

ADVANCing News

The Alliance for the Advancement of Florida's Academic Women in
Chemistry and Engineering (AAFAWCE) Newsletter

October 2012
Volume Three

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AAFAWCE is a National Science Foundation ADVANCE-PAID Award #0930164
<http://anthropology.usf.edu/AAFAWCE/>

AAFAWCE Goes On!

AAFAWCE has been awarded an NSF no-cost extension to continue its activities for a fourth year!

Vanessa Martinez, Research Assistant, USF



From left to right: Penny J. Gilmer, Berrin Tansel, Kathryn Borman, Chrystal Smith, Anne Donnelly (on computer screen), Ngozi Ugochukwu, and Simone Peterson-Hruda

ative research project to interview women STEM faculty at the five AAFAWCE universities about their departmental climate and career development (see pages 4-5). In this final year of the NSF ADVANCE-PAID grant, all five AAFAWCE institutions will collaborate on our publication *Alliances for the Advancement of Academic Women in STEM: Guidelines for Collaboration in Chemistry, Engineering, and Beyond* (see page 6). Furthermore, each campus will continue to provide networking and learning opportunities for its women STEM faculty.

Flip to the back of this newsletter to see what is happening on your campus!

The AAFAWCE team has been working diligently to provide women faculty in chemistry, engineering, and other STEM disciplines with the opportunity to attend workshops and presentations on mentorship and career development (see pages 2-3). Conversations with speakers and participants at these events revealed

that isolation continues to be a significant challenge for women faculty in STEM. To further investigate this issue, AAFAWCE designed a qualita-



Who Are We?

The Alliance for the Advancement of Florida's Academic Women in Chemistry and Engineering (AAFAWCE) is an NSF ADVANCE-PAID program.

AAFAWCE is a collaboration of five Florida state universities: [USF](#), [FSU](#), [UF](#), [FAMU](#), and [FIU](#). Our mission is to increase the representation and promote the advancement of academic women in chemistry and engineering, thereby developing a more diverse science & engineering workforce.

In addition to our sponsorship of leadership workshops, on each AAFAWCE campus we have established:

- Mentorship programs for female assistant and associate professors
- Recruitment practices workshops that provide strategies to attract excellent and diverse faculty candidates

The Spring 2012 COACH Workshop

Hosted by FAMU, Tallahassee, FL, February 23-24, 2012

Simone Peterson Hruda, Ph.D., Associate Professor, Mechanical Engineering, FAMU-FSU College of Engineering, AAFWCE-PI, FAMU

The theme of the day and a half workshop was 'Uses of Influence, Power, and Conflict Resolution in Negotiation.' Facilitators Barbara Butterfield and Jane Tucker have over 60 years of combined experience in higher education, and have conducted numerous workshops on negotiation and networking. All participants received a workbook containing information and worksheets on:

1. Negotiations, Problem Solving and Conflict Resolution
2. Influence, Power and Politics: Alignment and Decisions
3. Social Intelligence
4. Networking
5. Attracting and Retaining Women Faculty
6. Building High Performance Teams
7. Assessment of Response/Negotiating Styles
8. Difficult Conversations
9. Case Studies

Thirty-four representatives from AAFWCE campuses attended the workshop, including assistant, associate, and full professors, instructors, postdoctoral scholars, administrators, and instructional coordinators. Participants were from chemistry, engineering, physics, biomedical sciences, scientific computing, medicine, social work, anthropology, and academic affairs. The workshop provided participants time to network and strengthen existing relationships.

Participant Feedback: COACH Workshop 2012

"This was an excellent workshop with great participants and atmosphere. It would be great to make this a regular part of career development."

"The meeting provided me not only a wealth of practical information for professional growth, but a means to connect with a group of inspiring women colleagues."



Mentoring Workshops with Donna Dean

Hosted by USF and FSU, February 2-3, 2012



Former AWIS President Donna Dean facilitated the workshop 'Using Mentoring and Networking to Develop Your Leadership Skills' on the FSU and USF campuses. These sessions focused on the principles of her book *Getting the Most out of Your Mentoring Relationships: A Handbook for Women in STEM*. During Dean's visits to USF and FSU, the AAFWCE teams sponsored a 'meet and greet' mentoring breakfast. Eleven protégés, 10 mentors and five others attended the FSU workshop. Approximately 26 faculty, administrators, post-doctoral students, and graduate students attended the workshop at USF.

Participant Feedback: Donna Dean Mentoring Workshop

Has your view of a mentor changed as a result of this workshop and, if so, explain how?

"Very interesting to hear Dr. Dean's stories and learn new methods and tips, especially as a woman."

"I liked that Donna pointed out that you should have multiple people mentoring you not necessarily multiple mentors. She made a distinction between the act of mentoring and mentors."

Speed Mentoring

Hosted by USF, Tampa, FL, April 13, 2012

Speed Mentoring provided mentors and protégés with the opportunity to:

1. Engage in time-efficient networking
2. Pose important questions about their research and careers
3. Quickly identify a good mentoring match

Seven senior STEM faculty members participated as mentors and six junior women STEM faculty members participated as protégés. While participating mentors remained in their seats, protégés rotated from station to station for eight-minute intervals. Between each session, participants were given two minutes to wrap up and take notes.

All senior STEM faculty members received a letter of recognition from the USF Provost.

Participant Feedback: Speed Mentoring



“This was a great experience for me as a mentor, and I think that I helped the protégés.”

“The speed mentoring session helped me with the ability to express my research objectives more concisely. In addition, I learned of a mechanism to improve my publication strategies with my graduate student researchers; definitely worth the time.”

UF Mentor-Mentee Luncheons

Hosted by UF, Gainesville, FL, 2012

Anne Donnelly, Ph.D., Director, Undergraduate Research & SEAGEP, AAFWCE-co-PI, UF



Senior faculty from chemistry, physics and engineering who agreed to be ADVANCE mentors met with junior female faculty and discussed the mentoring program and issues of concern. Prior to the third luncheon, we surveyed junior faculty to determine how the meeting could best meet their needs. The responses indicated that they valued the luncheons and the opportunity to meet with the senior faculty mentors. These responses solicited by the survey will guide programming for future meetings.

Participant Feedback: UF Mentor-Mentee Luncheons

When asked if they valued the ability to have a mentor outside their department participants wrote:

“Yes, although I do not have one, sometimes the relationship with an outside mentor might be more sincere as the mentee does not feel dependent on the mentor, especially when it comes to tenure.”

“Yes, I do think it is useful to have a mentor in both the department and outside. Mentors outside the department may have different views on things.”

“Absolutely, YES. This is a very nice opportunity to be mentored by someone not directly involved in your department, it allows for my freedom to discuss issues with someone not inverted in your department. I also think it allows you to speak more candidly than you would to a senior member of your department.”

Isolation in STEM: Women Faculty

Preliminary data analysis

Isolation is one of the most significant issues or challenges facing women scientists as they plan their careers. In addition to the literature, the findings of our climate survey and conversations with women STEM faculty during grant activities influenced our decision to conduct further qualitative research, i.e., semi-structured interviews on this important issue.

Research Questions

1. What are the factors that contribute to the feelings of isolation reported by women STEM faculty?
2. How do women STEM faculty overcome their feelings of isolation and successfully advance their careers?

Sample & Methodology

We drew our sample from women STEM faculty employed at AAFWCE institutions. We have interviewed 15 women, and intend to interview 15 more. See Table 1.

AAFWCE designed the semi-structured interview protocols. Sociocultural anthropologist Dr. Smith conducted and recorded the interviews with participants. Ms. Martinez, AAFWCE graduate assistant, coded and analyzed the interview transcripts for thematic analysis by entering the data in to ATLAS.ti 6.

Themes Identified (see Table 2)

1. Lack of Mentoring
2. Negative or limited experience with networking and collaboration
3. Gender bias in the work environment

Themes	N (%)
Mentoring	
Informal	12 (80)
No mentor	3 (20)
Formal	0 (0)
Networking/Collaboration	
Positive/Active	3 (20)
Negative/Limited	12 (80)
Gender Bias	
Yes	5 (33)
No	10 (67)

Table 2. Themes Identified from Semi-Structured Interviews with Women STEM Faculty

Variables	N (%)
Tenure status	
Tenured	7 (47)
Tenure-track	3 (20)
Non-tenure track	5 (33)
Ethnicity	
White American	5 (33)
Asian/Pacific American	4 (26)
Latino/Hispanic American	3 (20)
Black/African American	2 (14)
Other	1 (7)
Marital status	
Married/Living with someone	12 (80)
Single/Never married	2 (14)
Divorced/Separated	1 (7)

Table 1. Characteristics of Women STEM Faculty

Lack of Mentoring:

Not a single the participant reported having an assigned mentor. Rather, most reported a variety of informal mentoring relationships with senior faculty and colleagues, both inside and outside of their departments and/or universities. One such faculty member gave the following reasons for taking the initiative to find her own mentor:

“...having a mentor is essential in our career because there’s so many times that you need experience and we just don’t know... can I make a decision just based on the information that I have? and the answer is no, I need the history, you know, I need someone who has been there to tell me, you know, this is the best way to do it, this is the wrong way to do it... this is what you know is going to happen, if you do this...”

Three women reported having neither formal nor informal mentors. The following quote conveys the difficulties they have faced in the absence of guidance:

“...I was put on a lot of service committees in the beginning, I did not know how to say no... I never knew that I could say no. There was nobody... from the senior faculty who could help me out and step to my chair and say like, look, this is a junior faculty, she needs to do research, she needs to do some teaching, but nobody stepped up for me, so you were all by yourself...”

Negative or limited experience with networking and collaboration

Twelve out of 15 women reported either limited or negative experiences in networking and collaboration. The interview data reveal that such activities are more likely to occur within departments when faculty members have similar areas of research, while departments with faculty diverse in research areas, ethnicity and age produce climates more difficult for collaboration. Eleven women reported active and positive networking and collaboration with faculty *outside* of their department and/or university. Although some reported actively pursuing such activities at their institutions, many cited national and international conferences as the origins of collaborative relationships.

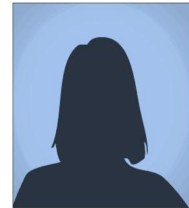
Gender bias in the work environment

Five of the 15 women experienced, witnessed or were personally affected by gender bias in their departments. The following quotes reflect the challenges they face:



“In meetings, men interrupt me or if I suggest something and then everybody ignores it and then the same thing is suggested by a man to great acclaim, that should not happen.”

“The male faculty is better paid. It's unacceptable that you have female faculty being paid as the lowest. I approached the chair and I told him that I'm paid at the lowest level, this is not a good example having women paying the lowest...”



Participants who reported gender bias suggested that it was pervasive and that they were uncertain about how to address these incidents when they occurred.

Discussion

The strategies that women reported using to break their isolation include:

- Establishing informal mentoring relationships with senior colleagues
- Collaborating with colleagues in other departments and/or colleagues they met at professional conferences



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Institutions need to address factors that contribute to the isolation of STEM women faculty by:

- Implementing formal mentoring programs (when they do not exist)
- Supporting collaboration/networking opportunities

The most difficult factor to address is gender bias, which requires structural change, i.e., institutional transformation, e.g., implicit bias training for chairs and other leaders. Our recommendations to address STEM women's isolation include:

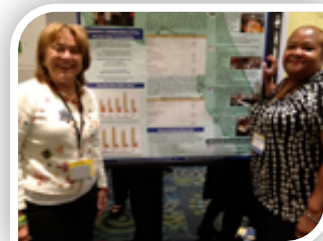
- Create and support development of women scientists' and engineers' positive collective identity
- Make connections between individual's personal experiences and policies and practices in the institution
- Support change-focused alliances of women and men by creating meaningful avenues for concrete action

NSF Joint Annual Meeting

Washington D.C., June 12-15, 2012

The AAFACWE team collaborated to make the following contributions to the NSF JAM:

- Dr. Gilmer presented the AAFACWE collaboration in the session, 'Building Networks and Communities.'
- Drs. Smith, Gilmer, and Donnelly made the presentation 'Isolation and Women STEM faculty.'
- Drs. Smith, Gilmer, Borman, and Donnelly presented a poster focusing on AAFACWE's mentoring activities and the preliminary findings of interviews conducted with STEM women faculty on isolation and career development.



Drs. Borman and Smith at the JAM poster session



Drs. Gilmer and Borman at the JAM poster session

'Triple A Women' & a Productive Writing Workshop

A trip to the University of Nebraska proves helpful in writing the AAFACWE book

Penny J. Gilmer, Ph.D., D. Sc.Ed., Professor Emerita, AAFACWE-PI, FSU



Big Ten STEM Writing workshop participants.
Dr. Gilmer is in the back row, second from the right in the black hat.

I am the senior editor for our book, *Alliances for Advancing Academic Women: Guidelines for Collaboration in Chemistry, Engineering, and Beyond*, to be submitted by June 2013 to Sense Publishers. The name of the book is the 'Triple A Women'. The book has four sections: Getting Started, Getting Going, Implementing Activities, and Wrapping It Up. Eleven chapters will be sent to external reviewers. Our goal is to tell our story in such a way that the book is useful to other groups applying for and getting ADVANCE grants or for other activities that involve STEM collaborations, both on a particular campus and among campuses.

My goal for attending the Big 10 STEM writing workshop was to prepare for the upcoming book that our team from the NSF ADVANCE-PAID grant is writing on collaborating to advance the status of academic STEM women. The workshop was a wonderful opportunity to meet with others interested in writing on STEM projects. The workshop offered the advice of an editor, Carolyn Johnsen, who spoke to our group about quality writing, and then met with some of us who had submitted writing in advance for her critique.

Faculty Data

2010-2011 and 2011-2012 instructional faculty comparison

Tenured Chemistry Faculty

Consistent with previous years, data collected from the AAFACWE institutions this year revealed that percentages of tenured female chemistry faculty remained lower than those of tenured male chemistry faculty by 20.0 to 62.5%. From year two to year three, tenured female faculty at FIU remained at approximately 3%, while at USF and FSU they remained at approximately 6 and 11% respectively. UF saw an increase from 8 percent to 12.8%. FAMU, notably, saw a sharp increase in tenured female faculty, from 7 to 20%. In all, women continued to be underrepresented at these institutions at all faculty levels. This year, the greatest disparities among chemistry faculty were at FIU (65.6% tenured men, 3.1% tenured women), FSU (13.9% tenure track men, 0.0% tenure track women), and UF (21.8% non-tenure track men, 6.4% non-tenure track women).

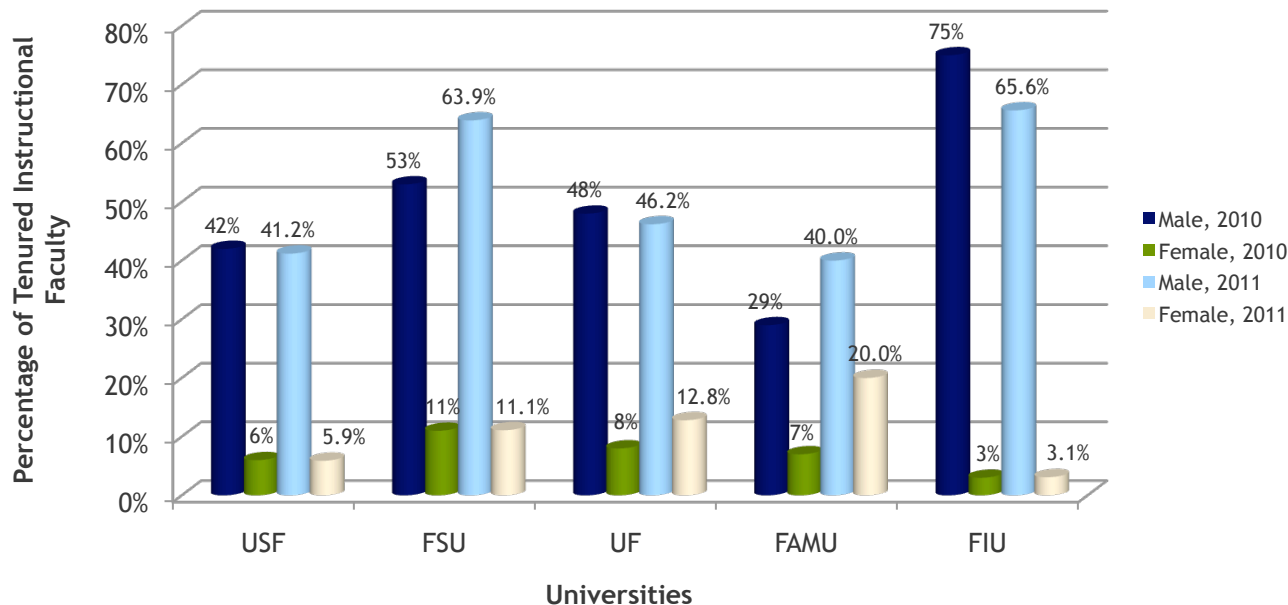


Figure 1. Tenured Chemistry Faculty by University and Gender, 2010 vs. 2011

*The percentage of tenured instructional faculty is taken out of the total number of instructional faculty.

Tenured Engineering Faculty

Data collected from the colleges of engineering at all four institutions also revealed disproportionately low numbers for female faculty versus male faculty (See Figure 2). The greatest disparity was found at the tenured level. Of the total faculty in these colleges, percentages of tenured male faculty ranged from 47.5 to 60.3%, while the percentages of tenured female faculty ranged from only 4.8 to 8.1%.

From year two to year three, tenured male faculty decreased at three of the four AAFAWCE institutions: at FAMU/FSU by 4.5%, FIU by 0.5%, and UF by 2.7%. Only at USF did the percentage of tenured male faculty increase (by 11.8%). Percentages of tenured female faculty in engineering remained the same from year two to year three at FIU and UF (-5% of the total faculty), decreased at FAMU/FSU (by 0.8%), and doubled at USF (from 4.0% to 8.1%).

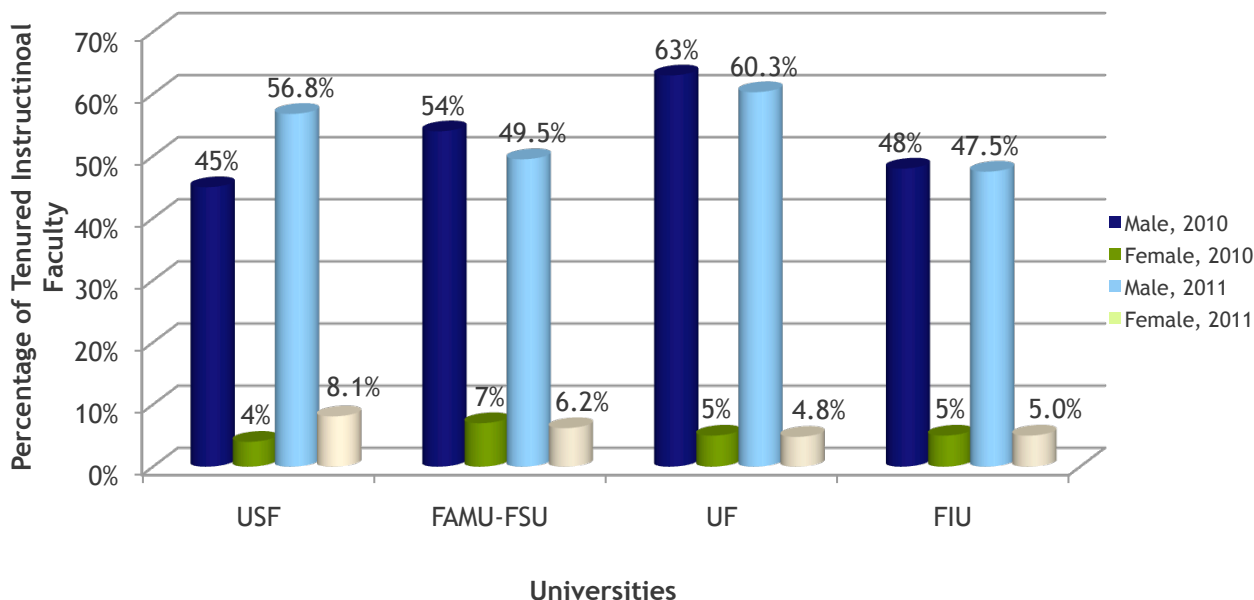


Figure 2. Tenured Engineering Faculty by University and Gender, 2010 vs. 2011

*The percentage of tenured instructional faculty is taken out of the total number of instructional faculty.

What to Expect at USF

AAFAWCE had three goals for its NSF ADVANCE-PAID grant: the recruitment, the retention, and the advancement of academic women in chemistry and engineering. In line with these objectives, USF focused primarily on recruitment during the first two years, and in the third year of the grant laid the groundwork for mentoring programs on campus. This year, USF will continue its efforts to establish mentorship networks for women in STEM and furthermore focus on the themes of leadership and advancement. Here are some events to look forward to in the coming months:



- Academic Women Leadership Discussion Panel

This exciting event will feature women faculty in leadership positions on October 10th, in MSC2708, from 10am to 1pm. Panelists will discuss their experiences as they pursued leadership positions and give helpful advice to junior colleagues interested in advancing into academic leadership positions. Panelists will include Garnett Stokes, Provost, FSU, Karen Holbrook, Sr. Vice President for Global Affairs & International Research, USF, Jacqueline Dixon, Dean, College of Marine Science, USF, and Karen Liller, Dean of the Graduate School & Associate Vice President of Research and Innovation, USF. The event will begin with a 60 minute discussion led by the panelists, followed by a 30 minute Q&A session. After the discussion panel, all participants are invited to enjoy lunch and network with one another.

- ADVANCE PAID Networking Event

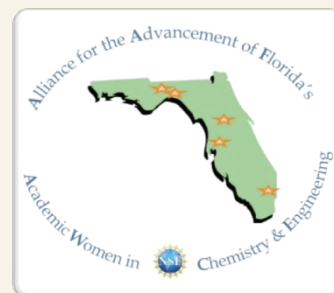
Women STEM faculty, mentors, and administrators are welcome! At this event, we will present our accomplishments with ADVANCE PAID and discuss our plans to develop a proposal for a NSF Institutional Transformation grant.

If you are interested in participating in this year's activities, please contact us! (see below)

Interested in becoming a mentor/protégé? Or, want information on faculty recruitment?

Here is the contact information:

USF:	Dr. Kathryn Borman	borman@usf.edu
USF:	Dr. Chrystal Smith	casmith5@usf.edu
FSU:	Dr. Penny J. Gilmer	gilmer@chem.fsu.edu
UF:	Dr. Anne Donnelly	adonn@ufl.edu
FAMU:	Dr. Simone Peterson Hruda	simone.hruda@fam.u.edu
FIU:	Dr. Berrin Tansel	tanselb@fiu.edu



How You Can Get Involved with AAFAWCE!

AAFAWCE is looking for:

- Senior faculty (men and women) to become mentors
- Junior STEM women faculty protégés
- Administrators and faculty to participate in recruitment practices activities

AAFAWCE Newsletter Contact:

To post opportunities in the newsletter or if you have other questions, please contact Amanda McManaway at ajm10j@my.fsu.edu