



NSF ADVANCE: Institutional Transformation  
Texas A&M University

Year 2 Annual Report  
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## SUMMARY

As Year 2 of the TAMU ADVANCE Program has progressed, overall participation has broadened and added reach has been accomplished. Target Departments that had not yet engaged the program are now getting involved and new faculty have begun to connect. Additionally, synergies across activities and with other units and organizations within the university have emerged. Key accomplishments for the ADVANCE Center for Women Faculty from October 1 to April 30 include the completion of focus group data processing for Faculty-Staff Interaction, event planning for the Speaker Series, the completion of the first Roadmap Workshop, the launch of a new Success Circle – a grant writing club – and the formation of a **partnership with the TAMU Women’s Faculty Network (WFN)**. (This was accomplished through the joint planning of a luncheon for women faculty that featured Q&A with the President, Provost, Dean of Faculties, and Vice President for Diversity as well as the academic journeys of three women faculty – a Distinguished Professor of Chemistry, a STEM Department Head, and a newly appointed Associate Dean of Faculties who is also an ADVANCE Administrative Fellow.) Additional efforts included planning for two May visits: one with our external evaluator, Sandra Laursen (report forthcoming), and one with **the University of Michigan’s STRIDE Team** (see Award and Search Committee Training for details). Also, the Center prepared faculty data as requested by University of **Oklahoma’s** Dr. Donna Nelson for an update of her analyses of minorities in science and engineering disciplines at research universities.

In the first half of Year 2, the Social Science Studies and Evaluation Teams continued to meet regularly and make progress on the research and evaluation plans for each activity. Significant advances for the Social Science Studies team included the further refinement of a coding scheme as well as coding for spring and fall 2011 course evaluations for the Student Diversity Training activity, the completion of the Staff Survey for the Faculty-Staff Interaction activity, and the introduction of the longitudinal survey study to examine early career **academics’ success** for the Roadmap Workshop. The Evaluation team further refined their plan for program evaluation (see the Evaluation section), completed a preliminary analysis of retention data, finished the baseline salary analysis and worked with administration to raise awareness about possible salary inequities, continued work on cleaning and analyzing space allocation data, made progress on data collection for start-up packages, and conducted a formative analysis of the Roadmap Workshop (see Roadmap Workshop).

## ENGAGING THE UNIVERSITY COMMUNITY

Collaboration with additional campus stakeholders has been a Center focus in Year 2. The Program Director continued to attend monthly campus Work-Life Committee meetings to discuss workplace issues and monthly meetings with college diversity leaders to discuss cross-college synergies and strategies. Engaging the diversity leaders led to a joint effort with ADVANCE and the College of Liberal Arts to bring members of the University of

Michigan STRIDE Team to campus. Preliminary discussions regarding collaboration are underway with women-centered groups across campus such as the **Women's Resource Center and Women's Studies Program**. As mentioned above, a new collaboration was established when the ADVANCE Center collaborated with the WFN on a luncheon for women faculty. The Program Director also initiated efforts to engage attendees of quarterly Executive Advisory & Development Councils in the STEM colleges for development purposes. Further, the ADVANCE Team met with External Advisory Board member Carol Jordan to discuss development strategies. Ms. Jordan and the Program Director then met with STEM deans and development officers to share plans and garner support. The Center also continued efforts to partner with other campus stakeholders on augmenting child care services on campus by hosting a joint meeting with Bright Horizons and the Dean of Liberal Arts who is championing this effort. Finally, while participation has broadened in this second year, the Planning Committee is beginning to identify and engage additional advocates in each of the 39 Target Departments to further extend our reach.

## ENGAGING THE ADVANCE COMMUNITY

Efforts to engage the ADVANCE community in Year 2 have included continued participation in monthly AIM meetings and various communications with AIM members about various ADVANCE issues (e.g. a debriefing on the Roadmap Workshop with Rice University). Not only did the TAMU ADVANCE Center participate in questionnaires sent by the AIM group (e.g. a survey regarding women faculty of color), the Center sent out a questionnaire to the group to gather information about how climate surveys are conducted at other institutions. (This was done to inform the process for the next TAMU Climate Survey.) The data from the questionnaire are available to the AIM group.

Other efforts to engage the ADVANCE community in Year 2 included a meeting with the PI, Program Director, and Dr. Joan Bennett, Rutgers University ADVANCE PI, when she was on campus as part of the ADVANCE Speaker Series. The ADVANCE Center also planned for a visit from a STRIDE Team from the University of Michigan. Additionally, planning for attendance at the 2012 NSF Joint Annual Meeting (an abstract has been submitted for a poster presentation) **as well as WEPAN's Ohio conference** (which focuses on "Results and New Ideas from the ADVANCE Community") have been underway.

## UPCOMING EVENTS

- On May 8, the ADVANCE Center will co-host a team from the University of Michigan STRIDE program with the College of Liberal Arts.
- Sandra Laursen, the External Evaluator for the TAMU ADVANCE Program, will make her annual visit to campus on May 9.
- Departmental mini-grants will be announced on May 15.

- The Program Director and Activity Leader for the Faculty-Staff Interaction committee will present focus group data to the university's Diversity Operations Committee on May 24.
- Initial contact of nominated colleagues of Roadmap Workshop survey participants will begin in June.
- The second cohort of ADVANCE Scholars will be notified of their acceptance by June 1.
- The Principal Investigator will attend the NSF's 2012 Joint Annual Meeting (JAM) June 12-15.
- The Program Director will attend WEPAN's 23rd Annual Conference June 25-27. One of the conference themes is "Results and New Ideas from the ADVANCE Community."
- Year-end interviews with the first cohort of ADVANCE Administrative Fellows will take place in June. The first round of interviews for the second cohort will take place in June and July; they begin their assignments July 1.
- Funding for the next round of departmental mini-grants begins July 1.
- The *Advancing STEM through the Participation of Women Faculty of Color* conference will be held October 11-12. A study including the ADVANCE Scholars, their internal advocates, and their external mentors is tentatively planned for October.
- The next TAMU Climate Survey is tentatively scheduled for fall, 2012.

## PROGRAM ACTIVITIES

**Overview:** There are a total of 12 ADVANCE activities that are designed to increase gender equity by transforming Texas A&M University for women STEM faculty. Each activity is aligned with one or more of the five Psychologically Healthy Workplace (PHW) practices – the underlying, evidence-based framework for this initiative. The activities are organized into 3 broad categories: Climate Change, Success Enhancement and Recruitment and Retention. Each category has two Co-Chairs that oversee the related activities, an Activity Leader, and a committee made up of individuals from various units throughout the university. Each of the 12 activities is being evaluated separately and collectively as a part of an overarching analysis of institutional transformation. Social science research studies are being conducted in concert with 6 of the activities.

## CLIMATE CHANGE

Co-Chairs - Christine Stanley and Mary Jo Richardson

**Workplace climate is a major factor affecting women STEM faculty's success and efficacy at Texas A&M.** In order to address this, the ADVANCE Center for Women Faculty is engaged

in 5 Climate Change Activities which are designed to improve the work environment by reducing bias. Christine Stanley, Vice President and Associate Provost for Diversity, and Mary Jo Richardson, Regents Professor, Department of Oceanography, Co-Chair this effort.

## LEAD Program

Activity Leader - Simon Sheather

Activity Summary: The ADVANCE Center for Women Faculty is collaborating with the Dean of Faculties and the Office of the Vice President and Associate Provost for Diversity to enhance existing diversity training for current and newly appointed Department Heads. The goal of the LEAD Program is to expand training related to implicit bias and provide further support to help Department Heads improve departmental climate for all faculty and meet diversity goals related to women STEM faculty. To that end, the committee is establishing a leadership program for Department Heads that will provide workshops each semester (and possibly during the summer sessions) that focus on issues related to department leadership; training related to implicit bias will be woven into each workshop.

Activity Update: As a continuation to the November LEAD workshop, "**Conflict Management for Department Heads,**" a one and one-half day mediation training was scheduled for March 5-6, 2012. Due to small registration numbers, the facilitators decided to change the session to a 3-hour workshop. **Six department heads from ADVANCE's 39 Target Departments** attended. **Areas of Difficulty/Resistance** Due to the workload on other activities – particularly the Roadmap Workshop and Faculty-Staff Interaction activities – **and rigorous schedules for department heads, this committee's work has slowed.** However, they continue to work on the next LEAD workshop: Strategies for Faculty Retention. Vignettes continue to be developed, and scheduling the event is underway. **Best Idea Yet** The ADVANCE Planning Committee is asking additional department heads to be part of this committee so as to redistribute workload and invigorate group dynamics. The summer months should also allow for added time to focus on this activity.

## Faculty-Staff Interaction

Activity Leader - Merna Jacobsen

Activity Summary: A positive working relationship between faculty and staff is critical to the success of the University. The ADVANCE Center for Women Faculty is working to increase faculty and staff awareness of intentional or unintentional bias toward female faculty by expanding existing training related to gender equity and diversity. The first phase of this activity includes faculty and staff focus groups conducted to inform program design; however, the data will also be used as baseline information and focus groups will be conducted in the future for comparison purposes.

Activity Update: Coding for the four focus groups that were conducted last fall is complete. Data were analyzed and a summary report was prepared and presented to the committee. Findings were categorized by context (e.g. university environment, resources, no formal recourse for staff against difficult faculty, etc.) themes (understanding roles and demands, faculty peer relationships, rankism etc.), gender (**it's not always gender, female faculty don't want to be thought of as staff**, male faculty enforce traditional gender roles etc.), solutions (utilize department heads, empathy building exercises etc.) and advice (e.g. **focus on solutions not personalities, augment new faculty training, don't take a punitive approach**). A summary of the focus group findings are located in Appendix A. The committee plans to use the information to design a program over the summer months for implementation in the fall. The Program Director and Activity Leader plan to present the **data to the university's Diversity Operations Committee** in May and have submitted an abstract for a poster presentation at the June, 2012 NSF Joint Annual Meeting.

Social Science Study Summary: This activity is the focus of one of the six ADVANCE social science research studies. **The working title for this effort is "Reducing Staff & Student Implicit Biases: Campus Climate Perceptions before and after Diversity Workshops and Training."** ADVANCE Co-Investigator Kathi Miner is leading this analysis of longitudinal **Campus Climate Survey data that assesses women STEM faculty's perceptions of personal** and vicarious experiences of disrespect from staff and undergraduate students (see Student Diversity Workshops below) before and after diversity training. The next Campus Climate Survey is tentatively scheduled for fall 2012. A first draft of the survey is complete.

Social Science Study Update: In an effort to get staff buy-in for the need for staff → faculty incivility training, the Social Science Studies Team developed and administered a faculty → staff incivility survey (see Appendix B for the final survey). Institutional Review Board approval was received on 10/20/11 and data collection was completed on 2/24/12. After the initial recruitment invitation, potential participants received three reminders; two weeks after the last reminder, the survey was closed. Two-hundred-twenty-three staff (79% female, 86% White) from ADVANCE Target Departments completed the survey for a 29% response rate. We are preparing the data file for analysis (e.g., creating scales). The data generated from this survey will supplement the analyses mentioned above.

## **Student Diversity Workshops**

Activity Leader - CJ Woods

Activity Summary: In order to improve the workplace climate for women STEM faculty, the ADVANCE Center for Women Faculty is engaged in an effort to teach students that respecting all faculty is part of the culture of Texas A&M. The Center collaborated with members of the TAMU Performance Studies Department to develop interactive theater experiences that address issues of implicit bias, prejudices, and stereotypes of women and minorities.

Activity Update: During the spring, three female STEM faculty held the “scripted performances” in their classrooms. Their feedback was largely positive in that students were engaged in the performances. **Areas of Difficulty/Resistance** We previously reported that additional strategizing had resulted in a proposed freshman seminar for the fall: “Theater for Social Change.” The hope was that a consistent stream of students would be made available to perform the scenarios. However, after initially agreeing to the plan, the Performance Studies department was not able to follow through. The committee is currently discussing other options which may include TAMU’s Fish Camp (freshman 4-day orientation program).

Social Science Study Summary: The Student Diversity Workshops are being conducted in concert with two ADVANCE social science research studies. The **first** study, currently titled “Reducing Student Implicit Biases: Analysis of Course Evaluations before and after Student Diversity Workshops,” is led by Co-Principal Investigator Stephanie Payne. This study is a **content analysis of students’ teaching evaluations pre-** and post-student diversity workshops/performances and will examine whether or not women STEM faculty receive less disrespectful comments on their teaching evaluations after the student diversity performances. The **second** study, “Reducing Staff & Student Implicit Biases: Campus Climate Perceptions before and after Diversity Workshops and Training” is led by ADVANCE Co-Investigator Kathi Miner. This study is an analysis of longitudinal Campus Climate Survey data and will assess women STEM faculty’s perceptions of personal and vicarious experiences of disrespect from staff (see Faculty-Staff Interaction) and undergraduate students before and after diversity training.

Social Science Study Update: For the **first** study, the Social Science Research Team is content coding qualitative comments in course evaluations. An initial summary of analyses conducted on coded comments from the spring 2011 semester for biology and engineering professors was submitted to the Academy of Management 2012 conference; however, it was not accepted for presentation. Peer reviewers provided useful feedback that will facilitate a revision of the paper. The team plans to submit the revised paper to the 2013 Society of Industrial and Organizational Psychology conference (submission deadline September 2012). To date, the majority of the fall 2011 online course evaluations for STEM departments have been coded. This summer we will code non-STEM departments for comparison purposes using the latest coding scheme (see Appendix C). Additional voluntary undergraduate research assistants have been recruited to help with coding and the other social science studies this summer and fall.

For the **second** study, faculty responses to questions concerning interactions with students will be analyzed and compared to the 2009 climate survey data. The next Campus Climate Survey is tentatively scheduled for fall of 2012. A first draft of the climate survey has been completed and will be submitted to the NSF once a final version is available (likely September).

## Merit Pool Incentives

Activity Leader - Christine Stanley

Activity Summary: Christine Stanley, the Vice President and Associate Provost for Diversity (VPAPD) and ADVANCE Co-Investigator, and her Council on Climate and Diversity (CCD) annually assess the progress made by each university unit (academic colleges as well as non-academic units) toward reaching diversity goals. The ADVANCE Center for Women **Faculty is working with Dr. Stanley's office to leverage this new institutional practice to further the goals of the ADVANCE program (e.g. participant tracking for Departmental Mini-Grants serves both ADVANCE and university diversity reporting requirements).**

Activity Update: ADVANCE Co-Investigators Mindy Bergman and Kathi Miner continue to consult with various units through the Diversity Operations Committee (DOC) to assist them in meeting the assessment plan goals for their units. (The DOC is the operational committee formed under the 2009 TAMU Campus Diversity Plan to assist with ongoing planning, implementation, assessment, and evaluation of University and unit progress with respect to accomplishing goals related to accountability, climate, and equity.)

## Departmental Mini Grants

Activity Leader - Al Boggess

Activity Summary: The aim of this activity is to support departments in their diversity efforts and to provide an avenue for strategies that promote the success of women STEM faculty at Texas A&M. Mini-grants for innovative projects are being awarded annually to individual departments based on how well the proposed projects support the goals of the ADVANCE program.

Activity Update: **Broader reach to more and additional departments was seen in this year's** proposals for departmental mini-grants. Fourteen proposals were received for the 2012-13 academic year (see Appendix D). Seven were chosen for funding totaling \$26,900 plus an additional \$5,500 in departmental matching. The Committee favored proposals that addressed workplace climate issues over those that asked for travel funds for female faculty members or targeted funding for students. **Area of Difficulty/Resistance** The Activity Leader for this effort, Al Boggess, is leaving the university this summer. The Director and Activity Co-Chair, Mary Jo Richardson, are in the process of identifying someone to replace him.

## SUCCESS ENHANCEMENT

Co-Chairs - Antonio Cepeda-Benito and Dorothy Shippen

The Success Enhancement component of ADVANCE activities is designed to foster the professional development of women STEM faculty. There are 3 Success Enhancement Activities that have been established to foster the professional development of women STEM faculty. Antonio Cepeda-Benito, Dean of Faculties and Associate Provost, and Dorothy Shippen, Department of Biochemistry & Biophysics, Co-Chair this effort.

## ADVANCE Scholar Program

Activity Leaders - Christine Stanley and Becky Petitt

Activity Summary: The ADVANCE Scholar Program intends to increase likelihood of success of underrepresented women STEM faculty members, particularly women of color, by providing as mentors eminent scholars in their fields. The ADVANCE Center for Women Faculty is also establishing a national conference for underrepresented women in STEM, the first of which is scheduled for October 11-12, 2012.

Activity Update: All 16 Scholars have now been paired with both an Internal Advocate and a Mentor/Eminent Scholar. Five Scholars have met face-to-face with their Mentors and we have assisted three additional Scholars in arranging travel to connect with their Mentors within the next three months. To recruit our second cohort, we sent letters of invitation to the remaining 14 women faculty of color in our targeted departments, and to two women faculty of color residing in non-targeted departments (where funding for participation is provided by that particular college). We again held informational meetings to invite interested faculty to learn more about the program and the benefits of participation. Five women attended the informational meetings, three of whom submitted applications: one from a targeted department, and two from non-targeted departments. New Scholars will be notified of their acceptance no later than June 1, 2012.

After learning more about the program, a woman of color who is a full professor in a Target Department decided she would prefer to participate by becoming a member of our committee. So as we said goodbye to one retiring committee member, we welcomed another.

Planning for the October 11-12, 2012 conference continues. The conference venue is our newly renovated Memorial Student Center. The conference theme is *Advancing STEM through the Participation of Women Faculty of Color*. Though we began reaching out to potential keynote speakers several months ago, we have yet to confirm a speaker. Both Dr. Evelyn M. Hammonds, Dean of Harvard College at Harvard University, and Purdue University President Frances Córdova indicated that they were honored but unable to participate due to previous engagements. For varying reasons, they each took a while to inform us that they would be unavailable. We hope to confirm a speaker within the next month. We are delighted that a number of the Mentors/Eminent Scholars have indicated that they plan to attend the conference.

We have met resistance from a few White women faculty in the College of Engineering who are challenging the necessity of a program designed to meet the needs of women faculty of color. In response to their concerns, the activity leaders met with the PI, Program Director, and an Associate Dean in the College of Engineering to devise a plan that would meet their needs while preserving the intention/integrity of the Scholar Program.

Social Science Study Summary: A study including the ADVANCE Scholars, their internal advocates, and external mentors is tentatively planned for October 2012. A study design examining triads is consistent with the research literature that mentoring is not limited to dyadic relationships. Recognizing the ADVANCE Scholars activity is targeted at a vulnerable population, we are carefully pursuing the best way to conduct this study without overburdening the participants. Dedicated time for mentees and mentors to complete surveys at the above mentioned conference is likely to impose the least inconvenience and provide the best response rate. An IRB proposal is being prepared for submission this summer. **This study will overlap extensively with the Women's Faculty Network mentoring program evaluation study that was conducted in April-May of 2012.**

### **Administrative Fellow Program**

Activity Leader - José Luis Bermúdez

Activity Summary: This activity provides opportunities for women STEM faculty at the associate or full professor level to serve in developmental assignments in the offices of the Provost, Deans of targeted colleges, Vice President for Research, VP and Associate Provost for Diversity, and the Dean of Faculties. Administrators are selected based on a proposed project, jointly developed by the faculty member with the college or administrative office, and supported jointly by the ADVANCE project and the host office.

Activity Update: The first cohort of Administrative Fellows met with the activity committee to debrief on their experiences. Each Fellow reported a positive experience and also made suggestions for improving the program, including an initial meeting with the committee at the beginning of the program and a speaker to provide an overview of university structure. In regards to the latter, ADVANCE is working with the Dean of Faculties to include Administrative Fellows in the annual New Administrators Training that is conducted each fall by that office. Additional training for the Administrative Fellows **includes Mediation Training that the Vice President and Associate Provost for Diversity's Office conducts. In May, there will be a "Meet the ADVANCE Administrative Fellows"** event for those eligible faculty interested in the program, and the committee is scheduled to meet with the unit hosts to hear their perspective.

The second cohort of Fellows currently consists of three women **in the Provost's office.** Two are being funded by the ADVANCE Program and one is being funded by the host unit. This commitment represents a positive step in the direction of institutionalization of the program. A fourth Fellow is pending for the Office of the Dean of Faculties and Associate Provost. The approved position applications are located in Appendix E.

The monthly lunch series for the Fellows to meet with campus administrators (President, Provost, VPs, Deans, etc.) continues. In February, the first cohort met with Karen Butler-Purry, Associate Provost of Graduate Studies. The next scheduled mentoring luncheon is for the first and second cohorts to meet one another and have lunch with Provost and Executive Vice President for Academic Affairs Karan Watson and the Vice Provost for

Academic Affairs Pam Matthews. Drs. Watson and Matthews are hosting 3 of the positions in the second cohort.

Social Science Study Summary: In conjunction with this activity, Mindy Bergman is conducting interviews with the Administrative Fellows and their colleagues. The working title of the study is **“Advancing Women into Leadership Positions: Effectiveness of the Administrative Fellows Program.”** The goal of this study is to develop a thick-description case study of women entering academic leadership and administration for the first time via a part-time, short duration position. The research questions focus on the changing beliefs and expectations of Fellows throughout their first year in administration, the fit of the position into the administrative unit (as part-time, short term administrative positions are relatively unusual at Texas A&M), and the effect on a variety of psychologically healthy workplace outcomes (e.g., work-life balance) and career trajectories as a typical faculty member (e.g., research productivity, student mentoring). All Administrative Fellows will be interviewed at three points during their first year of appointment (beginning, middle, end). Additionally, the sponsor of the position (i.e., the unit head) as well as several peers and support staff will be interviewed at the beginning and end of the first year of each **Fellow’s appointment.**

Social Science Study Update: To date, the first two sets of interviews have been completed in the College of Liberal Arts, the Office of the VP for Diversity, and the Dean of Faculties office for both Fellows and their colleagues (17 interviews total). Semi-structured interview protocols were developed for both the Fellows and their colleagues. Questions probe the efficacy and fit of the position into the host unit (all respondents), components of the psychologically healthy workplace model (especially work-life balance; Fellows), and the effects of joining administration on faculty career trajectories such as maintaining an active research program (all respondents). Qualitative analyses will be conducted. Transcription is in progress, so analyses have not yet begun. First round interviews with Fellows and colleagues were conducted in early Fall 2011; mid-term interviews with Fellows were completed by mid-February 2012. Scheduling for the end-of-year interviews for the first Fellows cohort is underway, with the goal of completing interviews in June 2012. Also, scheduling will begin for interviews with the second cohort of Fellows, with the goal of completing interviews in June and July 2012.

We are also planning on expanding our research protocol to include an additional interview with Fellows, as the first group of Fellows all appear to be remaining in their position or in administration in general for at least one more year. This protocol will be submitted to IRB in early fall 2012, following the transcription of the end-of-first-year interviews with the first Fellows cohort.

## Success Circles

Activity Leader - Jane Welsh

Activity Summary: The ADVANCE Center for Women Faculty is organizing mentoring groups centered on personal and professional interests. This activity functions as a complement to existing one-on-one mentoring (**Women's Faculty Network, the Mexican American Latino Faculty Association and the Black Faculty Alliance**) and facilitates the development of social connections among women faculty with the goal of greater satisfaction and well-being. Because this activity has not yielded mentoring groups, the social science study originally planned to align with this activity has been abandoned and the corresponding IRB protocol closed.

Activity Update: The March 3 kickoff event for the Grant Writing Club for women STEM faculty was a success. Fifteen faculty from all five ADVANCE Target Colleges signed up for the group, and eleven were able to make it to the initial 5 hour-hour event. Three facilitators conducted the workshop, two who have **expertise in "power writing" and good writing habits** and one with expertise in NSF grant writing. At the kickoff event, the group decided they wanted to meet weekly. Since then, some combination of 6 to 7 club members meets weekly. The ADVANCE Center has scheduled an NSF CAREER awardee to come and talk to the group as well as return visits from the facilitators. A faculty member who has been on an NSF CAREER Award review panel is tentatively scheduled to meet with the group. In addition to these visitors, faculty use the weekly 1.5 hour meetings to **write, review each other's work, and connect**. Synergy with other ADVANCE activities is evident here in that six ADVANCE Scholars are participating in this group, five of which also attended the Roadmap Workshop (see Roadmap Workshop below). At this point we hope to offer this opportunity in the future, but there are early discussions about such a program being conducted through our Center for Teaching Excellence which is in our Dean of Faculties Office (a co-PI on ADVANCE).

In addition to the Grant Writing Club, ADVANCE organized teams again this year for the Walk Across Texas event. Four teams (n=30) were formed to participate in this 8-week fitness program that is designed to help establish the habit of regular activity. Some teams were aligned with their college or area of study while others were a mix of female faculty and a few spouses.

## RECRUITMENT AND RETENTION

Co-Chairs - Robin Autenreith and Sarah Bednarz

While the number and diversity of women faculty at Texas A&M University has seen recent gains, a great need still exists to attract and keep women of excellence in the STEM fields. To that end, the ADVANCE Center for Women Faculty has established 4 activities focused on Recruitment and Retention of women STEM faculty. Robin Autenreith, Co-PI and Associate Dean of Graduate Studies in the College of Engineering, and Sarah Bednarz, Associate Dean of Geography, are Co-Chairs for this effort.

## Roadmap Workshop

Activity Leader - Ben Wu

Activity Summary: Formerly the Workshop for Early Career Academics, this activity is designed for internal (A&M) and external (non-A&M) post-doctoral researchers and Assistant Professors (in the first two years of their position) in STEM fields. The purpose of these annual workshops is to assist departments in the recruitment and retention of women STEM faculty.

Activity Update: The first Roadmap for a Successful Academic Career workshop took place March 26-28 and was a great success. Forty-six people applied, including the 5 eligible ADVANCE Scholars (all of whom also participate in the Success Circle Grant Writing Club). All 46 women were accepted, and 41 attended (again, including the 5 eligible ADVANCE Scholars). Table 1 describes the attendees. It should be noted that 43 faculty from across campus participated in this event either through planning or presenting at the Workshop (see Appendix F for the final agenda). This is an example of the momentum that the ADVANCE program is gaining in year two as further buy-in is garnered.

Table 1 2011 Roadmap Workshop Demographics	
<b>Institution:</b>	30 TAMU 2 TAMUS 9 External
<b>Rank:</b>	19 Assistant Professors (3 external, 2 system) 22 Postdoctoral Researchers (6 external)
<b>College:</b>	Liberal Arts = 13 Science = 10 Geosciences = 2 Engineering = 8 Agriculture = 8
<b>Race/Ethnicity:</b>	Caucasian = 25 African American/Black = 5 Asian = 5 Hispanic = 4 2 or more = 2

At the end of the Workshop, participants were asked to complete a short survey regarding their satisfaction with the experience. Thirty-eight of the 41 attendees completed the survey, and all agreed or strongly agreed that:

1. The **Workshop** content was useful and relevant
2. The presentation of material was clear and understandable
3. Presenters were well informed on the topics covered
4. Presentations were interesting and enjoyable
5. The Workshop materials were useful, and
6. Overall I was satisfied with the workshop.

**As one respondent indicated** “This workshop demystified the tenure track application process. I am leaving more confident about pursuing this path, and even if things don't work out, I know I will be just fine.”

There were no systematic differences between post-doctoral researchers and Assistant Professors with respect to their responses to the above statements. However, **internal participants were more likely than external participants to strongly agree that “overall, I was satisfied with the workshop.”** Only one of the 10 external respondents strongly agreed with this statement. (The rest agreed, but not strongly). Nearly all (36/38) of the respondents would recommend the Roadmap workshop to a colleague. The one respondent who indicated that she would *not* **recommend the workshop stated** “it is extremely useful for women who are already hired here, but again it’s very specific to TAMU...If you don't work here, it is not as helpful.”

When asked what they found most helpful about the Workshop, many respondents cited the opportunity for networking and the mentoring discussions. When asked what they found least helpful or what they would cut if the Workshop needed to be shorter, many respondents cited the sessions on teaching and negotiations. The Activity Committee will take these responses into consideration when designing the 2013 Workshop.

Social Science Study: **Kathi Miner is conducting a study currently titled “Repairing the Leaky Pipeline: Workshops for Early Career Academics.”** This survey study investigates whether workshop attendees report higher levels of self-efficacy for negotiating and, in turn, higher levels of well-being than post-doctoral non-workshop attendees. The sample consists of post-doctoral researchers and Assistant Professors who participated in the workshop. Attendees were also asked to nominate a comparable friend (e.g., female colleague at a similar rank) to also complete the survey; these non-attendees will serve as a comparison group.

Social Science Study Update: All workshop participants were invited to participate in the online survey (see Appendix G) study at the start of the workshop. Thirty-three participants completed the survey for an 81% response rate. In addition, 12% ( $n = 4$ ) of survey respondents have nominated a colleague to also participate; reminders to nominate a

female colleague are scheduled to be sent out in the coming weeks. The data file from workshop participants is currently being prepared for analysis and nominated colleagues will be contacted and invited to participate by June 1.

### **Award and Search Committee Training**

Activity Leader – César Malavé, Industrial and Systems Engineering

Activity Summary: The Dean of Faculties and the ADVANCE Center for Women faculty are working together to expand existing gender bias training for all members of review committees including search committees, committees making decisions on university and college awards, and committees making decisions on tenure and promotion.

Activity Update: Two faculty members from the University of Michigan STRIDE program are scheduled to visit the ADVANCE Center and College of Liberal Arts on May 8. Three goals will be fulfilled during this visit: 1) STRIDE will present to STEM deans and associate deans to garner further buy-in, 2) STRIDE will present their workshop to the College of Liberal Arts and activity committee members and 2) the STRIDE Team will meet with the activity committee to discuss lessons learned and review the progress to date that TAMU has made in training development. The TAMU training as it stands currently has four basic components:

1. Administration and discussion of a TAMU-developed Implicit Attitudes Test
2. Brief **video of TAMU faculty discussing bias they've** experienced or witnessed in their academic careers
3. Presentation of Research on Implicit Bias
4. Breakout session on Strategies and Solutions

The goal is to design at least two components of different lengths (1 hr and 2 hr) in order to accommodate different audiences.

Social Science Study: One of the six social science studies will be conducted around this activity; the study is currently titled “Improving Selection and Promotion of STEM Women Faculty: Reducing Search and Award Committee Biases.” Mindy Bergman is the lead social science studies team researcher on this study. The basic hypothesis for the social science study is that training will increase knowledge of equal opportunity laws and decrease explicit sex biases substantially as well as decrease implicit sex biases more moderately. The current plan is to use a Solomon 4-group design to compare pre-/post- training attitudes and knowledge regarding implicit sex biases and equal opportunity laws.

Social Science Study Update: Instruments for the social sciences study are in development as the course content becomes clearer. Current plans include using an implicit attitudes test, explicit attitudes measures (including Hostile and Benevolent Sexism, among others), and ratings of stimulus (faux) applicant folders and differences in ratings based on sex.

## ADVANCE Speaker Series

Activity Leaders - Nancy Amato, Jennifer Welch, and Jodie Lutkenhaus

Activity Summary: The ADVANCE Speaker Series has two goals: 1) to bring in one or two senior women scientists and engineers per year who have also been active in gender and diversity issues to speak and 2) to bring in mid-career and senior women scientists and engineers that are nominated by STEM departments for recruiting purposes.

Activity Update: Of the 9 nominations that were received for the fall semester, two speakers were selected. A report on the first speaker, Anita Mahadevan-Jansen, was detailed in Year 2, Interim Report 1. The post-event report for the other speaker, Marilyn Warbuton (a target-of-opportunity speaker), was submitted by the Department to the ADVANCE Center in December. Dr. Warburton was co-hosted by the ADVANCE Speaker Series and the Department of Soil and Crop Sciences on November 8-9, 2011. She met with over 30 female undergraduate and graduate students in Soil and Crop Sciences in five small group settings, had a working lunch with female faculty (five Assistant and Associate Professors or equivalent), and participated in a working lunch with twelve of our plant breeding and genetics faculty. In addition to the small group meetings, Dr. Warburton presented a technical seminar (approximately 30 attendees) and one talk entitled "Outstanding in her field smelling the roses: how women can advance in the agriculture sciences at a sustainable pace;" approximately 20 people were in attendance.

Nine additional nominations were received for the December, 2011 deadline (spring, 2012 speakers). Three speakers were selected from the nominations and one speaker was nominated by the ADVANCE Center who then worked with a department to co-host her:

- Joan Bennett, Plant Biology and Pathology, Rutgers University and ADVANCE PI
  - February 14-15
  - Nominated by the ADVANCE Center and co-hosted by the Department of Biology
  - Visit detailed below
- Laura Greene, Swanlund Professor of Physics, U of I, Urbana/Champaign
  - March 19-20
  - Nominated and co-hosted by the Department of Physics
  - Post-event report pending
- Maria Flytzani-Stephanopoulos, Raytheon Professor of Pollution Prevention, Chemical Engineering, Tufts University
  - April 20<sup>th</sup>
  - Nominated and Co-hosted by the Department of Chemical Engineering
  - Visit detailed below
- Susan Fiske, Eugene Higgins Professor of Psychology, Princeton University
  - Scheduled for fall, 2012
  - Nominated and co-hosted by the Department of Psychology

Dr. Joan Bennett was selected as a first speaker by the ADVANCE Center to set the stage for the series. However, due to scheduling conflicts she was not able to come to campus until February 14-15. The Biology Department co-hosted Dr. Bennett. During her visit, she gave two highly attended seminars, including a technical seminar and a seminar entitled **“Girl geeks: pathways, pitfalls and promises.”** The technical seminar was attended by about 250 people, including faculty, graduate students, undergraduate students, and postdocs from several departments (Biology, Biochemistry, Plant Pathology, Soil and Crop Sciences, Engineering). The gender ratio was approximately 50:50. While she discussed the details of her current research, another main message of her talk is that one can do anything they put their mind to. Her second talk was attended by about 100 people, faculty (28 pre-registered), postdocs, and graduate students from a wide mix of departments across the TAMU campus. This was preceded by a 1-hour reception hosted by ADVANCE. Approximately 40 faculty attended the reception. Dr. Bennett also attended dinners with a mix of male and female faculty from Biology, Plant Pathology, and Chemistry. In addition, she spent about 2 hours with the TAMU ADVANCE PI and Program Director discussing their ADVANCE programs.

Professor Maria Flytzani Stephanopoulos was co-hosted by the ADVANCE Speakers Series and the Department of Chemical Engineering on April 20th. Dr. Flytzani-Stephanopoulos is currently the Robert and Marcy Haber Endowed Professor in Energy Sustainability at Tufts University. She has an outstanding career as a Chemical Engineer, with great international recognition in her area of specialization: Catalysis. During her visit, she had a chance to visit with a number of Chemical Engineering faculty, and she offered two talks. **One of the talks, entitled “Two academics and three kids in the family: learning to change many hats a day!” was attended by 38 people, among them four male faculty, and numerous female post-docs, graduate students and faculty.** The technical talk was entitled **“Designing catalysts for sustainable energy production: if metal atoms do the job, why use nanoparticles?”** was also a great success, with an attendance of about 70 faculty, post-docs, and graduate students from Chemical and other Engineering Departments.

## Faculty Recognition

Activity Leader - Elena Castell-Perez

Activity Summary: This activity is focused on highlighting the success of women STEM faculty. **In collaboration with the Dean of Faculties office, the Women’s Faculty Network, the Women Engineering Faculty Interest Group, the Women Administrators Network, and the Vice President of Research, the ADVANCE Center for Women Faculty is organizing events to recognize and publicize the achievements of women faculty.**

Activity Update: The Faculty Forum on Awards was held on March 2. The event was led by a panel of Deans and Department Heads and moderated by the leader for this activity. All tenured and tenure-track faculty were invited (1800+-), and an event support brochure was developed based on the **WISELI document “Advancing Your Career through Awards**

and Recognitions.” **Area of Difficulty/Resistance** While the discussion was relevant and meaningful to those in attendance, there were only 17 attendees. It is unclear why the turnout was so low. The committee is scheduled to meet again in May to discuss the event and strategize on next steps.

## EVALUATION

The ADVANCE program at TAMU encompasses a series of interrelated interventions designed to change the climate, enhance professional success, and improve the recruitment and retention of female faculty. Untangling the degree to which the various interventions interact with one another would be nearly impossible. Therefore, the Evaluation team is focusing on a more holistic analysis of **Institutional transformation**. This analysis will be embedded in the literature on institutional change, and based on department-level data on faculty climate, faculty recruitment and retention, space allocations, start-up packages, and salaries. In all cases, a difference-in-difference approach will be used to assess whether or not ADVANCE activities can help to explain departmental changes over time. The underlying hypothesis is that departments which have been more engaged with ADVANCE will show greater improvements in climate, retention, recruitment, and resource balance over time.

Recent work by the Evaluation team—Angela Bies, Edwina Dorch, Jeff Froyd and Lori Taylor—has focused on:

- Reviewing the public administration and nonprofit literatures on institutional change
- Identifying and compiling the data needed for the analysis of institutional transformation
- Conducting the baseline analyses of faculty salaries and retention
- Helping the University clean and compile the administrative data on space allocations and start-up packages;
- Securing IRB approval for evaluation activities
- Conducting a formative analysis of the Roadmap Workshop
- Creating a narrative template for the analysis of institutional transformation
- Participating in the committee meetings for each of the ADVANCE program activities.

Table 2 below indicates the ADVANCE activity data that are being collected by the Evaluation team for use in the analysis of institutional transformation.

**Table 2**  
**ADVANCE Activities and the Evaluation Data**  
**for the Analysis of Institutional Transformation**

Activity	Evaluation Data Being Collected
LEAD Program	The ADVANCE Center is compiling a database of which department heads have participated in diversity training, and how many hours of training they have received.
Faculty-Staff Interaction	The ADVANCE Center is compiling a database of the number of faculty and staff from each department who have participated in the Faculty-Staff Interaction Workshops.
Student Diversity Workshops	The evaluators will compare summary statistics from the TAMU student evaluations for treated sections with summary statistics on student evaluations for untreated sections.
Merit Pool Incentives	The Vice President and Associate Provost for Diversity maintains these data. Note: Since the inception of ADVANCE, the Merit Pool Incentive has been dormant due to budgetary constraints. If and when these incentives are reinstated, the investigators will utilize data on whether or not each department receives funding through this program and the amount of funding each department receives. If possible, investigators will also utilize data on the process by which the awards were granted.
Departmental Mini Grants	Data collected from this effort includes all application forms submitted, information on awardee departments, minutes and notes taken from ADVANCE mini-grant committee meetings on process/program design, and the progress reports.
ADVANCE Speaker Series	The ADVANCE Center is compiling a database of the number of faculty from each department who have attended each speech, and the number of speakers proposed by each department, and the demographics of speakers in previous years.
Award and Search Committee Training	The ADVANCE Center is compiling a database on the number of award and search committee members who have participated in diversity training, by department, and how many hours of training they have received.
Faculty Recognition	The ADVANCE Center is compiling a database of all award events and all faculty receiving awards.
Roadmap Workshop	The ADVANCE Center is compiling a database of all departments proposing candidates for the workshop, the demographic characteristics of all women attending the workshops and indicators for whether or not attendees were eventually hired by TAMU or another research institution.

**Table 2 (continued)**  
**ADVANCE Activities and the Evaluation Data**  
**for the Analysis of Institutional Transformation**

Activity	Evaluation Data Being Collected
<b>Administrative Fellow Program</b>	Data collected from this effort include all applications, information on awardees, minutes and notes taken from ADVANCE Administrative Fellow Program committee meetings on process/program design, and progress reports
<b>ADVANCE Scholar Program</b>	The ADVANCE Center is compiling a database on all faculty who participate in the program and track their participation in professional development activities (publications, conference presentations, etcetera).
<b>Success Circles</b>	The ADVANCE Center is compiling a database of the departmental affiliations of all faculty members who participate in the program.

As is always the case with non-experimental research designs, there are other factors outside of our control that offer an alternative explanation for any institutional change. Table 3 below indicates some of the additional data that are being collected by the investigators on this project.

As part of the analysis of institutional transformation, the data from Table 2 will be used to develop measures indicating the extent to which each TAMU department has engaged with the ADVANCE program. Scales will measure the degree of departmental engagement as a function of participation in ADVANCE activities and in ADVANCE design efforts. Similarly, the data from Table 3 will use used to develop measures indicating the extent to which each TAMU department has engaged with other diversity and climate change efforts on campus.

**Table 3**  
**Non-ADVANCE Activities and the Corresponding Evaluation Data**

Non-ADVANCE Climate Activity	Evaluation Data Being Collected
<p><b>The Diversity Plan Grant:</b> This collaborative effort will fund \$10,000 (Five \$2000 grants) for student-run initiatives that align with the TAMU Diversity Plan. The funding will be made available for recognized student organizations to create an initiative, or improve an existing initiative, that specifically supports one or more priorities of the Diversity Plan (Accountability, Climate, and Equity). (<a href="http://diversity.tamu.edu/Documents/DiversityPlan.pdf">http://diversity.tamu.edu/Documents/DiversityPlan.pdf</a>).</p>	<p>The Vice President and Associate Provost for Diversity maintains these data. The investigators will utilize data on whether or not each department receives funding through this program and the amount of funding each department receives. If possible, investigators will also utilize data on the process by which the grants were awarded</p>
<p><b>Graduate Diversity Fellowships:</b> These fellowships were established to attract students to TAMU who have a proven record of success in a diverse environment. Academic departments nominate prospective graduate students, and recipients are selected based on overall <b>merit and the nominating department's</b> statement of support. (<a href="http://ogs.tamu.edu/prospective-students/funding-information/fellowships/faculty-nominated-fellowships/">http://ogs.tamu.edu/prospective-students/funding-information/fellowships/faculty-nominated-fellowships/</a>)</p>	<p>The TAMU Office of Graduate Studies maintains these data and will share it with the investigators. Data collected from this effort will include publically available information on awardees from 2008-2016.</p>
<p><b>Teaching Excellence Award Program:</b> The TAMU System's voluntary, student-selected Teaching Excellence Award Program was created to recognize excellence in classroom teaching. Individuals of all teaching levels will be eligible for awards based on students' responses from the uniform faculty evaluation form in eligible courses. The program was piloted in Fall 2008, expanded to include all 11 A&amp;M System campuses in 2009, and suspended in 2011. (<a href="http://www.tamus.edu/offices/academic/student-recognition-award-for-teaching-excellence/">http://www.tamus.edu/offices/academic/student-recognition-award-for-teaching-excellence/</a>)</p>	<p>The TAMU System Office of the Vice Chancellor for Academic Affairs houses this information. Data collected from this effort will include all publically available information from awardees by department for the period of 2008-<b>until the program's</b> suspension in 2011.</p>

The baseline **retention analysis** is ongoing. The Evaluation team is using regression analysis to examine faculty retention for the fiscal years 2001 to 2011. All tenured or tenure-track faculty with at least a half-time appointment in a STEM department are being included in the analysis. Faculty members in non-STEM departments are being excluded from the baseline analysis of the two colleges that blend STEM and non-STEM departments (the College of Agriculture and Life Sciences and the College of Liberal Arts). Preliminary analysis suggests that there are no gender differentials in turnover, given faculty demographics and departmental affiliations. Subsequent analysis will examine the extent to which differences in departmental climate help to explain the historical pattern of turnover among women faculty.

The baseline **salary analysis** has been completed (report previously submitted). This analysis examines faculty salaries for the fiscal years 2001 to 2011. The baseline analysis examines the salary history for each tenured or tenure-track faculty member using a series of linear mixed models (also referred to as hierarchical linear models, or multilevel models). Because we had no reason to believe that the salary patterns were the same across colleges, the Evaluation team estimated separate salary models for each STEM college in the university. Faculty members in non-STEM departments were excluded from the baseline analysis of the two colleges that blend STEM and non-STEM departments (the College of Agriculture and Life Sciences and the College of Liberal Arts). With the exception of a handful of outliers, all tenured or tenure-track faculty with at least a half-time appointment in a STEM department were included in the analysis. Because of the sensitive nature of the salary analysis, members of the Evaluation team spent a great deal of time visiting with University administrators and other interested parties to ensure that the model was as robust as possible.

The two colleges that blend STEM and non-STEM departments were also the only two ADVANCE colleges at TAMU with a statistically significant difference in monthly salaries for male and female STEM faculty. In the STEM departments of the College of Agriculture and Life Sciences, female assistant professors with average demographics earned 6 percent less than male assistant professors with the same demographic profile. Gender differences in salary among faculty of higher ranks were not statistically significant. In the STEM departments of the College of Liberal Arts, male associate professors earned 8 percent more than female assistant professors, on average. Again, gender differences in salary among full professors were not statistically significant. There is no evidence that salaries are systematically related to gender in the remaining STEM colleges.

The administration is using the ADVANCE salary analysis to raise awareness about possible salary inequities. In December, the Provost and Dean of Faculties asked the Evaluation team members who conducted the salary study to prepare a database identifying faculty whose observed salaries were much higher or much lower than the salaries predicted by the salary model. Those files were forwarded to the College Deans for their information. This spring, the Dean of Faculties began meeting with the Deans about the outlier

individuals, asking the Deans to confirm that the differentials could be explained by productivity or other factors outside the salary model. Evaluation team members have participated in many of those meetings so that they could answer questions about the analysis. Plans to repeat this process (salary analysis, outlier identification, and conversations with College Deans) indicate that this aspect of the ADVANCE project is being institutionalized.

Moving forward, subsequent salary analyses will test for changes in the gender differential during the ADVANCE grant period and whether or not the degree of departmental engagement with ADVANCE and/or the nature of that engagement help to explain the gender differential.

The **space allocation** analysis will rely on newly developed data on space allocations at TAMU. Baseline data were collected by the facilities department in 2012 and are in the process of being cleaned by the ADVANCE evaluation team. These data will be the first to link individual records for TAMU faculty with descriptive characteristics of specific offices and laboratories. The baseline analysis will examine the extent to which there are gender differences in the allocation of office or laboratory spaces, conditional on the appropriate demographic characteristics of faculty. Subsequent analysis will examine changes, if any, in the gender pattern of space allocation.

The analysis of **start-up packages** will rely on data currently under development by the Dean of Faculties office. Departments have been asked to provide such data for each new hire since 2005. The format for such data has been determined and data have been collected from the College of Geosciences and the College of Liberal Arts. We expect to receive data from the remaining Colleges over the next few weeks, and to conduct baseline analyses during the summer.