AND WORKFORCE
Policy and Global Affairs



Impacting Real Sustained Change

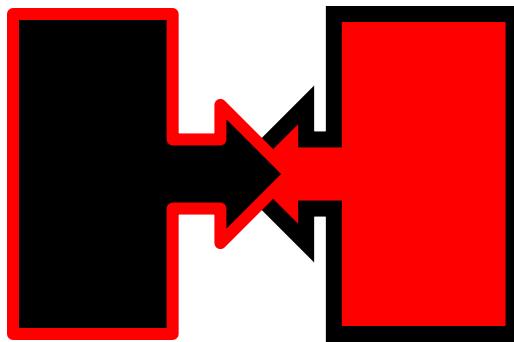
Another report?

“It’s certainly possible, of course, that one or both of these new efforts will finally crack the secret of how to incentivize real reform.”

B.L. Benderly “Will more studies of the training and career mess actually create change?” Source: Science (sciencemag.org ; Taken for granted stories)



“Today – I will focus on a dialog about cross cultural mentoring – where the mentors are women of color and the mentees are from several different cultures. The majority of studies focus on the women and underrepresented minorities as being the recipients of the mentoring....”



- ***Cross-cultural mentoring*** involves an ongoing, intentional, and ***mutually enriching*** relationship with someone of a different race, gender, ethnicity, religion, cultural background, socioeconomic background, sexual orientation, or nationality.
- The identification of ***values*** that are held in common, even across difference, leads to the development of ***trust and understanding***.
- The commitment to a vision of ***inclusive excellence*** inspires one to clear educational pathways and help others overcome obstacles and limitations.

*From a talk by:

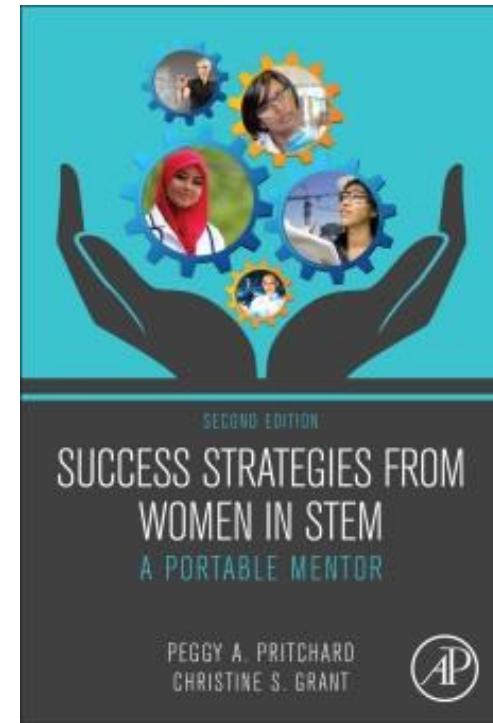
Betty Neal Crutcher (Wheaton College) "Cross-Cultural Mentoring: A Pathway to Making Excellence Inclusive"
Source: <https://www.aacu.org/liberal-education/2014/spring/crutcher>

Success Strategies From Women in STEM, 2nd Edition

Co-edited by P. Pritchard and C. Grant

(From Mentoring Chapter...Elsevier/Academic Press (2015))

- “It is important to understand that **your mentor does not have to be just like you for the relationship to work well**. The person may be female or male, young or old, of the same or a different race, culture, religion, temperament; s/he may be at the same company, institution, or agency as you, or work in a different field altogether.”
- “The important point is to **find someone compatible** who is sensitive to your unique job or educational situation, has the appropriate knowledge and experience you seek, and is interested, willing, and able to participate in a mentoring relationship with you.”



Book available here: <http://store.elsevier.com/Success-Strategies-From-Women-in-STEM/isbn-9780123971814/>

best practices based on lessons learned by seasoned faculty, admin, staff mentors:

- Those **motivated to mentor** mentees whose backgrounds or identities differ from their own must be adept at navigating cultural boundaries-personal, gendered, racial, ethnic, and geographic.
- Because of the complexity of cross-cultural mentoring, mentors need to **possess certain attributes** or virtues, including active listening skills, honesty, a nonjudgmental attitude, persistence, patience, and an appreciation for diversity.
- Mentors must **maintain a dual perspective**, seeing the mentee as an individual as well as part of a larger social context.
- For the relationship to survive times when the mentee does not take the mentor's advice, it is important that the mentor **avoid becoming overly prescriptive** or invested in the mentee's choices.
- Mentors **set boundaries** and don't become friends with their mentees, at least not for quite a while.

*From a talk by:

Betty Neal Crutcher (Wheaton College) "Cross-Cultural Mentoring: A Pathway to Making Excellence Inclusive"
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Revisit

Mentoring

- Reflect
- Empathize
- Vary
- Implement
- Seek
- Iterate
- Teach

University Leader



College Leader

Department Leader

Full Professor

"Peer Mentoring Summits for WOC Engineering Faculty"

NSF ADVANCE Leadership award 0545269

PIs: Christine S. Grant, Ph.D. and Jessica DeCuir-Gunby, Ph.D.; NC State University



Associate Professor

NC STATE UNIVERSITY

Where are the participants now?!
(Partial Listing)

Promoted to Associate

Norma Alcantar (CHE) USF



Jessica DeCuir-Gunby (Ed.Psy) NCSU



Monica Cox (Eng. Ed.) Purdue

Omoloia Eniola-Adefeso (CHE) U.Mich



Susana Lai-Yuen (IE) USF

Jennifer Lukes (ME) UPenn

Stephanie Luster-Teasley (CHE) NCA&T

Iris Rivero (IE) TexasTech->Iowa State



Sylvia Thomas (EE) USF**

Chekessa Liddell Watson (MSE) Cornell

Leigh Winfrey (NE) UF

Rosalind Wynne (EE) Villanova

Julie Ivy (ISE) NCSU



Promoted to Full

Annie Anton (CS) NCSU-> GA Tech



Karen Butler-Purry (ECE) TAMU

Theda Daniels-Race (ECE) LSU

Monica Cox (Eng. Ed.) Purdue>Ohio State

Tamara Floyd Smith (ChE) Tuskegee
*Interim Assistant Provost
Professor of Chemical Engineering*

Stephanie Adams (ISE) VCU-VATech

Norma Alcantar (CHE) USF

Tonya Peeples (CHE) UIowa

Jelena Srebric (ArchE) PennState→ Umd

Jennifer Lukes (ME) UPenn



Rhonda Franklin (ECE) UMn

Kim Jones (CE) Howard

Jennifer Lukes (ME) UPENN

Pamela McCauley (IE) UCF

Julie Ivy (ISE) NCSU**

Administrators

Gilda Barabino: Dean (CCNY)



Karen Butler-Purry (TAMU): Associate Provost for Graduate & Professional Studies

Monica Cox (Ohio State) Dept. Head
Tamara Floyd Smith (Tuskegee) Interim Assistant Provost



Lesia Crumpton-Young: (TSU) Associate VP Research & Sponsored Programs; Chief Research Officer

Tonya Peeples (U.Iowa) Associate Dean for Diversity & Outreach
Christine Grant (NCSU) Associate Dean Faculty Advancement



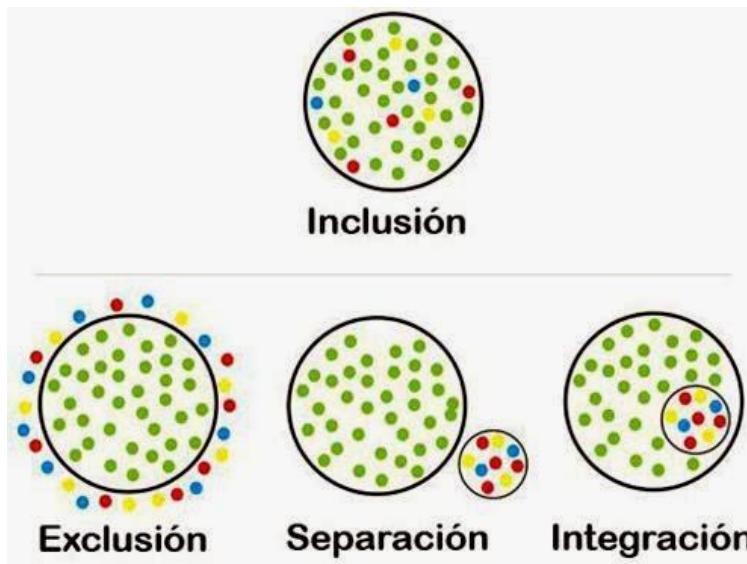
Stephanie Adams (VA Tech) Dept. Head, Engineering Education; (Old Dominion) Dean

Annie Anton (GA Tech) Chair School of Interactive Computing
Kim Jones (Howard) Chair Civil & Env. E
Janet Rutledge (UMBC) Vice Provost & Dean Graduate School



Cross cultural mentoring.. The Next Dialog

- How important is it for URM women faculty to be a resource for CC mentoring to promote diversity and inclusion in the academy?



- How can URM women leverage in leadership roles in the academy to promote/inform CC mentoring to foster diversity and inclusion in graduate programs?

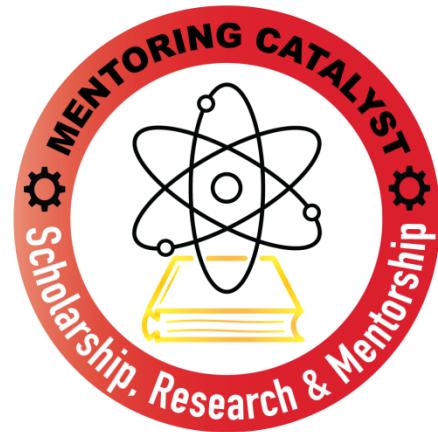
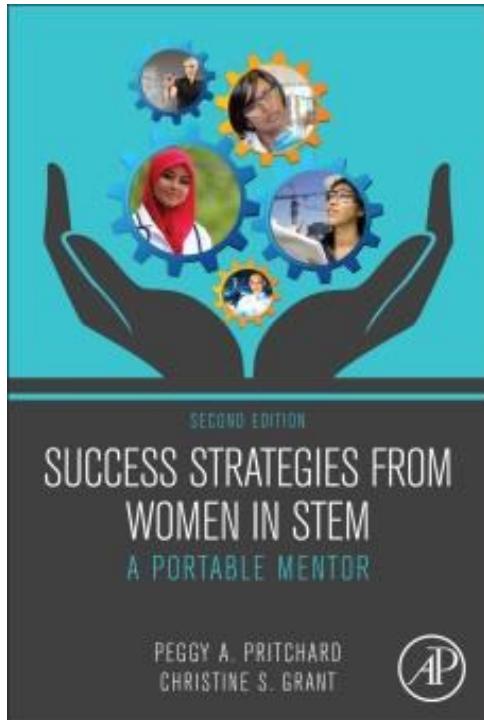
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EFRI-REM MENTORING
An NSF Project: #1551323
Collaborative Research: EFRI-REM Mentoring
Catalyst Initiative

<https://mentoringcatalyst.org/>

Multi-cultural Mentoring

By our diverse teams!

One of our NSF Funded Mentoring projects...

Website: <https://mentoringcatalyst.org/>



EFRI-REM MENTORING
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Collaborative Research: EFRI-REM Mentoring Catalyst Initiative