



Institutional Transformation Grantee Two-Page Summaries

The goal of the National Science Foundation's ADVANCE program is to increase the representation and advancement of women in academic science and engineering careers, thereby contributing to the development of a more diverse science and engineering workforce. Creative and innovative strategies to realize this goal are sought from men and women.

ADVANCE* Institutional Transformation (IT) projects are designed to systemically transform institutional practices and climate at universities and colleges in order to recruit, retain and promote women in science and engineering academic careers. Typical activities include, but are not limited to: reviewing, updating, and clarifying hiring, promotion and tenure policies, developing new policies and programs such as dual-career hiring and mentoring programs, providing faculty development and leadership training, and conducting surveys and collecting data to analyze campus climate.

ADVANCE Institutional Transformation Grantees (Cohorts 1-3):

Nine institutions were awarded grants in 2001 – Cohort 1:

Hunter College, City University of New York (NY)
University of Colorado, Boulder (CO)
Georgia Institute of Technology (GA)
University of Michigan, Ann Arbor (MI)
New Mexico State University (NM)

University of Puerto Rico, Humacao (PR)
University of California, Irvine (CA)
University of Washington (WA)
University of Wisconsin, Madison (WI)

Ten institutions were awarded grants in 2003 – Cohort 2:

Case Western Reserve University (OH)
University of Montana (MT)
Columbia University (NY)
University of Rhode Island (RI)
University of Alabama, Birmingham (AL)

University of Texas, El Paso (TX)
Kansas State University (KS)
Utah State University (UT)
University of Maryland, Baltimore County (MD)
Virginia Polytechnic Institute (VA)

Nine institutions were awarded grants in 2006 – Cohort 3:

Brown University (RI)
California State Polytechnic University, Pomona (CA)
Cornell University (NY)
Iowa State University (IA)
Rensselaer Polytechnic Institute (NY)

University of Arizona (AZ)
University of Illinois at Chicago (IL)
University of North Carolina, Charlotte (NC)
William Marsh Rice University (TX)

The following two-page summaries were prepared in 2007 by ADVANCE IT grantees in Cohorts 1, 2 and 3. Nine additional IT grantees started projects in 2008 (Cohort 4).

*Additional information about the ADVANCE program can be found on the ADVANCE program website, <http://www.nsf.gov/advance>, or on the ADVANCE portal, <http://www.portal.advance.vt.edu>.

Questions about the ADVANCE Program may be directed to advance@nsf.gov.

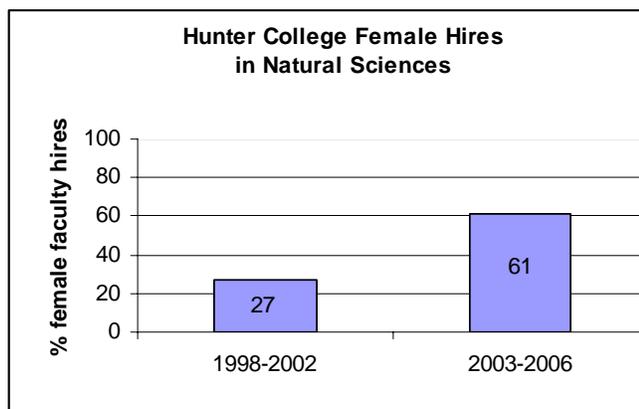


Gender Equity Project

Hunter College of the City University of New York



- Objectives**
1. To increase the professional success, recognition, and leadership of Hunter's women scientists
 2. To promote excellence and equity at Hunter College through institutional transformation
 3. To provide professional development to junior science and engineering faculty across CUNY
- Constituents** **Natural and social science departments** (including Anthropology, Biological Sciences, Chemistry, Computer Science, Economics, Geography, Mathematics & Statistics, Physics, Political Science, Psychology, and Sociology) **at 8 CUNY campuses** (Brooklyn, City, Staten Island, the Graduate Center, Hunter, John Jay, Lehman, and Queens)
- Initiatives**
- Individual initiatives: Support and recognize Hunter's women scientists**
- Sponsorship Program with professional development workshops
 - Web-based video interviews (<http://www.hunter.cuny.edu/genderequity/svideo.html>)
- Departmental initiatives**
- Chair handbook for faculty development
 - Departmental presentations to increase awareness of gender equity issues and solutions
 - Departmental equity surveys (data to be used in allocating faculty lines, space, and resources)
- Hunter college-wide initiatives**
- Offer-letter templates and checklists
 - Collection and reporting of college-wide gender equity benchmark data
 - Science Faculty Survey
- City University of New York (CUNY)-wide initiatives**
- Collection and reporting of CUNY-wide gender equity benchmark data
 - Grant Writing Assistance Program for junior female faculty
 - Professional development workshops for junior faculty
 - Professional development workshops for graduate students and post-doctoral fellows
- Selected resources featured on the GEP website (<http://www.hunter.cuny.edu/genderequity>)**
- Promotional video for the GEP's Sponsorship Program
 - Departmental equity survey and a guide to creating one
 - Tutorials for Change: Gender Schemas and Science Careers (<http://www.hunter.cuny.edu/gendertutorial>)
- Results**
- 38% of Hunter's women scientists have been funded via the Sponsorship Program
 - Sponsorship Program scientists significantly increased their scholarly productivity
 - Attrition of female professors is decreasing: the attrition gap between male and female faculty has decreased from 22 % in 1997-02 to 13 % in 2001-06



Before the GEP began in 2002, women accounted for 27 % of new hires in the natural sciences at Hunter College

From 2003-2006, women accounted for 61 % of new hires

Selected products	<ul style="list-style-type: none"> • Rabinowitz, V. & Valian, V. (2007). Beyond mentoring: A sponsorship program to improve success in academic science. In A. J. Stewart, J.E. Malley, & D. LaVaqu-Manty (Eds.). <i>Transforming science and engineering: Advancing academic women</i> (pp. 96-115. Ann Arbor, MI: University of Michigan Press • Martinez, T., Mazhar, S., Nicols-Grinenko, A., Rajaram, S., Valian, V. (2007). <i>Attending conferences</i>. (http://www.hunter.cuny.edu/genderequity/equityMaterials/attendingConference.pdf) • Valian, V., Barr, G., Berenbaum, S., Griffin, Z., Gerken, L., Rajarm, S. (2007). <i>Grant writing tips</i>. (http://www.hunter.cuny.edu/genderequity/equityMaterials/granttips.pdf) • Nicols-Grinenko, A. (2006). <i>Tenure and promotion FAQs</i>. (http://www.hunter.cuny.edu/genderequity/equityMaterials/Tenure-and-Promotion-FAQs.pdf) • Rutberg, R. (2006). <i>The National Science Foundation's proposal review process</i>. (http://www.hunter.cuny.edu/genderequity/equityMaterials/GEPfundingtalk.ppt) 												
Workshops	<ul style="list-style-type: none"> • Since 2005, the GEP has developed materials (readings, activities, discussion questions) for three new professional development workshops <ul style="list-style-type: none"> - Hallmarks of success - Making the most of attending conferences - Departmental governance: Ensuring a voice for women and minorities • GEP workshops have been extremely highly rated by participants and are now offered every semester to faculty at eight CUNY campuses via an NSF ADVANCE PAID (Partnerships for Adaptation, Implementation, and Dissemination) award 												
Principal Investigator/ GEP Co-Director	Virginia Valian, Distinguished Professor of Psychology and Linguistics Email: gender.equity@hunter.cuny.edu Phone: 212/ 650-3001												
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Co-Principal Investigator	Shirley Raps, Professor and Chair of Biological Sciences												
Program Staff	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Director of Programs and Research:</td> <td>Annemarie Nicols-Grinenko</td> </tr> <tr> <td>Coordinator:</td> <td>Jana Sladkova</td> </tr> <tr> <td>Research Assistants:</td> <td>Sabrica Barnett</td> </tr> <tr> <td></td> <td>Karalyn Shimmyo</td> </tr> <tr> <td></td> <td>Saira Mazhar</td> </tr> <tr> <td>Multimedia Designer:</td> <td>Monica Hopenwasser</td> </tr> </table>	Director of Programs and Research:	Annemarie Nicols-Grinenko	Coordinator:	Jana Sladkova	Research Assistants:	Sabrica Barnett		Karalyn Shimmyo		Saira Mazhar	Multimedia Designer:	Monica Hopenwasser
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Funding	<table border="0" style="width: 100%;"> <tr> <td colspan="2">National Science Foundation</td> </tr> <tr> <td>NSF Program Officer:</td> <td>Jessie DeAro (jdearo@nsf.gov)</td> </tr> <tr> <td>ADVANCE IT total funding:</td> <td>\$3.75 million + \$200,000 supplement – 2002-2008</td> </tr> <tr> <td>ADVANCE PAID funding:</td> <td>\$500,000 – 2007-2010</td> </tr> </table>	National Science Foundation		NSF Program Officer:	Jessie DeAro (jdearo@nsf.gov)	ADVANCE IT total funding:	\$3.75 million + \$200,000 supplement – 2002-2008	ADVANCE PAID funding:	\$500,000 – 2007-2010				
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ADVANCE institutions will serve as exemplars for other colleges and universities aiming to increase the participation and status of women in science and engineering faculty



NSF ADVANCE at the University of Colorado, Boulder

Goal	The LEAP (Leadership Education for Advancement and Promotion) program at the University of Colorado, Boulder funded through the NSF ADVANCE initiative is a five-year project to promote the institutional transformation needed to increase the representation of women in leadership positions in the science and engineering disciplines.
Constituents	LEAP works with faculty of all genders and all disciplines. It is focused on supporting the development of faculty into effective leaders at all levels of the institution. Consistent with our model of institutional change, LEAP has worked at the faculty, department and administrative levels as well as working in policy development.
Project Award Size And Length	LEAP is a 3.5M NSF grant, with the University of Colorado-Boulder funding an additional \$900,000. The award was designed to be spent over a five year period, from 2001-2006. We are currently in a no-cost extension year.
Initiatives	<p><u>Leadership Development</u></p> <ul style="list-style-type: none">• Separate Junior and Associate Level Workshops, 2.5 days• Short seminars/workshops on leadership topics• Department Chair support activities, ie: retreats, brown-bag topic discussions.• One year AVC position funding: Allows faculty to 'try on' administrative role.• The LEAP program now operates in the Office of Faculty Affairs. <p><u>Networking</u></p> <ul style="list-style-type: none">• Provide networking opportunities to build community such as:<ul style="list-style-type: none">• Book Club• Brown Bag lunch series to explore women's concerns and to bring together senior women faculty, chairs and directors. <p><u>Delineating the Issues</u></p> <ul style="list-style-type: none">• Qualitative and quantitative research to benchmark the status of women and progress due to the program.• Ongoing analysis of the Pathways Study (an ethnographic study of the choices of female scholars in making career decisions) research gathered by the internal evaluation group.• Climate study will be completed and compared to initial study done by the program in 2003. <p><u>Recent Interventions</u></p> <ul style="list-style-type: none">• Invited faculty to participate in a Course Development Project in which they chose to re-design a course to make it more appealing to women students.• Put out an RFP for grants to departments to create an initiative that would have a positive impact on the overall climate in the unit.• Put out an RFP to faculty for small grants to re-energize their research or take their research in a new direction; rewarding faculty that had spent a significant amount of time doing service or create an opportunity for associate professors to initiate a change in their research direction.• Created a project for LEAP faculty to participate in the campus wide strategic planning process where they interviewed thought leaders across the state of Colorado and recorded data to advise the Chancellor.

Results

The CU system has recognized LEAP as an important and valuable program with a recognized place at CU Boulder. LEAP now resides in the Office of Faculty Affairs and works with that unit to provide faculty support and development programs. In addition, LEAP now has an opportunity to impact new and on-going programs like the creation of a Chairs Support Program for the Boulder campus, and the continued development of the ELP (Emerging Leaders Program) Program which is a CU system-wide program recognizing faculty with the potential to take a leadership role in the university. One program that was initiated by the LEAP grant is a post doc support program, PAC, which currently resides with the Graduate Teacher Program on campus. LEAP partnered with the GTP to create PAC, which presents topics each semester aimed at the post doc community.

Products

- Nielsen, J., Marschke, R., Sheff, E., and Rankin, P. (2005) Vital Variables and Gender Equity in Academe: Confessions from a Feminist Empiricist Project, SIGNS Vol 31 (Autumn 2005) 1-28.
- Rankin, P., Nielsen, J., Stanley, D., Success Strategies for Women in Science. edited by Peggy Pritchard, Elsevier (2006), 107-132..
- Marschke, R., Laursen, S., Nielsen, J., Rankin, P. (2007). Demographic Inertia Revisited: An immodest proposal to achieve equitable gender representation among faculty in higher education. J. Higher Education 78(1), 1-26.
- McClam, S. Fitting In or Opting Out: Deconstructing The Marginalization of Women In Academic Science (2004), dissertation, University of Colorado, Boulder.
- Marshke, R. Pay Equity At Big U (2004), dissertation, University of Colorado, Boulder.
- Rankin, P. Nielsen, J. (2006). Transforming Science and Engineering, Advancing Academic Women. The University of Michigan Press (2007).
- DeWilde, K., Laursen, S., Thiry, H. (2007). SWS Fact Sheet: Women in Science, Technology, Engineering and Math (STEM). Forthcoming from Sociologists for Women in Society, <http://www.socwomen.org/index.php?ss=25> .
- Faculty Recruitment Brochure, University of Colorado-Boulder.
- Work Life Policies Brochure, University of Colorado-Boulder.

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NSF ADVANCE Institutional Transformation Georgia Institute of Technology

Funding Agency: National Science Foundation
\$3,702,000; 2001-07

Objective

The NSF ADVANCE Institutional Transformation Program (2001-07) at Georgia Tech took an integrated approach to institutional factors supporting the full participation and advancement of women, providing a model of best practices in academic science and engineering, and thereby constituting the core intellectual merit and broader impacts of the initiative.

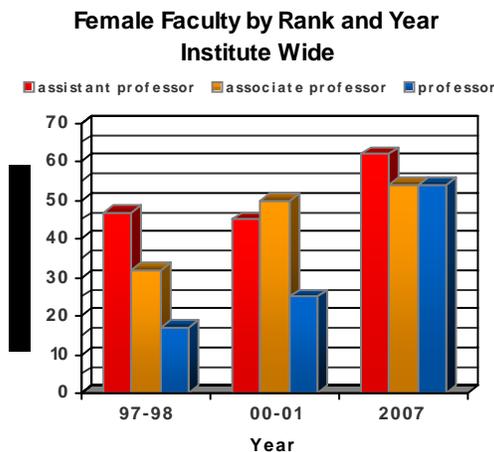
Constituents

During the grant period (2001-07), activities focused on science, engineering, computing, and other tenured and tenure-track faculty with appointments in the College of Computing, College of Engineering, College of Sciences, and the Ivan Allen College, who constitute 83% of Georgia Tech faculty. In fall 2006 Georgia Tech expanded the program in appointing ADVANCE professors in the College of Architecture and the College of Management.

Initiatives

- **Annual Conference** for female faculty and administrators (2001-07).
- **Workshops for Faculty** on leadership, mentoring, obtaining grants, and negotiation
- **Workshops for School Chairs** on retention and recruiting for diversity
- **ADVANCE Professor College Networks** for female faculty across fields and ranks.
- **Research that Defines Issues and Solutions**, including surveys of faculty at GT and benchmark universities and interviews with GT faculty on their perceptions, needs, and experiences that contribute to ADEPT (2001-07).
- **Annual Reports and Final Report** at <http://www.advance.gatech.edu>

Results



GT ADVANCE Research reported significant progress in the advancement of women faculty at the Georgia Institute of Technology:

- From 1997 to 2007, the number and percentage of women at the ranks of Associate and Full Professor increased.
- From 1997 to 2007, the number of female faculty in administrative positions increased from four to nineteen.

Products

Built on GT ADVANCE Research and related research of the 2003-04 Promotion and Tenure ADVANCE Committee, web-based computer instrument **Awareness of Decisions in Evaluating Promotion and Tenure (ADEPT)**
<http://www.adept.gatech.edu>

- **Website** contains case studies, simulations of unit-level P&T committee meetings and career strategizing, bibliography on bias, best practices of evaluation, and faculty survey results
- **Case studies and activities** are for group discussion or individual use by candidates, members of committees, and other faculty.
- **ADVANCE Research publications** in scholarly journals and books and other products are listed at <http://www.advance.gatech.edu/products.html>.



The intellectual merit and broader impacts of Georgia Tech ADVANCE include:

Integrated Initiatives

- Creating termed professorships promoting goals of ADVANCE and building college and cross-college networks of communication, mentoring, and exchange among female faculty members across disciplines and ranks.
- Institutionalizing a formal training process for committees involved in tenure and promotion. The Promotion and Tenure Advance Committee (PTAC) piloted the Awareness of Decisions in Evaluating Promotion and Tenure (ADEPT) interactive tool in fall 2004. PTAC surveyed the faculty to examine academic faculty perceptions concerning workload and rewards, inventoried the promotion and tenure processes in units at Georgia Tech, and identified best practices in P&T. The PTAC Report was sent to all deans and chairs and archived on the GT ADVANCE website.
- Defining problems and issues and developing strategies for advancement using our ADVANCE research as a rich baseline of data toward assessing change. Collecting and using resource-allocation data for equity and development of best practices. Data reports presented at ADVANCE annual retreats and available on GT ADVANCE website.
- Holding annual conferences of women faculty, provost, deans, and school chairs to review and refine goals and progress: four Georgia Tech conferences and one National Conference were held.
- Strengthening and extending the scope and impact of family-friendly practices, including developing Active Service Modified Duties and stopping the tenure clock processes, creating lactation facilities, and building and sponsoring a daycare center. Such initiatives assist male and female faculty and help them balance their commitments to family and work.
- Sponsoring leadership workshops for faculty on topics such as writing grant proposals, collaborating on interdisciplinary projects, family-work issues, career coaching, leadership, and networking.

Principal Investigator	Jean Lou Chameau , former Georgia Tech Provost and Vice President for Academic Affairs; as of September 2006, President, California Institute of Technology
Co-Principal Investigators	Mary Frank Fox , NSF ADVANCE Professor, School of Public Policy and Co-director, Center for Study of Women, Science, and Technology Sue Rosser , Dean of Ivan Allen College & Ivan Allen Professor of Liberal Arts and Technology
2001-06 ADVANCE Professors	Jane Ammons , Industrial and Systems Engineering, College of Engineering Mei-Yin Chou , Physics, College of Sciences Mary Frank Fox , Public Policy, Ivan Allen College Mary Jean Harrold , College of Computing
2006-11 ADVANCE Professors	Cheryl Contant , College of Architecture Mary Frank Fox , Public Policy, Ivan Allen College Mary Jean Harrold , College of Computing Maryann Ingram , Electrical and Computing Engineering, College of Engineering Wing Suet Li , Mathematics, College of Sciences Christina Shalley , College of Management
ADVANCE Program Director (2005-07) and ADEPT Coordinator	Carol Colatrella , Professor, School of Literature, Communication & Culture and Co-Director, Center for the Study Women, Science & Technology
Institutionalization	Georgia Tech ADVANCE activities are co-sponsored by the ADVANCE team, which consists of the co-directors of the Center for the Study of Women, Science, and Technology, the director of the Office of Faculty Career Development Services, and the six ADVANCE Professors.
Contact Information	Website: www.advance.gatech.edu Email: carol.colatrella@lcc.gatech.edu ; monique.tavares@carnegie.gatech.edu Phone: 404 894 1241 Mailing Address: Georgia Tech ADVANCE Program for Institutional Transformation c/o Monique Tavares, Faculty Career Development Services Georgia Institute of Technology Atlanta, GA 30332-0330



ADVANCE Program at the University of Michigan

Objective

The **ADVANCE Program**, which is housed in the Institute for Research on Women and Gender, began as a five-year, grant-funded project promoting institutional transformation with respect to women faculty in science and engineering fields. With the University's commitment to continue funding through June 2011, the program is gradually expanding to promote other kinds of diversity among faculty and students in all fields. The ADVANCE Program aims to improve the University of Michigan's campus environment in four general areas:

- Recruitment – focused on development and use of equitable recruiting practices
- Retention – focused on preemptive strategies to prevent the loss of valued faculty
- Climate – focused on improvement of departmental climate
- Leadership – focused on support for development of leadership skills and opportunities as well as on support for development of skills among all academic leaders to encourage supportive climates

Constituents

Science and engineering faculty with budgeted appointments in departments in the three schools with the largest science and engineering faculty: College of Engineering, College of Literature, Science, and the Arts (Division of Natural Sciences), and the Medical School (Basic Science departments); as well as science faculty in the School of Dentistry, School of Information, Division of Kinesiology, School of Natural Resources and Environment, College of Pharmacy, and School of Public Health

Project Award Size and Length

NSF ADVANCE Institutional Transformation grant: 2001-2007, \$3,901,545

Partnerships for Adaptation, Implementation, and Dissemination (PAID) grant: 2006-2009, \$499,906

Initiatives

Individual Initiatives: Advancing Women Scientists and Engineers

- Faculty Career Advising
- Network to Advance Women Scientists and Engineers

Departmental Initiatives: Support to Departments Aiming to Improve their Climates

- Departmental Self-Studies and Reviews
- Coaching for Department Chairs

Campus-wide Initiatives: Support for Efforts at Any Level

- Interactive Theatre Performances (CRLT Players)
- Leading Excellence Seminars for New Full Professors
- Strategies and Tactics for Recruiting to Improve Diversity and Excellence Committee (STRIDE)
- Friends and Allies of STRIDE Toward Equity in Recruiting (FASTER)
- Conference on Advancing Diversity and Excellence in Science and Engineering
- Science and Technology Excellence Program (STEP)

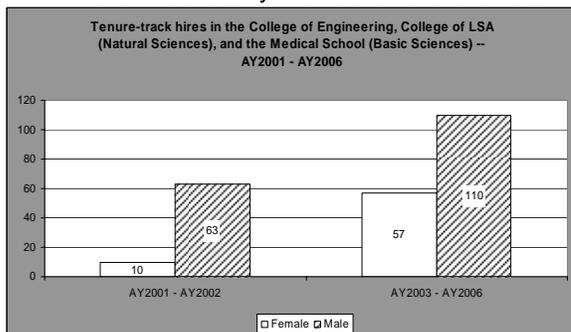
Cross-campus Initiatives: Partnerships for Adaptation, Implementation, and Dissemination (PAID)

- UM ADVANCE is collaborating with Grand Valley State University, University of Missouri, and Wayne State University

Results

Since the beginning of the NSF ADVANCE grant at the University of Michigan...

- 68 scientists and engineers have received Elizabeth C. Crosby and Lydia A. DeWitt research awards;
- 12 science and engineering departments have received departmental transformation grants;
- 9 women scientists and engineers have been appointed to dean (1) or department chair (8) positions;
- Over 100 faculty members have attended "Faculty Recruitment Workshops" presented by the STRIDE Committee;



- Over 40 administrators, departments, and search committees have requested presentations by the STRIDE Committee;
- The CRLT Players have presented 3 UM ADVANCE-sponsored sketches – *The Faculty Meeting*, *Faculty Advising Faculty*, and *Tenure: The Fence* – to more than 40 audiences of UM administrators and faculty.
- UM ADVANCE is able to report **significant progress** regarding the recruitment of women in each of the three colleges that employ the largest number of scientists and engineers at the University (Engineering, LSA, and Medicine): As a proportion of all science and engineering tenure-track hires, 14% (N=10) of all new hires were women in AY2001 and AY2002 (the "pre-ADVANCE" years) as compared to 34% (N=57) in AY2003 – AY2006 (see figure).

Products

Recruitment

- *Handbook for Faculty Searches and Hiring*
- *Candidate Evaluation Tool*
- *Positive and Problematic Practices in Faculty Recruitment*
- *Frequently-Asked Questions: Dual Career Issues*
- STRIDE Committee Faculty Recruitment Workshop presentations

Retention

- *How to Help New Faculty Settle In: Common Problems and Alternative Solutions*
- *Giving and Getting Career Advice: A Guide for Junior and Senior Faculty*
- *Support to Department Chairs and Deans in Assessing Individual Salary Equity*
- *Frequently-Asked Questions: Retention of Science and Engineering Faculty who are Women and/or Members of Racial/Ethnic Minorities*

Climate

- *Support for Assessment and Improvement of Departmental, School, or College Climate*
- *Creating a Positive Departmental Climate: Principles for Best Practices*
- UM ADVANCE Climate Reports

Other

Transforming Science and Engineering: Advancing Academic Women

- The University of Michigan Press | <http://www.press.umich.edu> | Available October 2007
- *Transforming Science and Engineering* is the first collection to describe the variety of innovative efforts academic institutions around the country have undertaken as a result of the National Science Foundation's ADVANCE Institutional Transformation program. This collection draws on the expertise of scientists and engineers, social scientists and specialists in organizational behavior, and university administrators; the contributors discuss both the theoretical and empirical research of the initiatives, with emphasis on the practical issues involved in creating the initiatives, and the resulting evidence that these initiatives have desired effects.

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Cynthia Hudgins, Program Manager
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NEW MEXICO STATE UNIVERSITY

ADVANCE

Institutional Transformation

NEW MEXICO STATE UNIVERSITY NSF-ADVANCE: INSTITUTIONAL TRANSFORMATION FOR FACULTY DIVERSITY

ADVANCE MISSION

The ADVANCE Program serves all underrepresented faculty members through training, mentoring, and networking.

ADVANCE VISION

The ADVANCE Program is a catalyst for achieving a diverse faculty, and is a recognized leader nationally.

ADVANCE GOALS

The ADVANCE Program supports underrepresented faculty, enhances diversity, and builds community.

NSF-ADVANCE Institutional Transformation



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ADVANCE PROGRAM OVERVIEW AT NEW MEXICO STATE UNIVERSITY

A five-year, \$3.75 Million NSF grant (2002-2006, and currently in no-cost-extension) has initiated groundbreaking programs for recruitment and retention of female faculty in Science, Technology Engineering and Math (STEM) at the main NMSU campus. The program targets 19 departments in STEM in three colleges: Agriculture and Home Economics, Arts and Sciences, and Engineering.

BEST PRACTICES FOR RECRUITMENT, RETENTION AND ADVANCEMENT

The ADVANCE Program has developed the following best practices as documented by the National Science Foundation (NSF):

- Competitive hiring packages to attract excellent, diverse candidates with sufficient infrastructure for world-class research to serve New Mexicans.
- Improved managerial effectiveness for diversity through programming for department heads and administrators.
- Policies to promote a family friendly work environment to foster the work-life balance demanded by today's professional workforce.
- Enhanced retention and protection of human resource investment through mentoring.
- Technology/research centers linkage through travel awards.
- Economic development fostered by research awards.
- Leadership development program to build faculty leaders.

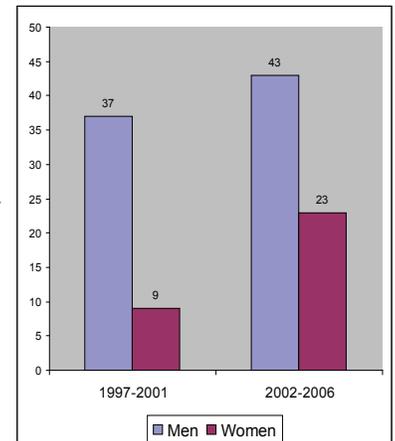
RESULTS OF ADVANCE PROGRAM TO DATE

- Travel and research awards for 59% of women faculty in STEM for retention and development.
- Nearly doubling the hiring rate for women faculty in STEM with start-up enhancement awards from 20% to 35%.
- Mentoring 56% of *all* faculty in STEM through leading edge cross-departmental mentoring program.
- Offering faculty development workshops, department head training and the ADVANCING Leaders program.
- Bringing nationally known visiting professors to conduct outreach to: 470 middle school students, 140 elementary school students, 40 K-12 teachers, 161 undergraduates and 301 graduate students for faculty from the entire university.



Participants in the 2004-2005 ADVANCING Leaders Program

In the five years *prior* to ADVANCE, women accounted for only **20%** of new faculty in STEM (science, technology, engineering and math). But in the five years since ADVANCE, women account for **35%** of new STEM faculty.



Number of New STEM Hires
1997 - 2006

ADVANCE

Institutional Transformation

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PROGRAM DIRECTOR**

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Rudi Schoenmackers, Associate Dean, College of Engineering

PROGRAM STAFF

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**NATIONAL-LEVEL PROGRAM
OVERVIEW**

“First round” (2001):

Hunter College, City University of New York
Georgia Institute of Technology
New Mexico State University
University of California, Irvine

University of Colorado, Boulder
University of Michigan
University of Puerto Rico, Humacao
University of Washington
University of Wisconsin, Madison

“Second round” (2003):

University of Alabama, Birmingham
Case Western Reserve University
Columbia University
University of Chicago, Illinois
Kansas State University
University of Maryland, Eastern Shore

University of Montana
University of Rhode Island
University of Texas at El Paso
Utah State University
Virginia Polytechnic Institute

“Third round” (2006):

University of Arizona
Cal Poly Pomona Foundation, Inc.
Cornell University
Brown University
Duke University

Iowa State University
Wm. Marsh Rice University
New Jersey Institute of Technology
University of North Carolina, Charlotte
Rensselaer Polytechnic Institute





NSF ADVANCE at the University of Puerto Rico-Humacao

Funding Agency: National Science Foundation

NSF-SBE-0123654

The goal of the ADVANCE program at the UPR-Humacao is to increase the representation and advancement of women in academic science and engineering careers, thereby contributing to the development of a more diverse science and engineering workforce.

Constituents **Eight Target Programs in Five Applied Science Departments:** Marine Biology, Microbiology, General Biology, Wild Life Management, Industrial Chemistry, Computational Mathematics, Physics Applied to Electronics, Social Action Research.

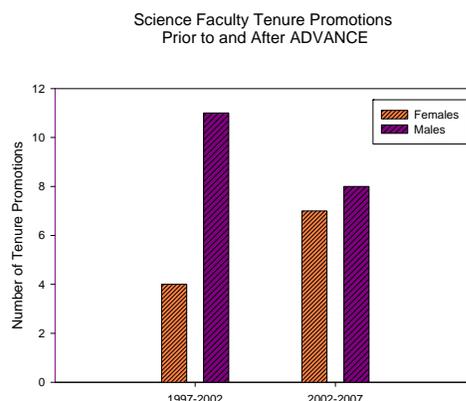
Three additional Programs in the Health Sciences invited to participate: Nursing, Physical Therapy and Occupational Therapy.

Project award size & length \$3.1 M, Award Period: 2001-2006, NCE: 2006-2007

Initiatives

- ADVANCE Research Awards
- Integration of university constituencies to promote change
- Seminars & conferences
- **Faculty in Training:** talented women undergraduates trained to pursue professorial careers
- Leadership development and training
- New policies and procedures for faculty recruitment
- Use of Interactive Theater for education and training
- **Institutional Research**
 - Causes and consequences of high participation of women undergraduates in science at UPRH
 - Perceptions of faculty of administrators about faculty recruitment at UPRH
 - Dual career hiring at UPRH
 - Science faculty interviews used to complement quantitative data for measuring change of women in science status.
 - Climate Survey

Selected Results



- In the five years prior to ADVANCE, **27% of the tenure promotions in science (4)** were awarded to women. In the five years after ADVANCE, **47% of the tenure promotions in science (7)** were awarded to women.

- Increased research productivity includes: 57% of women faculty in undergraduate science programs involved in research, 100+ publications and 25+ grant awards.
- Three women science faculty members have been appointed **Chancellor and Deans**, one woman appointed as Chair of Mathematics Department.
- Five women science faculty are serving as **Directors of Research Programs** or large grants.
- Successful faculty searches guided by ADVANCE policies have helped destroy the myth that highly qualified female (and male) candidates would not be interested in a small undergraduate institution.
- Training activities extended to other UPR campuses and non-STEM fields including Humanities, Business and Education at UPRH.
- ADVANCE policies for faculty recruitment have been incorporated into the faculty manual and more departments (at UPRH and outside) are adopting them.
- Office of Institutional Research has institutionalized gender-based data collection/ publication, as well as climate studies.
- A network of women in science and women-in-science supporters continues promoting ADVANCE legacy.
- Great expectations about faculty in training students returning as faculty.

Products

- Guide for Affirmative Action in the Recruitment of Faculty Personnel for the UPR-Humacao.
- *Advancing Women in a Small Hispanic Undergraduate Institution*, Ch. 15 in *Transforming Science and Engineering: Advancing Academic Women*.
- Dual career hiring at UPRH.
- Organizational Culture at UPRH (Climate).
- Gender-based statistics for UPRH Faculty.

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Diversity and Equity for Excellence

Funding Agency: National Science Foundation

Funding Level for UCI: \$3.45 million for September 2001 – September 2006

Mission *The UCI ADVANCE Program carries out the campus commitment to gender equity and diversity in the professoriate. Originally funded by a NSF Institutional Transformation award in 2001, UCI has seen dramatic gains in the presence of women in STEM fields. Based on the success of the Equity Advisor model, Executive Vice Chancellor and Provost Michael R. Gottfredson institutionalized UCI ADVANCE and extended its mission to include diversity in July 2006. This commitment ensures that equity and diversity will remain essential priorities in advancing excellence in the multiple missions of UC Irvine. In the future as in the past, a culture of inclusion is fundamental to American higher education and its continued global leadership in expanding the frontiers of knowledge.*

Objective**Promoting a Faculty Culture of Inclusion through Gender Equity and Diversity in:**

- Recruitment
- Retention and Advancement
- Leadership Opportunities

Structure of Intervention**Equity Advisor Model**

- Faculty Assistant to the Dean
- 3-year term w/stipend
- Participate in recruitment process
- Coordinate mentoring programs
- Proactively investigate inequities

Constituents**Units Served by Equity Advisors**

All eleven schools, including department of Education – Claire Trevor School of the Arts, School of Biological Sciences, College of Health Sciences, Department of Education, Henry Samueli School of Engineering, Merage School of Business, School of Humanities, Donald Bren School of Information and Computer Sciences, Donald Bren School of Law, School of Physical Sciences, School of Social Ecology and School of Social Sciences.

Research & Analysis:**Gender Equity Indicators**

- Survey of Faculty and Chairs
- Start-up Packages in Selected STEM Schools
- Equity Advisor Annual Reports
- Selection of Final Candidates in Selected STEM Schools

Dissemination**Best Practices, Career Tools, Family Friendly Resources**

- Search Committee Workshops
- Mentoring: Instructional DVD for Gender Equity
- Sponsored Lectures and Events: Hastings College of Law Professor Joan Williams, University of Michigan CRLT Players

Distinctions**Excellence through Equity and Diversity**

ADVANCE Term Chairs

- Distinguished scholars in the Physical Sciences selected for their service in promoting gender equity

Awarded NSF PAID grant (1/07 – 12/09)

Equity Advisor Recognition

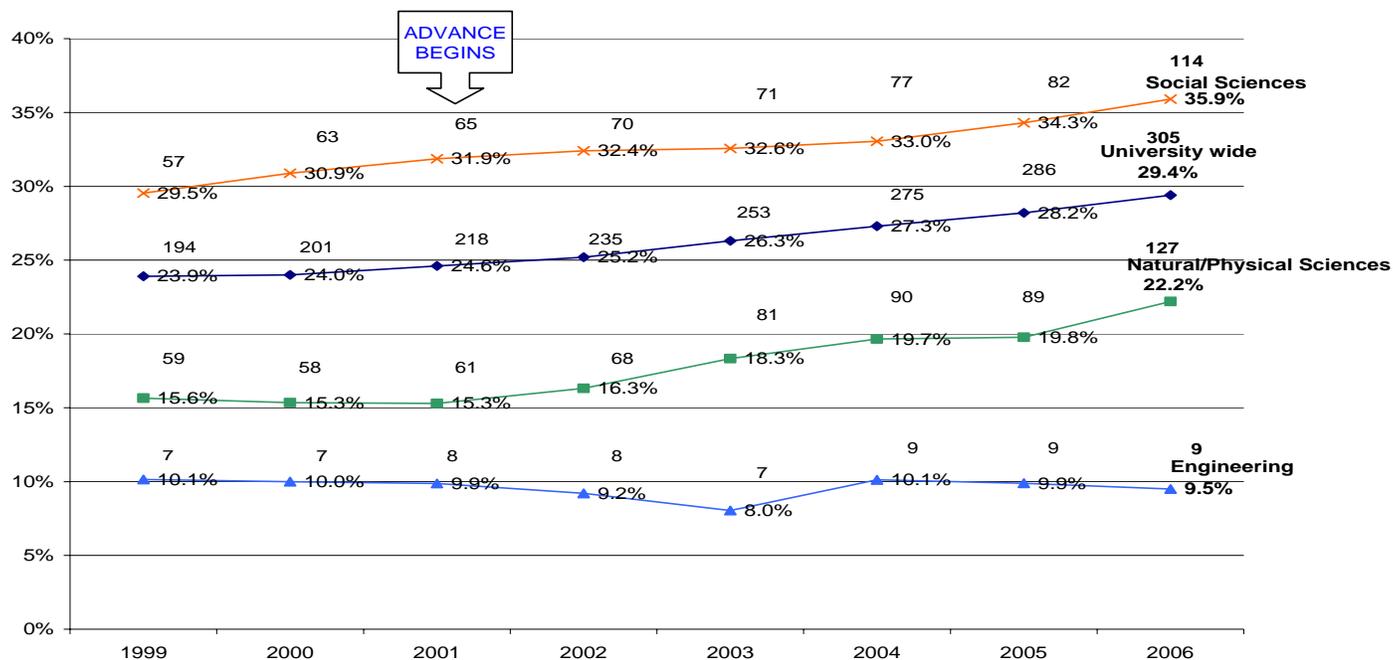
- ADVANCE Term Chair
- American Council on Education (ACE) Fellowship
- University Distinguished Mid-Career Award for Service
- Chancellor's Professor

Initiatives

Implement recommendations of the UC President's Task Force for Faculty Diversity
 Coordinate campus Scholarship on Diversity FTE Call and Program
 Developed \$16m ADVANCE fundraising priorities for the campus comprehensive campaign

Selected Results

Women as a Percentage of Tenured and Tenure-Track Faculty



Natural & Physical Sciences includes: COM BioSci, ICS & PhysSci

Engineering: engineering only

Social Sciences includes: SocEcol, SocSci & Business

N= women only

Institutionalization

- Faculty Director, Program Coordinator
- 1 Equity Advisor per school w/\$15k/year
- Expansion of Equity Advisor role to include attention to ethnic diversity in faculty hiring, retention & advancement
- Annual operating budgets: Program Office & Equity Advisors

Essential Elements for Success

- Leadership
- Academic Planning
- Resource Allocation & Faculty Rewards
- Faculty Recruitment & Retention
- Accountability

Products

Brochure: "Changing a Culture: Advancing Women in Higher Education"
Pamphlet: "Best Practices for Achieving Diversity in Faculty Recruitment"
Equity Video: "Tenure Meeting", "Junior Faculty Crunch"
Website: <http://advance.uci.edu>

Principal Investigators

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 Dr. Herb Killackey, Vice Provost, Academic Personnel
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UCIrvine

Diversity and Equity for Excellence

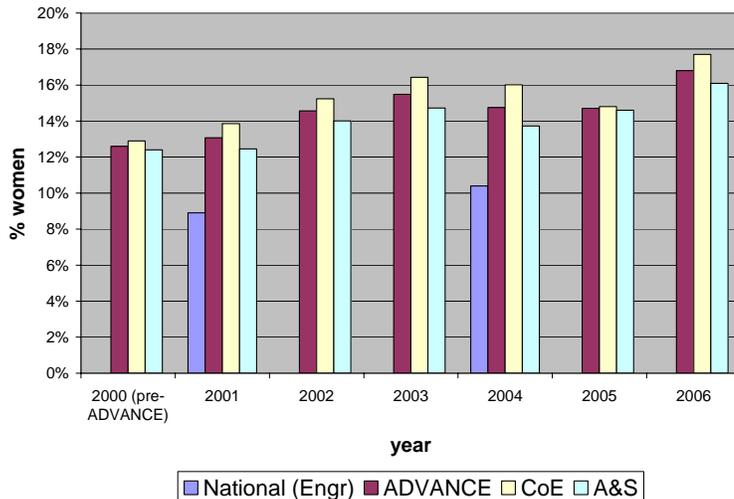
Results from and Impact of the University of Washington ADVANCE Center for Institutional Change

FUNDING AGENCY: National Science Foundation
FUNDING LEVEL: \$3.75M grant
October 2001-September 2007

OBJECTIVE To create a campus in which all SEM departments are thriving, all faculty are properly mentored, the diversity among faculty are recognized, and every SEM faculty member is achieving his or her maximum potential.

CONSTITUENTS 21 SEM departments – 10 in the College of Engineering and 11 in the College of Arts and Science, Science Division. The College of Ocean and Fishery Sciences and the Information School are informal partners. (Note: original 19 departments were 10 engineering and 9 science departments.)

SEM WOMEN LADDER FACULTY AT UW (19 ORIGINAL ADVANCE DEPARTMENTS)

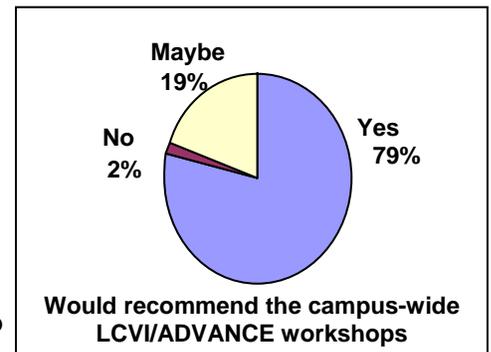


INCREASING WOMEN FACULTY REPRESENTATION IN ADVANCE DEPARTMENTS (ORIGINAL 19 DEPTS)

- **28.3% increase in the number of tenured or tenure-track women faculty (60 to 77)** (Fall 2001 to Fall 2006)
- **17.8% increase in number of women full professors (28 to 33)** (Fall 2001 – Fall 2006).
- Through AY04-05, **more than 37% of the women in the faculty interview pool were offered positions**, resulting in 16 new women faculty through Fall 2004.
- ADVANCE CIC staff has met with over 25 women faculty candidates

SIGNATURE INITIATIVES

- ◆ **Quarterly Leadership Workshops for UW Department Chairs and Emerging Leaders** (www.engr.washington.edu/advance/workshops/)
 - 14 quarterly leadership workshops offered (11/02 – 3/07)
 - Average attendance: 76.5% of department chairs invited
 - 30 topics offered. Topic ratings ranged from 3.6 – 5.0, with a mean of 4.35 (scale 1-5, 5=excellent)
 - 98 emerging leaders (46 women) attended at least 1 workshop
 - AY06-07 workshops expanded campus-wide via LCVI (see graph)
 - 238 attendees in 6 LCVI/ADVANCE workshops
- ◆ **Annual Two-Day National Leadership Workshop for SEM Department Chairs and Emerging Leaders** (www.engr.washington.edu/lead/)
 - In 3 workshops, have had 160+ participants (including 30 different speakers) representing 60+ institutions from 31 states, the Virgin Islands and British Columbia
 - In 2006 received a \$500,000 NSF ADVANCE PAID grant to continue workshops through 2009. Workshops now called LEAD: Leadership Excellence for Academic Diversity
- ◆ **Faculty Professional Development Workshops**
 - 103 participants (60% women) in 18 workshops (4/03 – 4/07)
 - As a result of participating in the workshops, 96% of evaluation respondents said they have a greater sense of community at UW and 91% have learned strategies to balance teaching, research, and service
 - Most helpful workshop elements: focusing on specific professional development issues (72%); networking (60%); and learning strategies and tools for career success from senior faculty (60%)



◆ **Mentoring-for-Leadership Lunch Series for Women Faculty (5/03 – 9/07)**

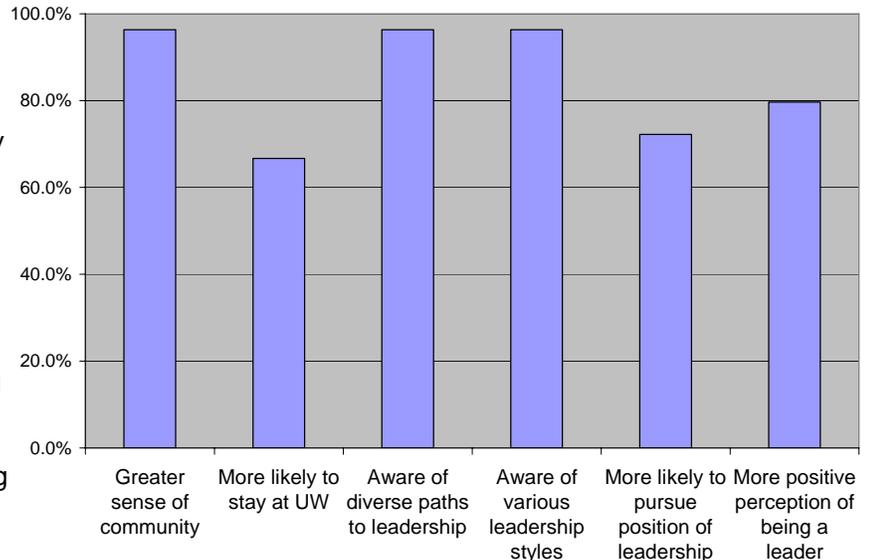
- 53 speakers (23 external & 30 internal women leaders)
- 120+ women participants; Majority have attended 1+ events
- Program duplicated at Boston University

◆ **Transitional Support Program (TSP) Grants**

- 51 TSP awards, totaling \$938,834; 42 women and 6 men awardees
- Campus-wide TSP available for emergencies
- Awardees reported impact of TSP
 - 87.5% able to continue work started with TSP
 - 57.5% increased/maintained ability to perform tenure-track duties during award period
 - 61.0% maintained/accelerated research progress

- Sample outcome: A faculty member stated the \$20,000 TSP grant was integral to the \$774,000 she subsequently received from the NSF, and to her tenure and promotion to Associate Professor.

Mentoring-for-Leadership Series Evaluation (N = 54)
Percent of respondents reporting “agree” or “strongly agree”



GENERAL BEST PRACTICES AND STRENGTHS

- ◆ TSP saves careers
- ◆ Peer-led professional development
- ◆ Highly functional core team
- ◆ Campus and national resource
- ◆ Community builder
- ◆ Use targeted content
- ◆ Address broader faculty issues, not just ‘women’ issues
- ◆ Steady drumbeat of activities (but not too much)
- ◆ Strategically offer faculty professional development
- ◆ Meet with women faculty when they interview and after they arrive on campus

DISSEMINATION AND NATIONAL PRESENCE

- ◆ 10+ conference papers and 8 journal papers, book chapters, program descriptions, and commentaries (See http://www.engr.washington.edu/advance/resources/#other_resources for partial listing and links)
- ◆ 60+ conference/workshop panels and presentations
- ◆ 10+ magazine and newspaper article interviews
- ◆ **Faculty Retention Toolkit** (www.engr.washington.edu/advance/resources/Retention/index.html)
- ◆ **Faculty Recruitment Toolkit** (www.washington.edu/admin/acadpers/procedures/search_and_hire/aa_recruitment_toolkit.html)

AWARDS AND RECOGNITION

- ◆ Eve Riskin - 2007 University of Washington David B. Thorud Leadership Award
- ◆ Joyce Yen – 2007 College of Engineering Professional Staff Innovator Award
- ◆ Eve Riskin - 2006 IEEE Hewlett-Packard/Harriet Rigas Award
- ◆ Eve Riskin - first WEPAN University Change Agent Award, 2006
- ◆ Joyce Yen - 2004 Outstanding Young Alumni Award from the University of Nebraska-Lincoln

PRINCIPAL INVESTIGATOR Ana Mari Cauce, Executive Vice Provost and Earl R. Carlson Professor of Psychology
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W I S E L I

Women in Science & Engineering Leadership Institute
University of Wisconsin-Madison

ADVANCE Institutional Transformation Program

National Science Foundation

\$3,750,000

January 2002 – June 2007

Objective NSF ADVANCE at the University of Wisconsin-Madison was a five-year project to promote institutional transformation in science and engineering fields by increasing the participation, success and leadership of women faculty in academic science and engineering. The grant was administered through the **Women in Science & Engineering Leadership Institute (WISELI)**, an institutionalized research center.

Constituents Science and engineering faculty and staff in the **six schools** with the largest science and engineering faculty: College of Engineering, College of Letters & Sciences, College of Agricultural and Life Sciences, the School of Veterinary Medicine, the School of Pharmacy, and the School of Medicine and Public Health. We target **70 departments/units and 1,200 faculty** in the biological and physical sciences.

Activities With a strong evaluation component in all that we do, our research and initiatives feed back to each other, improving our activities with each iteration.



Grant Programs

- Vilas Life Cycle Professorship Program
- Celebrating Women in Science & Engineering Grants

Workshops

- Workshops for Search Committee Chairs
- Climate Workshops for Department Chairs
- Workshops for PIs on Building Effective Research Teams (in development)

Other Initiatives

- Conversion of staff to tenure track
- Awards and honors for women faculty
- Leadership development for academic staff
- Conversations with senior women faculty
- Documentary video
- WISELI Seminar series
- WISELI website, listserv

Evaluative Research

- Interviews with women faculty and staff
- Study of Faculty and Academic Staff Worklife (climate survey)
- Resource studies
- Issue Studies
- Evaluation of existing programs at UW-Madison

Other Research

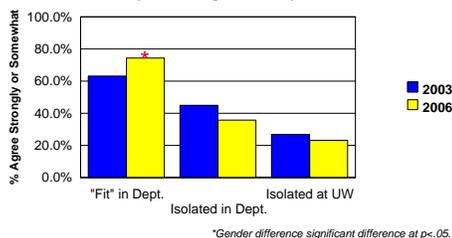
- Discourse analysis of women's communication strategies
- Ethnographic study of gendered interactions in the laboratory setting
- Study of Career Choices in Engineering
- Expanding Entrepreneurial Activity for Senior Women

Selected Results

Climate

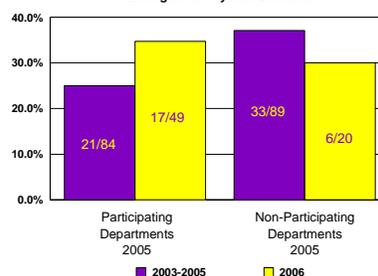
Isolation and "Fit"

Women Faculty in Biological & Physical Sciences



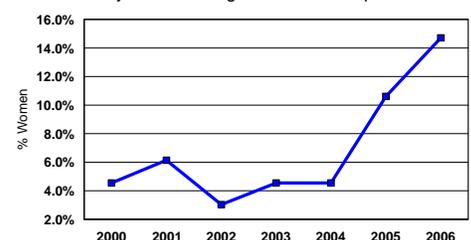
Hiring

Percent Female, New Tenure-Track Faculty
Biological & Physical Sciences



Leadership

Percent Women Department Chairs
Physical & Biological Science Departments



- Significant increase in the percentage of women faculty who felt they "fit" in their departments.
- Women faculty in bio. and phys. sciences reported less isolation in 2006 than in 2003, both in their departments and at UW-Madison.
- Departments sending at least one faculty member to our workshops for search committee chairs showed an increase in new women hires; non-participating departments showed a decrease in new women hires.
- At beginning of grant period (2002), there were only 2 women department chairs (of 68). By 2006, UW-Madison had 10 women chairs in the 68 biological and physical science departments.

Products (see <http://wiseli.engr.wisc.edu/products.htm>):

- Climate:**
- *Benefits and Challenges of Diversity*
 - *Enhancing Department Climate: A Chair's Role: Resources*
 - *Advice to the Top: Top 10 Tips for Academic Leaders to Accelerate the Advancement of Women in Science and Engineering*
 - *Sex and Science: Tips for Faculty*
 - *Study of Faculty Worklife at the University of Wisconsin-Madison* (survey instrument and results)
- Hiring:**
- *Recruiting Applicants: Research on Bias and Assumptions (2nd Edition)*
 - *Searching for Excellence and Diversity: A Guide for Faculty Search Committee Chairs*
- Selected Publications:**
- Gunter, R. and Stambach, A. 2003. "As Balancing Act and as Game: How Women and Men Science Faculty Experience the Promotion Process." *Gender Issues*. 21(1):24-42.
 - Gunter, R. and Stambach, A. 2005. "Differences in Men and Women Scientists' Perceptions of Workplace Climate." *Journal of Women and Minorities in Science and Engineering*. 11(1):97-116.
 - Handelsman et al. 2005. "More Women in Science." *Science*. 309(5738):1190-1191.
 - Carnes et al. 2005. "Diversity in Academic Medicine: The Stages of Change Model." *Journal of Women's Health*. 14(6):471-475.
 - Carnes et al. 2005. "NIH Director's Pioneer Awards: Could the Selection Process be Biased Against Women?" *Journal of Women's Health*. 14(8):684-691.
 - Sheridan et al. 2006. "Discovering Directions for Change in Higher Education Through the Experiences of Senior Women Faculty." *Journal of Technology Transfer*. 31(1):387-396.
 - Carnes, M. and Bigby, J. 2007. "Jennifer Fever in Academic Medicine." *Journal of Women's Health*. 16(3):299-301.
 - Carnes, M. and Bland, C. 2007. "A Challenge to Academic Centers and the NIH to Prevent Unintended Gender Bias in Selection of CTSA Leaders." *Academic Medicine*. 82(2):202-206.
 - Ford, C. 2007. *Women Talking in the Workplace: Getting and Using the Floor*. New York: Palgrave Macmillan.
 - Ford, C. In press. "Questioning in Meetings: Participation and Positioning." In *The Function of Questions in Institutional Discourse* (S. Erlich and A. Free, Eds.) Oxford University Press.
- Awards & Honors:**
- *Advancing Your Career through Awards and Recognitions: A Guide for Women Faculty in the Sciences & Engineering*
- Documentary Videos:**
- *WISELI: Advancing Institutional Transformation*
 - *WISELI: Building on a Legacy*
 - *WISELI: FORWARD with Institutional Transformation*

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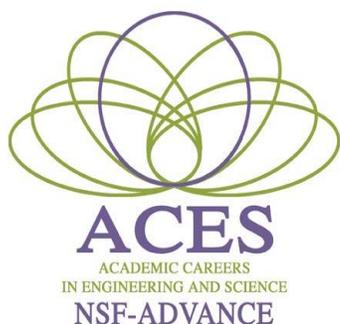
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NSF-ADVANCE INSTITUTIONAL TRANSFORMATION AT CASE WESTERN RESERVE UNIVERSITY

Funding Agency: National Science Foundation
Funding Level: \$3,499,580 to date
Project Span: Sept. 1, 2003 – Aug. 31, 2008
“Promoting a campus-wide culture of equality, participation, openness and accountability”

Case Western Reserve University

NSF-ACES@case.edu
 (216) 368-8860

The **goal** of the ACES project is to contribute to the development of a national science and engineering academic workforce that includes the full participation of women at all levels of faculty and academic leadership, particularly at the senior academic ranks, through the transformation of institutional practices, policies, climate, and culture. <http://www.case.edu/admin/aces>

Participation

ACES encompasses all departments in fields of research supported by NSF. There are 32 participating departments in four schools: College of Arts & Sciences, Case School of Engineering, School of Medicine, and Weatherhead School of Management.

Initiatives

Leadership level

 Departmental level

 Campus-wide

- Fundraising for 5 endowed chairs to attract senior women scientists and engineers
- Annual evaluation of deans’ progress toward transformational change
- Executive coaching for deans of schools/colleges
- Executive coaching for departmental chairs
- Coaching, mentoring, and networking for women faculty
- Educational support and faculty development
- Faculty search committee supports
- Opportunity grants for women faculty
- Departmental Initiative grants
- Distinguished Lectureships to bring in senior women in the disciplines
- Student awareness training
- Minority pipeline initiatives
- Partner hiring policy and partner network supports
- Faculty search committee guidelines and toolkits
- Center for Women activities

Activities and Selected Results Through Year 4

- S&E Recruitment and Advancement
 - 38 new hires of female faculty in S&E departments from AY 2003-04 to AY 2006-07, with attrition of 15 female faculty from S&E departments during this time.
 - From AY2003-04 to AY2006-07, 5 S&E women faculty were promoted to full professors, and 8 S&E women faculty were granted tenure.
 - In AY 2006-07, women chaired 5 of the 32 S&E departments (16%).
- Distinguished Lectureships: 28 senior women scientists presented
- Opportunity Grants: \$440,236 awarded to 38 women faculty
- Support for faculty search committees provided to 31 departments
- Increases in the number of women in faculty candidate pools
- Summer Undergraduate Research Program: 27 minority women students

conducted research for 10 weeks in the lab of a faculty mentor

- Institutionalized Provost's Annual Leadership Retreat for deans and chairs
- 8 Faculty Development Workshops, 8 Networking Events for women faculty, 4 Women of Achievement Luncheons and 2 "Spotlight Awards" ceremonies organized by the Flora Stone Mather Center for Women.
- Training workshops for S&E undergraduate and graduate students on gender schemas.
- Online Affirmative Action form instituted for faculty candidates
- Participation in the Collaborative on Academic Careers in Higher Education (COACHE) tenure-track job satisfaction survey of new faculty
- Online Faculty exit survey instituted
- The percentage of new faculty hires that are female has increased, from 37% women in AY2003-04 (17 women new hires), to 47% in AY2006-07 (7 women new hires).
- As of AY2006-07, women hold 14 endowed chairs, up from 8 in AY2003-04.
- In the College of Arts & Sciences, the number of tenure-stream women faculty in S&E departments has increased, from 22% in AY2003-2004 (n = 27) to 27% in AY 2006-2007 (n = 32).
- In Case School of Engineering, the number of tenure-stream women faculty in S&E departments has increased, from 8% in AY2003-2004 (n = 9) to 11% in AY 2006-2007 (n = 13).
- To date, we have provided Executive Coaching sessions to 77 women faculty, 20 chairs, 4 senior administrators (dean, associate dean, deputy provost, vice provost), and 2 minority male faculty.

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Co-Principal Investigators Mary Barkley, Professor, Department of Chemistry
Diana Bilimoria, Associate Professor, Department of Organizational Behavior
Donald Feke, Professor and Vice Provost for Planning and Assessment,
Department of Chemical Engineering
P. Hunter Peckham, Professor, Department of Biomedical Engineering

Publications & Presentations

- (1) Bilimoria, Diana, Hopkins, Margaret M., O'Neil, Deborah A. & Perry, Susan (2007). Executive Coaching: An Effective Strategy for Faculty Development, in Stewart, Abigail J., Janet Malley, and Danielle LaVaque-Manty (Eds.), Transforming Science and Engineering: Advancing Academic Women, pp. 187-203, Ann Arbor: University of Michigan Press.
- (2) Jordan, C. Greer & Bilimoria, Diana (2007). Creating a Productive and Inclusive Academic Work Environment, in Stewart, Abigail J., Janet Malley, and Danielle LaVaque-Manty (Eds.), Transforming Science and Engineering: Advancing Academic Women, pp. 225-242, Ann Arbor: University of Michigan Press.
- (3) Liang, Xiang fen & Bilimoria, Diana (2007). The Representation and Experience of Women Faculty in STEM Fields, in Burke, Ronald & Mattis, Mary (Eds.) Women and Minorities in Science, Technology, Engineering and Mathematics: Upping the Numbers, pp. 317-333, Northampton, MA: Edward Elgar Publishing.
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Project staff Shelley White, Project Coordinator; Amanda Shaffer, Diversity Specialist; Xiang fen Liang, Senior Research Associate, Jeffrey Turell, Research Associate



The University of Montana's Partnership for Comprehensive Equity (PACE)

Goal To develop a model for lasting institutional change in rural public universities and to promote quality through diversity. Specific goals include changing policy, increasing the number of tenure-line women science faculty, empowering and informing women faculty, and creating a statewide network of women scientists.

Constituents Thirteen departments: Biology; Biomedical & Pharmaceutical Sciences; Chemistry; Computer Science; Economics; Ecosystems & Conservation Sciences; Forest Management; Society & Conservation; Geography; Geosciences; Mathematics; Physics & Astronomy; and Psychology.

Award NSF granted the University of Montana a \$3.5 million, five-year ADVANCE award in 2003.

Initiatives PACE activities are described by component below.

Policy Development

- PACE PI serves as Special Assistant to the Provost for Comprehensive Equity.
- PACE Campus-Wide Policy Committee researched and drafted work-life policies and continues to review departmental diversity plans.
- The University Task Force on Policy Development and Revision produced a report with 17 policy recommendations. PACE is working to implement these proposals.
- Each science department is producing a diversity plan, describing methods for achieving gender equity and promoting diversity among students and faculty.

Recruitment

- PACE funds were used to support three new lines and to provide 'top up' salary for three more women. Additional hiring was supported by a 'Two-for-One' hiring practice, an initiative to expand hiring when candidates enhance the diversity of a department.
- PACE developed materials for search committees and chairs on recruiting and interviewing.
- The PACE Recruitment Director meets with every female job candidate and many spouses/partners to discuss topics that are difficult to address with search committees.

Retention

- PACE staff regularly meet with department faculty and chairs to discuss retention issues.
- PACE monitors the mentoring of pre-tenure faculty in the sciences.
- Women in Science events promote women's research and facilitate networking.
- Work/Writing Groups allow junior and senior faculty to work together off-site for 2-3 days to complete research and writing projects.
- The Visiting Scholar/Mentor program enables tenure-track faculty to conduct an exchange with leading scholars from other universities.
- The University has institutionalized the PACE award for faculty mentoring campus-wide.

Outreach

- Talking Circles are meetings of American Indian women scientists from different tribes. Through Talking Circles and Workshops, PACE is exploring the barriers to engagement for native women in science and strategies for improving native women's access to science.
- PACE initiated the American Indian Visiting Scholars Program at UM.
- A new office at UM, Research Opportunities in Science for Native Americans (ROSNA), is overseen by the PACE Outreach Director.
- PACE is developing a directory of American Indian scientists to facilitate networking.
- PACE created a set of electronic resources for native women scientists.

Assessment

- The PACE External Advisory Committee is comprised of prominent women scientists from across the U.S. who meet annually to provide guidance to PACE.
- The Evaluation Center at Western Michigan University is the external evaluator for PACE.
- Dr. James Hirstein of the UM Department of Mathematics analyzes the NSF Toolkit data.
- Dr. Chris Fiore and Joanna Legerski are conducting a climate survey and interviewing current faculty and faculty who have retired, resigned, or turned down jobs at UM.

Selected Results

- PACE initially proposed to partially fund three new tenure-track science faculty. Through a variety of mechanisms, PACE helped achieve ten new female faculty hires and one African American male hire. Hiring rates for women science faculty increased from 23% in 2001-2002 and 14% in 2002-2003 to 41% in 2003-2004 and 67% in 2004-2005 under PACE policies.
- Outreach to American Indian women in science has been institutionalized at UM through the development of the Research Opportunities in Science for Native Americans (ROSNA) office.
- PACE catalyzed the formation of the Presidential Task Force on Policy Development and Revision and has helped implement many of its recommendations.
- Science deans agreed to help support the Visiting Scholar/Mentor program and the PACE-initiated mentoring award was institutionalized.
- PACE has used its assessment results to leverage policy change campus-wide.

Products PACE products include four PowerPoint search committee modules; three recruitment pamphlets (*Recruitment vs. Evaluation*; *Evaluating the Applicant Pool*; & *Handling the Campus Visit*); the PACE website; resources for native women scientists posted on the American Indian Higher Education Consortium website; and I. PrettyPaint (2007), *In Our Mother's Voice: Cultural Commentary* by (Lawrence Earlbaum & Assoc., *In Press*).

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Objective

Funded by a five-year National Science Foundation ADVANCE award, the objective of the Earth Institute ADVANCE program at Columbia is to increase the recruitment, retention, and advancement of women scientists and engineers at the university.

Constituents

Faculty and research scientists in the departments and centers affiliated with the Earth Institute and the Lamont-Doherty Earth Observatory, the Fu Foundation School of Engineering and Applied Science, and the Natural Sciences at Columbia. The program works closely with the Vice Provost for Diversity Initiatives to expand successful ADVANCE initiatives to other parts of the University.

Initiatives

Changing the Demographics

- Marie Tharp Visiting Fellowship for distinguished women scientists
- Workshops for department chairs and search committees on best practices for recruiting women scholars
- Departmental transformation awards to increase the number of women visiting scientists and to support recruitment and retention efforts



Marie Tharp, former Columbia scientist & pioneer of modern oceanography

Cultivating an Environment that Attracts, Fosters, and Promotes Women Leaders

- Support for women scholars in the form of workshop leadership awards and research productivity grants during life transitions
- Workshops for untenured faculty
- Lamont Women’s Forum - provides networking and professional development opportunities for women scientists at the Lamont campus.

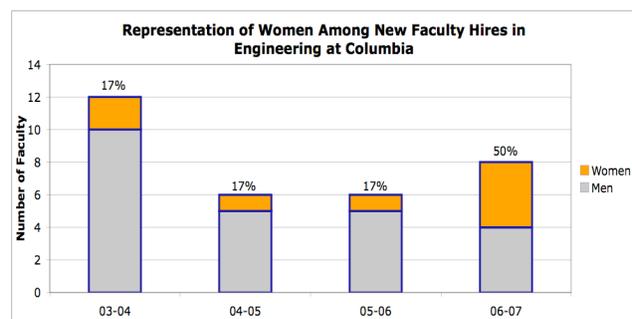
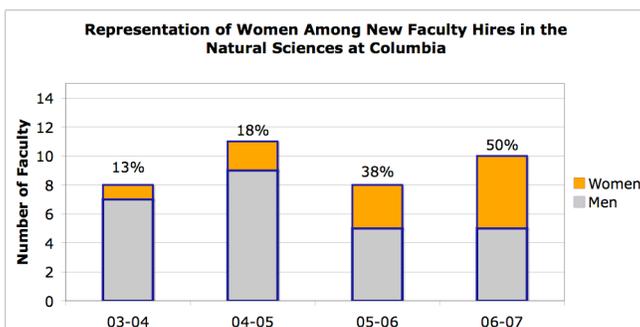
Stimulating an Institutional Culture Shift Using Behavioral and Social Science Research

- Symposium and ongoing lectures series on the Science of Diversity
- Presidential lectures with eminent university leaders who have had an impact on diversity at other institutions
- Research project on the long-term effects of stereotype threat on women scientists
- Workshop on “Women, Minorities and Interdisciplinarity”
- Workshop on “Women, Work, and the Academy,” co-sponsored with Barnard College

Progress & Results

The ADVANCE grant was awarded to the Earth Institute in June 2004. Since that time:

- The proportion of women among new hires has increased from 17% to 50% in the School of Engineering and 13% to 50% in the Natural Sciences.
- The proportion of women on the junior research staff at the Lamont campus has increased from 14% to 20%.
- The program has funded six Marie Tharp Visiting Fellows, one of whom is being recruited by Columbia for a faculty position.



Institutionalization

- A number of ADVANCE initiatives, including the workshop awards and the Tharp visiting fellowship, are being institutionalized through the Vice Provost of Diversity. In 2007, the ADVANCE Associate Director began working part-time in the Vice Provost's office.
- ADVANCE created two support positions that will become permanent: the Assistant Dean for Faculty Development and Diversity in the School of Engineering and the Assistant Director for Academic Affairs and Diversity at the Lamont-Doherty Earth Observatory.
- In 2007 the ADVANCE childcare award became institutionalized through the university's new back-up care program.

Products

- Climate survey reports
- STRIDE Proposal for Recruiting and Retaining Dual-Career Academic Couples
- Best Practices for Search Committees
- Annotated bibliographies on gender bias and research productivity
- Candidate evaluation form (adapted from the University of Michigan ADVANCE program)
- EI ADVANCE website and brochure

Publications

Laird, J.D. et al. (2007), **Assessing the publication productivity and impact of eminent geoscientists**, *EOS Trans., American Geophysical Union*, 88(38): 370-371.

Rhoten, D. and S. Pfirman (2007). **Women in interdisciplinary science: Exploring preferences and consequences**, *Research Policy* 36(1): 56-75.

Laird, J. D., et al. (2007), **The science of diversity**, *Eos Trans. American Geophysical Union*, 88(20), 220.

Bell et al. (2005). **An experiment in institutional transformation: The NSF ADVANCE Program for women at the Earth Institute at Columbia University**, *Oceanography Magazine*, 18 (1), 25-34

Bell, R.E. and J.D. Laird. (2005). **Women, Work, and the Academy**. *EOS Trans., American Geophysical Union*, 86, 278-279.

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Funding Agency: National Science Foundation
Award Information: 5-year, \$3.5 million; \$750,000 per year for 2003-2008

Goal: The NSF ADVANCE program at the University of Rhode Island is a 5-year program to improve and enrich the science, technology, engineering, and mathematics (STEM) academic workforce through the increased representation and participation of women faculty.

- Objectives:**
1. To develop a comprehensive understanding of the status of women STEM faculty
 2. To increase the number of ranked women STEM faculty
 3. To advance the careers of all women faculty, especially STEM faculty
 4. To improve the available networks of support for all women faculty, especially STEM faculty
 5. To plan and implement organizational climate change in collaboration with university leaders

Constituents: STEM faculty in five colleges: Graduate School of Oceanography, College of Engineering, College of the Environment and Life Sciences, College of Arts and Sciences, and College of Pharmacy

- Initiatives:**
- Recruitment:
- Faculty Fellows Program, offering 2-3 year fellowships to women faculty, transitioning to tenure-line appointment.
 - Supplemental funding to start-up packages for regular hires
 - Best practices in recruitment training and materials
 - Dual career initiative

- Faculty Development:
- Incentive Fund Program, offering awards that promote the research careers of women STEM faculty
 - Career workshops
 - Monthly Topical Lunch Series
 - Mentor Training Program

- Work-Life Support:
- Policy review and revision
 - Work-Life Center Website
 - Work-Life Faculty Interview Project
 - Lactation Facilities Project
 - Work-Life Conference

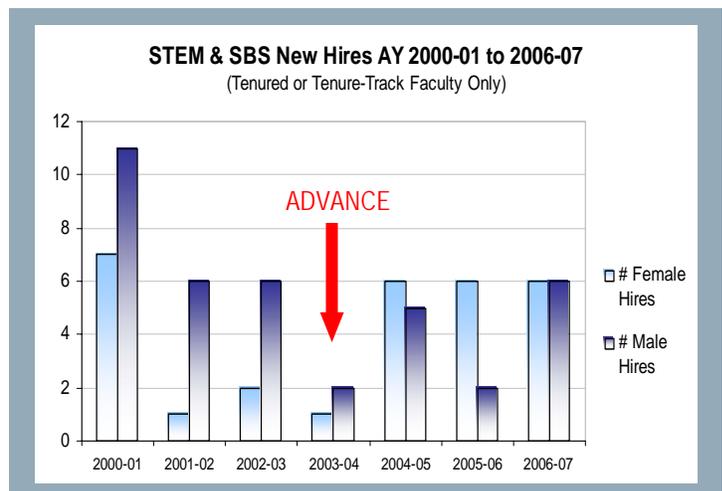
- Climate Change:
- Department Climate Workshops
 - Chairs Leadership Discussion Series
 - Campus-wide annual events
 - Internal Advisory Action Council

- Evaluation:
- Campus-wide *Academic Work Environment Survey*

Selected Results:

- Recruitment:
- 9 Fellows, 7+ influenced hires
 - Dual Career policy statement approved
 - Best Search Practices Presentations

During the 3 academic years prior to ADVANCE (in years 2000-2003) 24% of new STEM hires were women; in the 4 years since ADVANCE (2004-2007), 54% have been women.



Faculty Development:

- 31 Incentive Awards (2004 – 2007) totaling \$188,510
Year 4 (2007) program absorbed by the URI Council for Research Grant Program
- 27 Topical Lunches, over 550 total attendance
- Career workshops: Negotiation Skills, Writing, Mentor Training (two), Research Collaborations, Post-Award Grant Management, others
- University-wide Mentoring Policy and College Mentoring Policies

Work-Life Support:

- Paid Family Leave Policy for faculty approved and implemented
- Several informal social networking events
- Work-Life Center website developed
- 22 faculty work-life interviews
- Dual career policy approved; guidelines under consideration
- First University "Mother's Room" lactation site approved and under renovation

Climate Change:

- 10 departments participated in Climate Change workshops; 6 departments participated in follow-up sessions
- Administrators Summit meeting with President & Provost March 2005
- Campus-wide events: Virginia Valian visit, November 2004, "ADVANCE Day" with Robert Drago, October 2005; ADVANCE Day of Research Week, 2005,2006; Diversity Week presentations
- Chairs Leadership Discussion Series launched November 2005
- Internal Advisory Action Council (comprised of University leaders) meetings

Evaluation:

- Separate internal and external program evaluation
- 4 Focus Groups conducted – *key behaviors needed to support women faculty*
- 2004 Climate survey distributed to 700 faculty, with 40% return rate
- Follow-up survey distributed Fall 2007
- Chairs' survey of climate change

Products

- *Faculty Recruitment Handbook and Faculty Recruitment Web Tutorial*
- *Faculty Mentoring Handbook and Faculty Mentoring Web Tutorial*
- *Work-Life-Family Center Website*
- *Academic Work Environment Survey Executive Summary*

Principal

Investigators:

Lynn Pasquerella, Vice Provost, Academic Affairs (PI)
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Joan Peckham, Professor of Computer Science (co-PI)
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Principal Investigators and:

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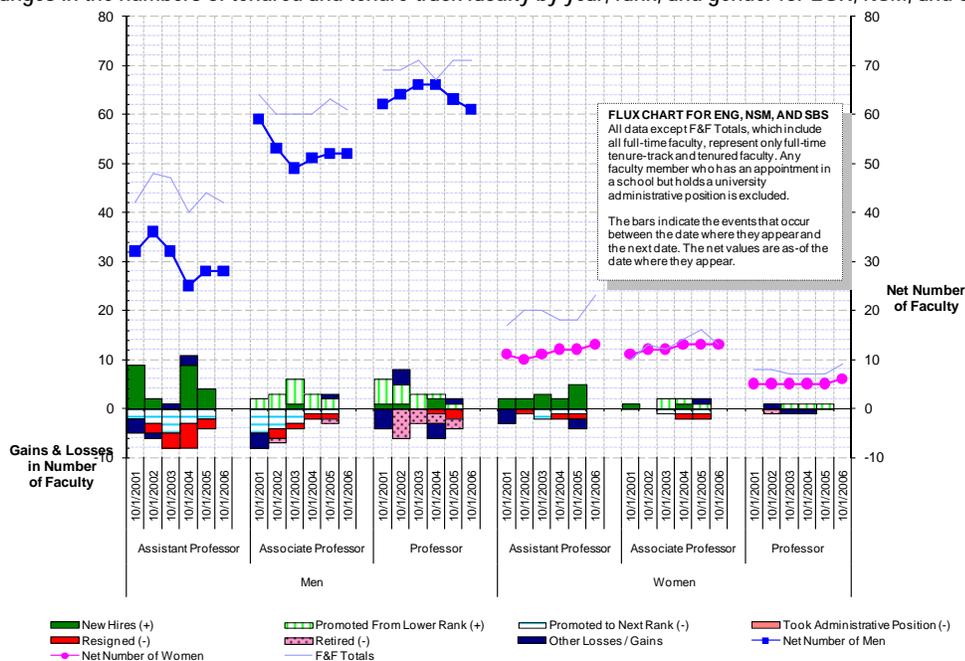
Funding Agency: National Science Foundation

- Goal and Objectives** The goal of the **NSF ADVANCE initiative** is to increase the recruitment, retention and promotion of women faculty in academic science and engineering. **UAB ADVANCE** aims to reach this goal by increasing the visibility of female scientists, enhancing recruitment efforts and providing development opportunities for faculty.
- Constituents** UAB ADVANCE has targeted 17 departments in the Schools of Natural Sciences and Mathematics (NSM), Engineering, and Social and Behavioral Sciences (SBS) as well as the Department of Finance, Economics and Quantitative Methods in the School of Business.
- Initiatives**
- Visibility
- New PI appointed, Dr. Claire Peel, Interim Associate Provost for Faculty Development & Faculty Affairs
 - Established the Office for the Advancement of Women in Science and Engineering (OAWSE)
 - UAB ADVANCE Faculty Climate Survey, 2004 and 2007
 - Established UAB Commission on the Status of Women (Office for Equity and Diversity)
 - Introduction of ADVANCE Distinguished Female Visiting Scholar Program
- Recruitment
- UAB ADVANCE Supplemental Start-up Funds
 - UAB Spouse/Partner Relocation Program
 - UAB Search Committee Training
- Retention and Promotion
- UAB ADVANCE Faculty Research Awards and Pilot Grants
 - UAB ADVANCE Department Chair Training
 - UAB ADVANCE Mentoring Program
 - UAB ADVANCE Lunch and Learn Series
- Policies
- New Tenure Clock Extension Policy
- Results**
- Recruitment
- 3 women Assistant Professors, tenure track, hired in 2004
 - 2 women Assistant and Associate Professors, tenure track, hired in 2005
 - 5 women Assistant Professors, tenure track, hired in 2006
 - 4 women Assistant Professors, tenure track, 1 tenured Professor, and 1 Dean hired in 2007
- Retention and Promotion
- 12 UAB ADVANCE Faculty Research Awards in 2004 (7-SBS, 4-NSM, 1-Engineering)
Total amount- \$152,112
 - 10 UAB ADVANCE Faculty Research Awards given in 2005 (6-SBS, 3-NSM, 1-Engineering)
Total Amount \$121,920
 - 12 UAB ADVANCE Faculty Research Awards in 2007 (6-SBS, 4-NSM, 2-Engineering), 1 Pilot Grant in Gender Equity awarded Total ADVANCE Funded Amount- \$136,953
- Policies
- Tenure Clock Extension Policy implemented in 2005

Numbers of faculty promoted by school, department, and gender for EGR, NSM, and SBS.

School	Department	Rank Change	2006		2007		Total
			Women	Men	Women	Men	
ENG	Biomedical Engineering	Assoc Prof. to Prof.		1			1
	Materials Science & Eng	Instructor to Asst Prof.	1				1
NSM	Chemistry	Asst Prof. to Assoc Prof.		1	1	1	3
	CIS	Asst Prof. to Assoc Prof.				1	1
	Physics	Asst Prof. to Assoc Prof.				1	1
SBS	Political Science	Assoc Prof. to Prof.	1			1	2
	History	Asst Prof. to Assoc Prof.		1		1	2
		Instructor to Asst Prof.	1				1
	Justice Sciences	Instructor to Asst Prof.	1				1
	Psychology	Asst Prof. to Assoc Prof.	1	1			2
		Instructor to Asst Prof.		1			1
	Sociology	Instructor to Asst Prof.	1				1
	Anthropology	Asst Prof. to Assoc Prof.				2	2
Grand Total			6	5	1	7	19

Changes in the numbers of tenured and tenure-track faculty by year, rank, and gender for EGR, NSM, and SBS.



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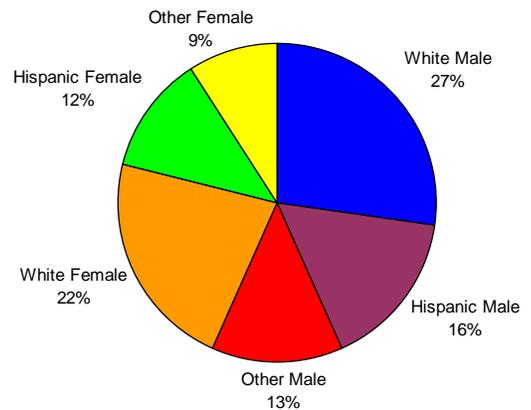
NSF ADVANCE
INSTITUTIONAL TRANSFORMATION
FOR FACULTY DIVERSITY

**NSF ADVANCE
AT THE UNIVERSITY OF TEXAS AT EL PASO**

Funding Agency: National Science Foundation
Award Amount: \$3.4 million/ 5 years

- Objective** NSF ADVANCE at the University of Texas at El Paso is a five-year project to recruit, retain, and advance women and underrepresented minorities in academic science and engineering.
- Constituents** 18 target departments in the Colleges Engineering, Science, Liberal Arts, and Business
- Initiatives**
- Policy and Recruitment - formulates faculty support and retention policies, supports recruitment efforts, and provides research support
 - Collaborative Leadership - facilitates productive and supportive departmental climates, identifies innovative leadership behaviors, and shares best practices
 - Faculty Development – expands faculty mentoring for women and helps faculty develop integrated plans for career success
 - Evaluation - includes both formative and summative self-assessments and review by an internal action board and external advisory board
- Selected Results**
- Since 2003:
- 42% of the academic tenure track hires in ADVANCE departments have been women
 - The number of women in tenured/tenure track positions have increased from 38 (15%) in 2003 to 62 (23%) in 2006
 - 11 dual career couples were hired; ADVANCE provided \$248,145 in first year salary support for 6 of those dual career faculty
 - 19 women received \$230,000 in additional start-up money
 - No significant differences by gender for salary, space allocation, and start-up packages
 - 37 faculty received over \$214,000 in Graduate Research Assistant awards
 - Over 100 new faculty have participated in the Faculty Mentoring Program for Women
 - 38 faculty have participated in the IMPACT Seminar, a week-long professional development and leadership program
 - All women who have come up for tenure and/or promotion during the past four years have been successful

Tenured/Tenure-Track Hires since 2003,
n=67



- More women are chairing science and engineering departments and serving on promotion and tenure committees
- Three of the four colleges that house ADVANCE departments now have formal third year review policies; the College of Engineering is developing such a policy
- ADVANCE conducted research on Latinas' pathway to the Ph.D. and interviewed all UTEP ADVANCE faculty women to record their experiences with recruitment, retention, and promotion
- Program information and results disseminated nationally through a Web site, brochures, submissions to journals and other publications, presentations at national conferences, and networking with ADVANCE institutions and other professional networks

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NSF ADVANCE at Kansas State University

Funding Agency: National Science Foundation
 Total Funding Level for K-State: \$3,500,000 for 2003 - 2008

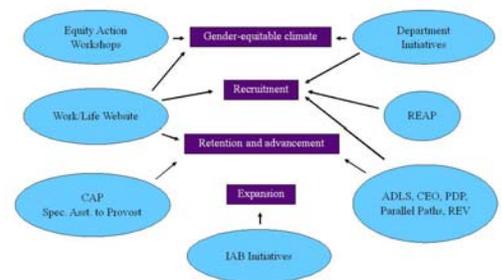
Goal The National Science Foundation recognizes that the lack of women's full participation at the senior level of academe is often a systemic consequence of academic culture. NSF created the ADVANCE Institutional Transformation program to catalyze organizational change that will enhance the full participation and advancement of women in science and engineering.

NSF ADVANCE at K-State is a five-year project to create a transformed institution that purposefully attracts, retains, supports, and advances women in the disciplines of science, engineering, and mathematics (SEM).

Constituents The project includes the four colleges (27 SEM departments) whose faculties include the majority of women scientists and engineers on campus, and in which women are the most under-represented. We began with six partner departments (Animal Sciences & Industry, Biological & Agricultural Engineering, Biology, Chemical Engineering, Diagnostic Medicine/Pathobiology, and Geology) who agreed to learn more about gender issues and to initiate self-studies of their policies, procedures, and other documents to ensure that they were gender-equitable. In year four of the project, we expanded our efforts to include four additional partner departments (Agronomy, Chemistry, Clinical Sciences, and Computing & Information Sciences). Heads of the other SEM departments constitute the project Internal Advisory Board.

- Initiatives**
- Departmental Initiatives: Aiming to Become Models for Gender Equity**
- Career Milestones for Academic Personal Success
 - Departmental Policy Review
 - Departmental Website Review
 - Equity Action Workshops
 - Internal Advisory Board Departmental Initiatives

Project Goals and Initiatives



College Initiatives: Mentoring, Recruiting, and Professional Development

- | | |
|--|--|
| <ul style="list-style-type: none"> • College of Agriculture • College of Arts & Sciences • College of Engineering | <ul style="list-style-type: none"> Professional Development Program (PDP) Career Enhancement Opportunities (CEO) Recruiting to Expand Applicant Pools (REAP) Research Enhancement Visits (REV) Parallel Paths |
| <ul style="list-style-type: none"> • College of Veterinary Medicine | |

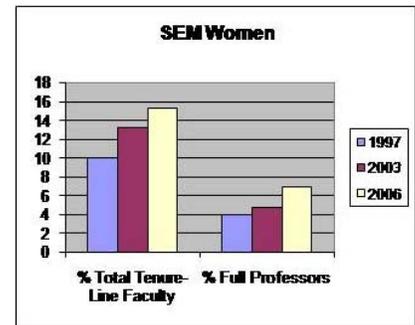
Project-wide Initiatives: All Science, Engineering, and Mathematics Disciplines

- | | |
|---|---|
| <ul style="list-style-type: none"> • Career Advancement Program (CAP) • Distinguished Lecture Series (ADLS) | <ul style="list-style-type: none"> • Special Assistant to the Provost • Work/Life Resources Website |
|---|---|

Results over first four years of the project

- Increased gender awareness and activities in departments
 - 8 departmental websites reviewed and revised
 - 6 department evaluation and tenure & promotion policies reviewed and revised
 - 9 IAB departments received awards to conduct recruiting, mentoring, and website activities

- Promotion, tenure, and professional advancement of SEM women
 - 11 women promoted to full professor
 - 11 women promoted to associate professor with tenure
 - 3 women associate professors received tenure
 - 10 SEM women promoted into or selected for leadership roles at K-State
 - 3 women full professors from K-State SEM departments selected for leadership positions at other institutions



- Excellent levels of interest and participation in our initiatives
 - 42 of 51 eligible women participating in the Distinguished Lecture Series
 - 18 of 51 eligible women participating in CAP
 - 22 of 24 eligible women participating in the Professional Development Program
 - 27 of 30 eligible women participating in CEO
 - 10 of 15 eligible women participating in REV
 - 26 faculty members participating in Parallel Paths
- Effective recruiting implemented in many departments
 - Recruiting trips by faculty supported by REAP in 2004-05 resulted in larger applicant pools with more women; result was three women hired in these searches
 - 37 women hired into tenure-track lines in 20 SEM departments (includes 5 positions converted from non-tenure track to tenure-track)
 - 4 SEM departments without junior women faculty when the project began now have women faculty

Products:

5 published papers in conference proceedings

Book chapter: Ruth A. Dyer and Beth A. Montelone, "An Institutional Approach to Establishing Professional Connections," in *Transforming Science and Engineering: Advancing Academic Women*, A. Stewart, J. Malley, and D. LaVaque-Manty, Eds., The University of Michigan Press, 2007.

Brochure: ADVANCE Distinguished Lecture Series (ADLS) *Tips on Hosting a Speaker* brochure.

<http://www.k-state.edu/advance/SeminarsEvents/Tips%20on%20Hosting%20a%20Speaker.pdf>

Survey Instruments: University Community and Climate Survey

<http://www.k-state.edu/advance/ReportsProgress/reports.html>

Online Resources:

Gender Equity Website Evaluation Rubric:

http://www.k-state.edu/advance/Initiatives/website_review.html

Career MAPS Template and Benchmarks

http://www.k-state.edu/advance/Initiatives/career_maps.html

Work/life Resources Website

<http://www.k-state.edu/worklife>

Project Leadership (Executive Committee and Principal/Co-Principal Investigators)

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 Beth Montelone, Associate Dean, Arts & Sciences
 Fred Cholick, Dean, Agriculture
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 Ralph Richardson, Veterinary Medicine
 Stephen White, Dean, Arts & Sciences

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 Dana Britton, Professor, Sociology
 Kimberly Douglas, Director, Women in Engineering & Science Program
 Richard Gallagher, Associate Dean, Engineering
 Bonnie Rush, Professor and Head, Clinical Sciences
 Rebecca Wood, ADVANCE Project Coordinator

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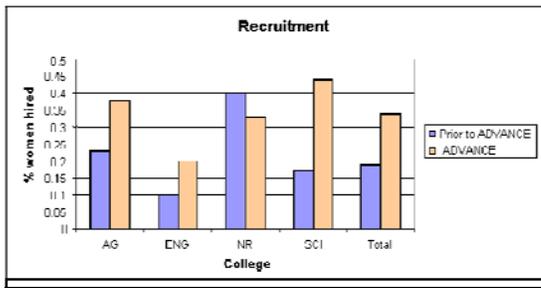
**NSF ADVANCE INSTITUTIONAL TRANSFORMATION
AT UTAH STATE UNIVERSITY**

Funding Agency: National Science Foundation
NSF Program Officer: Laura Kramer (lkramer@nsf.gov)
Funding Level for USU: \$600,000/year for 2003-2008

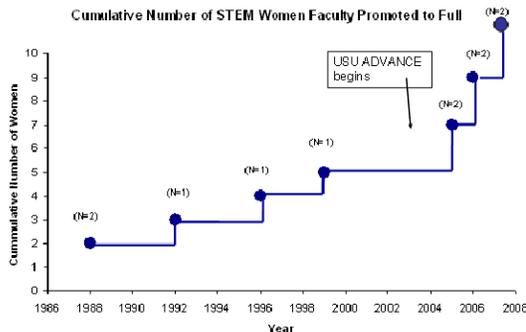
THE GOAL OF THE ADVANCE INSTITUTIONAL TRANSFORMATION PROGRAM IS TO PROMOTE INSTITUTIONAL TRANSFORMATION IN SCIENCE AND ENGINEERING FIELDS BY INCREASING THE PARTICIPATION, SUCCESS AND LEADERSHIP OF WOMEN FACULTY IN ACADEMIC SCIENCE AND ENGINEERING.

- Objective** **ADVANCE at Utah State University** is a five-year program (2003-2008) with the objectives to:
- 1) Increase women's recruitment, retention, and advancement at USU,
 - 2) Improve the climate and work/family balance for faculty at USU,
 - 3) Bring about policy and procedural changes to sustain advancement,
 - 4) Disseminate successful elements of ADVANCE across USU and to other institutions, and
 - 5) Increase collaborative research opportunities for minority women faculty and students.
- Constituents** 19 departments and their faculty with tenure-track appointments in the four colleges related to science and engineering: College of Engineering, College of Science, College of Natural Resources, and College of Agriculture.
- Institutional Transformation: To increase dissemination, faculty support programs are also available to faculty in non-STEM fields: College of Business, College of Education and Human Services, and College of Humanities, Arts, and Social Sciences.
- Initiatives** Individual Initiatives: Support to Women Scientists and Engineers
- Collaborative Research Seed Grants (involving women faculty on interdisciplinary teams)
 - Faculty Career Leadership and Work/Personal Development Workshops
 - Transitional Support Program (research support during life crises)
 - Associate to Full Faculty Grants
- Departmental Initiatives: Support to Departments Aiming to Become Models for Gender Equity
- Department Transformation Initiative
 - Science & Engineering Recruitment Team
 - Measures of Trends and Progress (data research, climate surveys, external evaluation)
- Campus-wide Initiatives: Support for Efforts at Any Level
- Policy code changes: e.g. P&T, Dual Career Assistance, Part-Time Tenure-Track, Faculty Senate committee on Diversity and Equity
 - Organization and Structure for Sustainability: e.g. Assoc. Vice Provost for Faculty Development and Diversity
 - Ombudsperson program for P&T
 - Interactive Theatre program
 - Web-based training for reduction in bias
- Selected Reports, Publications and Resources Featured on the USU ADVANCE Website
- About ADVANCE at USU, including the proposal to NSF
 - Quarterly and Annual Progress Reports
 - Search Committee Tools
 - P&T Advice & Guidelines
 - Job Satisfaction Survey Results
 - Climate Survey Results

Selected Results



Recruitment: The Utah State ADVANCE team set a recruitment goal of hiring women in the STEM colleges at or above their availability in the national pool. Overall hiring for the STEM colleges was at 54% of availability during the five years prior to ADVANCE and at 92% of availability for the first three years of ADVANCE.



Advancement: At the start of the Utah State ADVANCE project there were five women full professors in the four STEM colleges. During the ADVANCE project at USU, six women have been promoted to full professor. In 2005, 2006, and 2007 a greater percentage of women associate professors were promoted to full than men associate professors.

Principal Investigator

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Co-Principal Investigators

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Program Staff

Program Leader: Trish Kalbas-Schmidt (trishk@cc.usu.edu)

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ADVANCE institutions will serve as exemplars for other colleges and universities aiming to increase the participation and status of women faculty in science and engineering.



NSF ADVANCE PROGRAM AT UMBC

(UNIVERSITY OF MARYLAND, BALTIMORE COUNTY)

FUNDING AGENCY: NATIONAL SCIENCE FOUNDATION

OBJECTIVE

The ADVANCE program at UMBC is designed to enhance policies and practices affecting the recruitment, selection, promotion, and transition of women faculty in science, technology, engineering, and mathematics (STEM) so that women scholars will:

- be appropriately represented in all STEM departments;
- advance through the faculty ranks and into leadership positions; and
- reflect the diversity of the UMBC student body.

CONSTITUENTS

Faculty that benefit from the institutional transformation programs and initiatives offered through this program are in all colleges at UMBC – the College of Natural and Mathematical Sciences, the College of Engineering and the College of Arts, Humanities, and Social Sciences. Direct services are provided for nearly 200 faculty in 10 STEM departments.

INITIATIVES

RECRUITMENT

ADVANCE Research Assistantships: To assist STEM chairs in successfully recruiting new women STEM faculty by offering *additional* resources in the form of one-year research assistantships added to the recruitment package of new women STEM faculty to ensure the establishment of a successful research program.

Faculty Horizons: To provide upper-level graduate students and post-doctoral fellows, particularly women in STEM with an emphasis on including women from underrepresented groups, with the knowledge and tools necessary to establish a successful and productive career in the academy.

RETENTION AND ADVANCEMENT

Faculty ADVANCEment Workshops: To provide tenure-track and tenured faculty with information necessary to successfully advance through the ranks of academia.

Eminent Scholar Mentor Program: To facilitate a mentoring relationship between UMBC STEM female faculty, particularly those who are nearing a critical transition point in their career, and a prominent researcher in their field to enhance the junior faculty member's career.

ADVANCE Research Assistantships: To ensure the success of STEM faculty, particularly women, who are moving through the tenure, promotion, and advancement process; and, support faculty who have a proven track record or plan of advancing women faculty in STEM.

Faculty Sponsorship Committee: A committee of senior STEM women work with those STEM women going through a university personnel review (e.g. 3rd year, tenure and promotion, or promotion to full-professor) to provide them with sample self-assessments, dossier reviews and feedback; establishes a network of women who provide support to each other during the process.

LEADERSHIP DEVELOPMENT

Cohort Model: Establishes and supports a group of senior women at UMBC in order to institute leadership goals; develop strategies for advancement; work with a career coach; create a plan for intentional career advancement; explore challenges, benefits and rewards of leadership.

EVALUATION

ADVANCE is comprised of an internal and external evaluation component in order to better understand the comparative issues of psychological climate and workload equity in STEM and to enhance the programs offered through ADVANCE at UMBC.

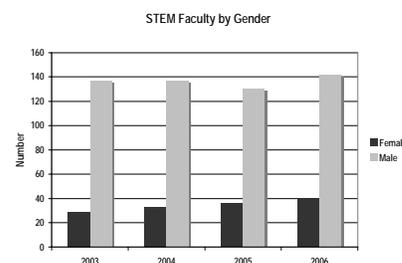
- Faculty climate and work life survey
- Program assessments
- New STEM faculty interviews
- STEM faculty focus groups
- Survey of Leadership Cohort participants

SELECTED RESULTS

RECRUITMENT

Since the inception of ADVANCE at UMBC:

- The number of women in tenured and tenure track STEM positions has increased 37.9% (Fall 2003 N=29, Fall 2006 N=40)
- The number of men in STEM tenured and tenure track faculty positions has increased 3.6% (Fall 2003 N=137, Fall 2006 N=142)





NSF ADVANCE PROGRAM AT UMBC

(UNIVERSITY OF MARYLAND, BALTIMORE COUNTY)

FUNDING AGENCY: NATIONAL SCIENCE FOUNDATION

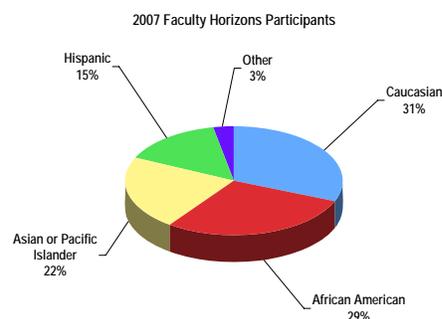
SELECTED RESULTS

RECRUITMENT

Faculty Horizons: Four successful programs held thus far with nearly 250 participants (94% women, 6% men). *All participants agree that they would recommend it to others.*

2007 Demographics:

- 31% Caucasian, 29% African American, 23% Asian, and 15% Hispanic
- 41% post-doctoral fellows, 41% graduate students, 10% assistant professors, and 8% other including research and visiting professors.



Faculty Hiring

Academic Year 2004 – 2005: Women were hired for 5 of the 7 STEM tenure-track positions.

Academic Year 2005 – 2006: Women were hired for 2 of the 4 STEM tenure-track positions. The position in Chemical and Biochemical Engineering is a *Clare Boothe Luce Professorship*.

Academic Year 2006 – 2007: Women were hired for 5 of the 6 STEM tenure-track positions.

RETENTION

ADVANCE Research Assistantships: To date 32 ADVANCE RA positions have been awarded, 20 to assistant professors (8 through the chair program), 8 to associate professors and 4 full professors.

Eminent Scholar Mentor Program: Nine of the STEM Assistant Professor women have established relationships with mentors in their research field. Additionally, the Information Systems department has established 3 relationships for their male junior faculty based on this program.

PRINCIPAL INVESTIGATOR

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NSF ADVANCE at Virginia Tech

Funding Agency: National Science Foundation

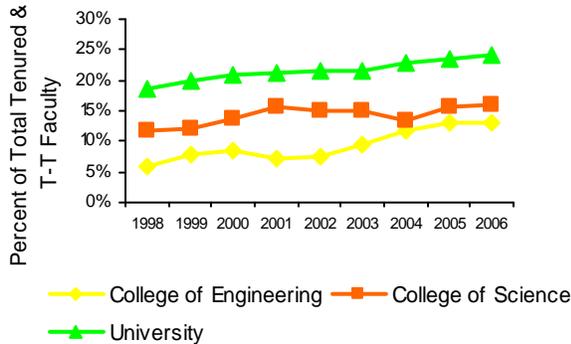
Funding Level: \$3,500,000 over 5 years

- Objective** *AdvanceVT* is a five-year program designed to increase the participation and advancement of women in academic science and engineering careers through comprehensive and creative strategies aimed at institutional transformation.
- Overview** Consistent with the goal of institutional transformation, *AdvanceVT* programs and activities extend university wide, with a particular focus on Virginia Tech's Colleges of Science and Engineering.
- Initiatives**
- Pipeline Element: Advancing women into faculty careers**
- Mission: Increase the number of women electing to pursue academic careers through empowerment and skill building programs.
 - Activities: Preparing the future professoriate, postdoctoral and graduate fellowship programs, brown bag lunch seminars, lecture series receptions, focus groups and skill building workshops, and a graduate student career preparation conference.
- Recruitment Element: Increasing the representation of women**
- Mission: Increase the representation of women at all ranks in science and engineering by working with search committees and building early and long-term connections with highly qualified women.
 - Activities: Resource database for recruiting, search committee education and support, visiting scholar lecture series, and building connections between Virginia Tech and outstanding women potential faculty candidates.
- Leadership Element: Empowering women as leaders and scholars**
- Mission: Increase the number of women in administrative and technical leadership positions in science and engineering.
 - Activities: Distinguished lecture series for visiting women researchers and scholars, administrative and technical leadership placements, research grant support, and faculty leadership development program.
- Institutional Change Element: University Policies and Climate**
- Mission: Implement policy changes that remove barriers to success and nurture the development of every faculty member to her or his fullest potential.
 - Activities: Review existing policies and procedures, study policy implementation and effectiveness, draft and move new and/or revised policies through university governance, compile and publicize successful strategies for creating and maintaining positive climate in departments, educate department heads and other university leaders on unconscious bias and diversity issues.
- Selected Results**
- The number of women tenure track faculty in the College of Engineering increased from 26 in 2003 to 40 in 2007, and the number of female full professors doubled.
 - Professor of physics Beate Schmittmann became the first female department head in the College of Science in August 2006.
 - Dual career hiring guidelines and a dual career assistance office are now available.
 - Sixteen untenured women faculty in science and engineering have received research seed grants to enable them to develop more competitive proposals for external funding. Two subsequently received NSF CAREER awards.
 - Thirteen tenured women faculty have participated in *AdvanceVT*'s leadership development program. One is now a dean at another institution, another a department head at Virginia Tech.

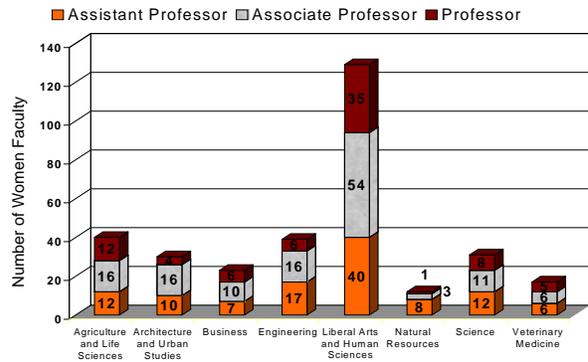
ADVANCE institutions will serve as exemplars for other colleges and universities to increase gender equity in academic science and engineering careers.



Women Faculty as a Percentage of Full-Time, Tenured and Tenure-Track Faculty



Women Faculty by Rank and College, 2006



Products

- Faculty work-life survey identified factors contributing to job satisfaction and issues of concern regarding recruitment, leadership, and university and departmental climate.
- Revised university policy on stopping the tenure clock now provides automatic extension of probationary period for new parents.
- New modified duties policy permits tenured or pre-tenure faculty to request a semester of modified duties at full pay to accommodate special family or personal health circumstances.
- New part-time employment policy allows pre-tenure faculty to request a part-time appointment for one semester up to two years for family or personal health reasons and tenured faculty to request term or permanent part-time appointment for personal or professional reasons.
- New work-life grant program provides temporary financial assistance to departments to enable them to continue support for graduate students during pregnancy and childbirth.

Principal Investigator

Mark McNamee
University Provost & Vice President for Academic Affairs

Co-Principal Investigators

Patricia Hyer, Associate Provost for Academic Administration
Beate Schmittmann, Professor and Department Head, Physics
Tonya Smith-Jackson, Associate Professor, Industrial and Systems Engineering

Other Leadership Team Members

Elizabeth Creamer, Professor, Educational Leadership and Policy Studies
Jack Finney, Associate Dean, College of Science
Roseanne Foti, Associate Professor, Psychology
Nancy Ross, Associate Dean, College of Science
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Eileen Van Aken, Associate Professor, Industrial and Systems Engineering

Director

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Graduate Research Assistants: Ane Johnson, Tonya Saddler

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ADVANCE institutions will serve as exemplars for other colleges and universities to increase gender equity in academic science and engineering careers.



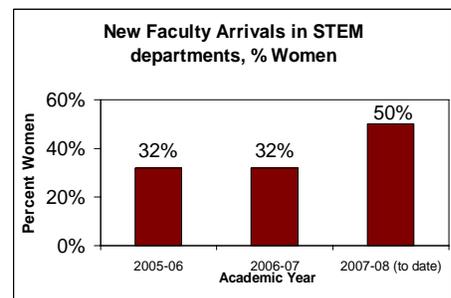
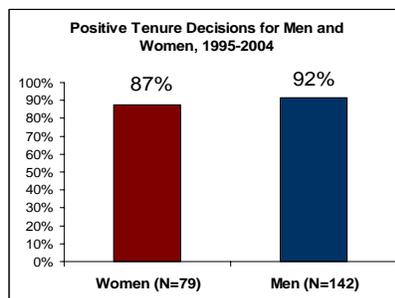
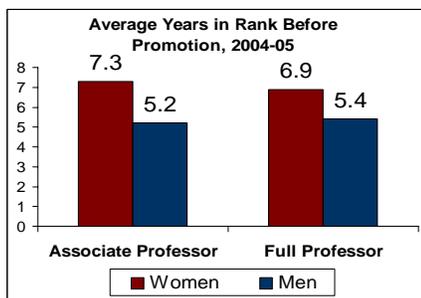
Objective Brown’s ADVANCE Program supports new initiatives for formal faculty development programs to ensure that all faculty – men and women – have access to resources that cultivate opportunities for success at the highest levels in academia and academic leadership. The overarching goals of the new programs are to provide faculty with institutional and departmental resources that enhance access to peer networks at Brown and in the wider academic community, foster leadership opportunities, and increase opportunities for collaboration and for obtaining grant funding. This program was funded by a 5-year, \$3.3 million grant from the National Science Foundation.

Constituents The program initiatives encompass faculty in 13 science and engineering departments at Brown: Applied Mathematics, Chemistry, Cognitive and Linguistic Sciences, Computer Science, Engineering, Geological Sciences, Mathematics, Physics, and the five basic science departments in the Division of Biology and Medicine (Ecology & Evolutionary Biology; Molecular Biology, Cell Biology & Biochemistry; Molecular Microbiology & Immunology; Molecular Pharmacology, Physiology, & Biotechnology; Neuroscience).

Initiatives

- *Department Chair Workshops*
- *Administrator Shadowing Program*
- *Awards to Develop Scientific Leadership* support teaching release time for women assuming a significant leadership role in their own scientific community (for example, president of a scientific society or journal editor).
- *Leadership Support Fund* for faculty to attend administrator training programs at other institutions. It also sponsors workshops at Brown that develop leadership skills.
- *Visiting Scholars Program*
- *Mentoring Program*
- *Coordinator of Research Opportunities* proactively identifies and brokers opportunities for faculty collaboration, for obtaining research support, and for negotiating the funding process.
- *Career Development Awards* provide funding to assistant professors and mid-career faculty to forge key networks of senior scholars at other institutions who can serve as collaborators, role models, and sponsors.

Moving from our baseline towards our desired outcomes



Women at Brown spend more years in rank before promotion and are less likely to be tenured than men.

But Brown has increased its efforts to recruit more women and minority faculty and has had much success.

Desired Outcomes

- Reduce faculty attrition (particularly women and minority faculty)
- Increase the number of women promoted to full professor
- Decrease time women spend in rank before promotion to full professor
- Increase number of women rising to leadership positions in administration or in their own academic discipline
- Prevent mid-career burnout by encouraging collaborative projects



Progress Towards Desired Outcomes

- Awarded 6 Career Development Awards to faculty in STEM departments (average award: \$11,400)
- Second annual Career Development Award Request for Proposals announced, proposals due Nov. 1st.
- Dr. Lisa Frehill, our first Visiting Scholar helped us plan the implementation of our mentoring and department chair workshops
- Working groups are developing department chair workshops
- Amy Robb joined the ADVANCE staff in September 2007 as the new Coordinator of Research Opportunities
- Launching awards to Develop Scientific Leadership, Leadership Support Fund, and Administrator Shadowing Program

Products

Developed web site with program information and links to resources, including National Reports and Data on Women in Science and Engineering, ADVANCE Resources, and institution-specific resources for Brown Faculty: <http://www.brown.edu/Administration/Provost/Advance/res.html>

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Managing Director Mariko Chang
Mariko_Chang@brown.edu; 401-863-2943

Steering Committee Clyde Briant, Vice President for Research
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Karen Fischer, Professor of Geology
Tayhas Palmore, Professor of Engineering
Johanna Schmitt, Professor of Ecology & Evolutionary Biology

Contact Information Website: <http://www.brown.edu/Administration/Provost/Advance/>
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Box 1971
Providence, RI 02912



Project Title

ADVANCE Institutional Transformation Award: The Path to Leadership: Collaborative Institutional Change

Goal

The Cal Poly Pomona ADVANCE program strives to create a university-wide system of recruitment, retention and development that will enable diverse faculty in STEM disciplines, including women, to advance to leadership positions. This transformation relies on a collaborative and participative approach, both on-campus and with other colleges and universities. Partnerships will be established with minority-serving institutions to encourage women and underrepresented minority students to pursue a faculty career. Our institutional change effort focuses on four key areas, each led by a faculty member designated as an ADVANCE Scholar: Assessment, Recruitment, Career Development, and Leadership Development.

Constituents

ADVANCE activities are directed to science and engineering faculty in three schools: College of Engineering, College of Science, and College of Agriculture. In total we target 17 departments and over 200 faculty members. In addition, faculty from other colleges are participating in the implementation of the project.

Project Award

The NSF ADVANCE award to Cal Poly Pomona is \$3,299,921 for 5 years.

Initiatives

■ Assessment

- ✓ Conduct faculty focus groups in STEM departments
- ✓ Develop and implement faculty satisfaction survey
- ✓ Develop plan for ongoing assessment of faculty salary, satisfaction, and success

■ Recruitment

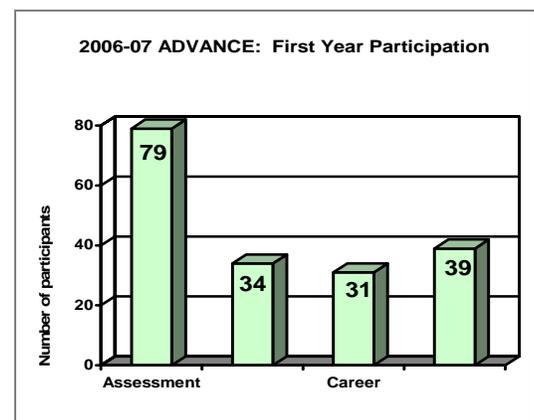
- ✓ Improve search committee and recruiting practices (workshops, mini-grants for depts.)
- ✓ Create a new Handbook for Search Committees
- ✓ Develop partnerships with minority serving institutions (HBCU, HSI & MSI): mini-grants, visiting graduate students
- ✓ Pilot a Partner Referral Program

■ Career Development

- ✓ Writing circles for RTP candidates and workshops for RTP committees
- ✓ Faculty Reading Circles to explore current issues in education while promoting collegial relations
- ✓ Brown Bag Series features faculty speakers on issues of career development and work-life balance
- ✓ Faculty development programs on teaching and learning
- ✓ Teacher-Scholar Grant Development Program
- ✓ Coaching program on enhancing service to the university

■ Leadership Development

- ✓ Faculty ADVANCE Scholars provide program leadership
- ✓ JavaNet: an informal mentoring initiative featuring weekly coffee and conversation for women faculty in STEM
- ✓ ADVANCE Mentor program on career pathways
- ✓ Panel Discussion Series to facilitate discussions on issues of institutional development, career development, leadership and advancement in STEM fields
- ✓ Colloquium Series to bring campus leaders in education and/or industry to discuss challenges and concerns to advancing in STEM disciplines



Selected Results

- Eight Faculty Focus Groups were held in the spring of 2007 with 40 faculty from the College of Science and 39 faculty from the College of Engineering participating.
- Five faculty members were awarded Teacher-Scholar Grant Development Awards, jointly funded by the ADVANCE program and the University.
- Widespread participation in JavaNet with 27 participants representing 5 colleges and 3 support offices attending at various times.
- Discussions underway with five minority-serving institutions about establishing partnerships to collaboratively develop the pipeline of underrepresented minorities preparing for faculty positions.

Products:

- **Essay:** "ADVANCE Topicals", written by the ADVANCE Scholars or Co-PIs, to report findings to the campus on assessment, recruitment, career development and leadership development in the STEM disciplines.
- **Calendar:** ADVANCE Quarterly Bookmarks listing program events.
- **Brochure:** "ADVANCE Search Committee Resources Brochure" provides hints to STEM department search committees on increasing diversity within their applicant pools and to better attract strong candidates.
- **Database:** CPP ADVANCE Childcare Database provides information on childcare centers within a five, ten and fifteen mile radius of the campus. It is part of the Faculty Resource Package and featured on the ADVANCE website.
- **Data:** ADVANCE Appreciative Inquiry Focus Groups: Summary of Findings and Recommendations, authored by Dr. Jill Nemiro, Co-PI for the CPP ADVANCE grant. Provides analysis of data gathered from STEM faculty focus groups using the Appreciative Inquiry Method.
- **Internet Dissemination:** <http://www.csupomona.edu/advance> The official Web site for CPP's ADVANCE award, recently re-launched with a new layout and better resources and information for interested campus members and outside institutions.

Principal and Co-Principal Investigators

Dr. Barbara A. Hacker, Principal Investigator and Associate Dean, College of Engineering
Dr. Edward C. Hohmann, Co-Principal Investigator and Dean, College of Engineering
Dr. Jill Nemiro, Co-Principal Investigator and Associate Professor, Psychology & Sociology
Dr. Donald O. Straney, Co-Principal Investigator and Dean, College of Science
Dr. Peggy Perry, Co-Principal Investigator and Director, Faculty Center for Professional Development

Project Management

ADVANCE Steering Committee supports successful project implementation from an operational perspective and provides guidance to the leadership team in the management of the project. Members of the Steering Committee include the PI and Co-PIs, the AVP for Faculty Affairs, the AVP for Research & Graduate Studies, the Director of the Faculty Center for Professional Development, the Director of Diversity and Compliance, the Executive Director of Institutional Research, Assessment and Planning, the ADVANCE Scholars, the external evaluator, and representatives from the Colleges of Science, Engineering and Agriculture faculty.

Advisory Committee to the Provost on the Status of Women in STEM Disciplines evaluates data on equity parameters and outcomes of ADVANCE initiatives, and for recommending action to ensure equity. This allows the Provost to provide guidance to the program and to affect institutional change in support of the program goals. Members include the ADVANCE Co-PIs, the Chair of the Academic Senate, the Director of the Faculty Center for Professional Development, the Director of Diversity and Compliance, the Executive Director of Institutional Research, Assessment and Planning, and four faculty members.

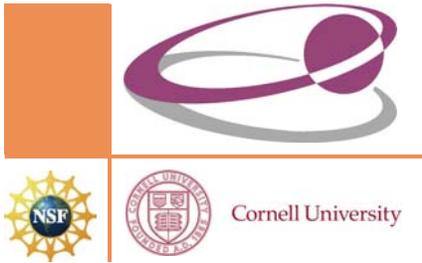
Key Project Staff

Mary Lucero Ferrel, Project Coordinator
Dr. Susan Tucker, External Evaluator

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Program: **ADVANCE Institutional Transformation**
 Funding Agency: National Science Foundation
 Project Award: \$3.3 million, Nov.1, 2006—Oct 31, 2011

Goal To create an integrated campus-wide set of initiatives and to ensure their implementation through the CU-ADVANCE center that permanently resides in the Provost's Office. The CU-ADVANCE Center is a central resource that shares "best practices" for recruitment, retention and promotion of women faculty, and connects faculty and decision makers across departments and colleges.

Objectives Over the life of the grant, achieve 20% women faculty in each S&E department and increase the number of senior women S&E faculty. Increase the commitment at all levels of the university to the recruitment, retention, development, and promotion of women faculty. Conduct studies on the factors that affect the climate for women faculty, develop initiatives to address these factors and institute programs to increase awareness.

Constituents Faculty in the Physical, Life, and Social Sciences and Engineering from the 5 colleges that house the largest number of these faculty: College of Agricultural and Life Sciences, College of Arts and Sciences, College of Engineering, College of Human Ecology, and College of Veterinary Medicine.

Initiatives The CU-ADVANCE Center sets forth 4 broad initiatives, on recruiting, faculty development, climate, and evaluation:

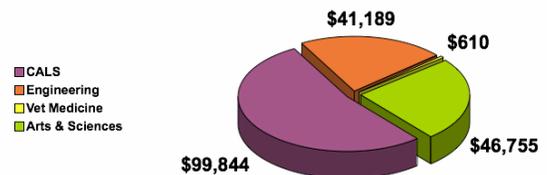
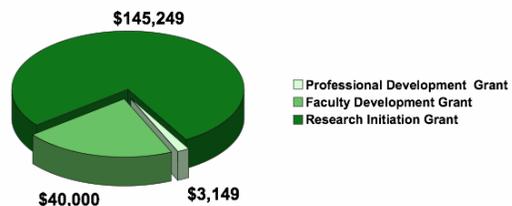
The Faculty Development Initiative includes

- Sharing of "best practices" to aid in formal mentoring programs for all faculty in S&E.
- Workshops, networking lunches and "Career Stage Retreats" to increase women faculty's effectiveness at all ranks through improved access to information and resources that support academic activities
- Grants:

Professional Development Grants that provide travel funds to pre-tenure women engineers, life scientists, social scientists and physical scientists to visit senior, recognized researchers in their area and/or the opportunity to host such researchers at Cornell for a colloquium.

Research Initiation Awards for associate women faculty as they near promotion to full, by funding research activities and initiatives that represent either a new direction or a renewed line of inquiry.

GRANTS AWARDED, JAN-JUL 2007



The Recruitment Initiative includes

- Development and implementation of strategies for successful recruiting of women through annual Fall department chair and search committee workshops and lectures focused on effective recruitment and equity in hiring
- Interview support for women candidates
- S&E-specific centralized dual-career placement support and expedited funding for partners of S&E women candidates

- Two prestigious named lecture series (Barbara McClintock and Carolyn Baldwin Morrison), for use in recruiting early-career women.

The Climate Initiative includes

- Ongoing climate assessment following up on the Cornell University Work-Life Survey.

The Evaluation Initiative includes

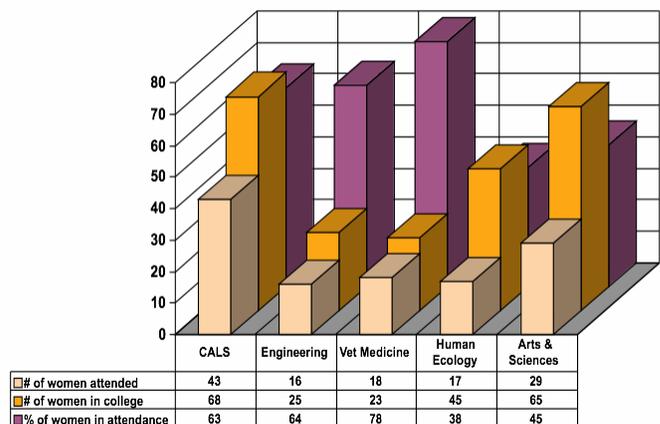
- Quantitative studies on promotion and retention
- Demographic composition and social relations in departments study
- Interview/offer/declined offer/departure tracking for women in S&E and for dual career couples.

Selected Results

Attendance – 135 women faculty members from the STEM and Social and Behavioral Science disciplines attended networking events in the first 6 months of the grant, with individuals choosing to attend more than one function for a grand total of 227 instances of attendance. 40 different departments participated.

Accountability in hiring – The CU-ADVANCE team designed and distributed a new form streamlining the collection of information on hiring, including pool data by gender and ethnic status, offers made and accepted, offers declined. This form will be used for the Deans’ annual reports to the Provost on issues of hiring and diversity.

ADVANCE ATTENDANCE BY COLLEGE, JAN-AUG 2007



Products:

- CU-ADVANCE Center Website with resources for recruitment and retention <http://advance.cornell.edu>
- Work-Life Survey results <http://www.ipr.cornell.edu/documents/1000371.pdf>
- Brochure entitled Today’s Family Matters at Cornell which covers Cornell’s financial support and programming for child care; support for the LGBTQ community; support for an aging workforce and the elderly; resources that promote work/life balance; and networking opportunities for faculty and staff.

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Goal:

The Iowa State University ADVANCE program aims to increase the participation and advancement of women faculty in the sciences, technology, engineering, and mathematics fields at ISU through a **comprehensive institutional intervention** plan. The program uses an integrated approach to examine **cultures, practices, and structures** within the University and determine how these enhance or hinder the careers of all ISU faculty, and especially women faculty in STEM disciplines. This information will be used to inform best practices at all levels of the University.

Constituents:

Faculty in thirty STEM departments across five colleges, representing over 750 faculty members in total, are included in the program's constituents. Additionally, nine focal departments in the STEM disciplines, representing three colleges, have been selected for targeted departmental transformation intervention over the course of the project.

Project award size and length:

5 years, 2006-2011. \$3.3 million

Activities & Initiatives

Building Infrastructure in the University, Colleges & Departments

- ADVANCE Professors and Equity Advisors represent ISU ADVANCE in STEM departments and colleges
- ADVANCE Council of key institutional partners meets regularly to guide the program

Departmental Transformation

- Participatory action research into departmental culture, practices and structure within STEM focal departments
- Focus groups and interviews generate qualitative data
- Findings reported to departments and used to guide collaborative transformation within each focal department

Combating Isolation

- Networking events and retreats for faculty in STEM disciplines
- Development of external mentoring program for women faculty of color in STEM disciplines

Research

- Departmental transformation focus groups and interviews
- Quantity of space data set
- Survey of faculty perceptions of quality of workspace
- Faculty climate survey
- Quantitative indicators required by NSF

National Conference--October 9-10, 2008

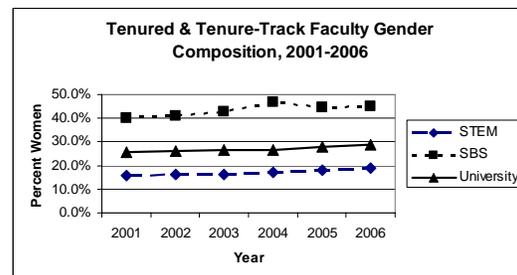
- Re-creating academic work in STEM

Dissemination

- For the public and ISU community: Web site www.advance.iastate.edu; newspaper articles in ISU, Ames and Des Moines papers; descriptive brochure; posters; open house events
- For STEM partners & constituents: Power point presentations; printed and web-based resources; poster for disciplinary & University events
- For scholarly dissemination: presentations, peer-reviewed papers and white paper forums

Selected Results

Synthesis of baseline data from 2001-2006, prior to the ISU ADVANCE Program, shows that the percentage of STEM faculty that are female increased from 15.6% (123 women) to 18.9% (145 women). In the social and behavioral sciences (SBS) fields and at the university in total, the percentage of women increased also. Data will be collected during the five years of the grant for comparison.



ISU ADVANCE Program

Products:

- Web site: resource for Iowa State University partners, other institutions, and the public: www.advance.iastate.edu
- Mentoring resources: literature references, definitions, handbook. <http://www.advance.iastate.edu/mentoring/mentoring.shtml>
- “Elevator speech” to describe program to STEM partners
- Presentations (4) to disciplinary conferences in sociology, philosophy and ornithology
- Year One Annual Report to NSF
- WebCT resources for use by Iowa State partners (password protected):
- Research protocols, including authorship guidelines, overview of departmental collaborative transformation process
- Diversity workshop materials for Equity Advisors, ADVANCE Professors & Dept. Chairs
- Case studies on subtle gender bias for use in discussion & training
- Power point presentations for focal departments, department chairs, deans, networking event participants
- Posters for public, disciplinary & university events
- Research article summaries for use by ADVANCE Council and partners
- Library of articles on mentoring, implicit bias, participatory action research, and other topics

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Diane Rover, Associate Dean
Chuck Glatz, Equity Advisor

College of Liberal Arts & Sciences

Michael Whiteford, Dean
David Oliver, Associate Dean
Lisa Larson, Equity Advisor

College of Agriculture & Life Sciences

Wendy Wintersteen, Dean
Joe Colletti, Sr. Associate Dean
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NSF Advance Institutional Transformation at Rensselaer

Objective: The goal of RAMP-Up, Rensselaer’s Program for Institutional Transformation, is to reform university advancement processes to increase the participation of women in science and engineering, particularly in the senior ranks. Using a model of professional self-regulation, RAMP-UP puts the work of reforming academic advancement squarely in the hands of the self-regulating mechanisms found at all levels of the university — at the department, at the school, and at the university.

Constituents: RAMP-Up’s advancement reforms are intended to benefit the tenure-track faculty at Rensselaer, with special emphasis on women, particularly minority women, in NSF-funded disciplines. Our activities are designed to impact individual faculty, departments, schools, and the university as a whole.

Award: \$1,380,654 over 5 years

Initiatives: At the level of the individual, RAMP-Up initiatives include communication and networking through colloquys workshops, and retreats, as well as grants through Career Campaign Awards. At the level of the department, RAMP-Up initiatives include training for department heads as well as grants for Cultural Change Initiatives. At the level of the school, RAMP-Up initiatives include the appointment and activities of Faculty Coaches who serve as information resources and participants in the schools’ advancement processes. At the level of the university, RAMP-Up initiatives include interventions on behalf of individual faculty, promotion and tenure reform, and a Senior Pipeline Search.

Grant	Constituents	Goal
Career Advancement Awards	Assistant and Associate Women Faculty	Pair women with mentors to develop career campaign that lead to advancement and provide resources (\$5000) to support their activities. Seven were supported in 06-07, four of whom were minority women.
Cultural Change Initiative	Departments with a recent history of hiring women faculty in NSF-funded areas	Support departments interested in initiating changes in departmental culture to better support the advancement of faculty careers with resources (\$10,000) to launch new social routines, create common spaces, foster social interactions, and seed participation.
Pipeline Search	Departments in Science and Engineering with a recent history of hiring women but without significant representation of women in the senior ranks.	Pioneer a model of priming the pump for women in science and engineering by hiring senior women from industry and national labs; encourage department cultural change in exchange for the opportunity to participate in a pipeline search.

Events	Constituents	Goal
Speed	All faculty	Using the model from speed dating, provide low-cost and

Networking		informal opportunities for developing social networks among faculty.
Colloquy	All faculty and academic leaders in Rensselaer and in neighboring institutions	Provide the academic leadership with an opportunity to demonstrate support for advancement reform, provide information about issues, create a forum for discussion, and create a buzz on campus.
Workshops and Retreats	Various	Create a forum in which issues and activities for reform can be discussed and planned. Increase social networking. In 07-08, retreats are planned for women, for departments, and for the academic leadership.

Analyses	Constituents	Goals
Hiring and Retention	Departments	Analyze patterns to become aware of problems with department culture
Salary	Leadership	Compare average salaries of men and women to become aware of disparities
Social Networks	Departmental Faculty and Women Faculty	Analyze department networks and document changes

Products:

1. Geisler, C. Kaminski, D. and Berkley, R.. (2007) An Index for Understanding, Documenting, and Resisting Patterns of Non-Promotion to Full Professor. *The National Women's Studies Journal*.
2. Berkley, Geisler, C. and L. Layne, (2007). Effects of Gender on Promotion to Full Professor. A Case Study of a Technological University. Berkley, Geisler, Layne. In review at *Group and Organization Management*.
3. Speed Networking: Summary Guide: <http://rampup.rpi.edu/onlineresources>
4. Colloquy Webcast: "Celebrating Advancement in the Academy"
5. Department Cultural Change Toolkit

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EXCELLENCE | EQUITY | DIVERSITY

OBJECTIVE NSF ADVANCE at the University of Arizona is a \$3.3-million 5-year grant program designed to promote diversity of faculty, to support the full participation and advancement of women in science, technology, engineering, and math (STEM) departments, and to provide a model of equity in the academy. Our goal is to alter the culture of the institution by reducing the impacts of unconscious bias. Achieving this goal will contribute not only to the intellectual environment of the UA, but also more broadly to the health of the academy. The UA is deeply committed to creating an environment of research and teaching that is distinguished by unbiased practices.

The UA ADVANCE program is managed by the Center for Research on Equity and Opportunity (CREO) under the Vice President for Research.

APPROACH Our ADVANCE program has a three-tiered strategy, directly fostering the academic and leadership careers of women; promoting responsibility for gender equity among faculty and administrators; and developing management software to facilitate more equitable decision-making. Three workgroups develop and implement interventions designed to advance the goals of their respective tier. These three workgroups coordinate activities to ensure balance and broad coverage.

Tier 1 - (Leadership) to increase the number of women from STEM fields in leadership positions by fostering visibility and developing social capital through networking, collaboration, and mentoring with local, national, and international STEM communities.

Tier 2 - (Stewardship) to define new expectations for the stewardship of faculty careers through programs aimed at providing to faculty members the tools necessary to accomplish that goal.

Tier 3 - (Transformational Technology) to eradicate inequitable practices by developing persuasive personnel-management technology that will gradually change attitudes while directly changing the way business is done at the university.

ACTIVITIES	Leadership Interventions	Stewardship Interventions	Transformational Technology Interventions
	<ul style="list-style-type: none"> Seed Grants (1 in 2007) \$35,000 award for interdisciplinary research Distinguished Lecture Series (2/year) Date Blitz seminars (2/year) Young Scientist Lecture Series (8/year, yrs 2-5) Career Development/ Mentoring Sessions (8/yr) 	<ul style="list-style-type: none"> Search Committee Orientation on unconscious bias in the hiring process and Interview Toolkit Research-based workshops on unconscious bias and department climate, mentoring, and faculty evaluation (including workshop for 90 department heads with research talk on the meaning of unconscious bias) Faculty-associate trainings at the department level to promote equitable practices (program liaisons identified in over 30 STEM departments) ADVANCE Fellows, department-based inquiry into equity issues within a department or across departments 	<ul style="list-style-type: none"> Compiling baseline data on hiring and promotion practices Interviews with women on hiring, negotiation, promotion readiness, and retention requests Evaluating existing recruitment and retention practices at UA Designing electronic document with user-friendly interface to initiate personnel processes online Capturing post-implementation data and tracking outcomes



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OTHER INITIATIVES

- ADVANCE website including resources, listserv
- Participant database
- State of Science at the UA (2007)

STRUCTURE

The organizational structure of the UA ADVANCE program consists of an executive committee responsible for the overall coordination of the grant; three workgroups (Leadership, Stewardship, and Dashboard Technology), each corresponding to one tier of intervention; three advisory boards, one providing counsel on research and two providing input on activities, events, and interventions. An external evaluation committee coordinates the program's summative and formative evaluation. This evaluation component allows us to refine our interventions as we progress, making them more informative, accessible, and functional.

CONSTITUENTS

All colleges and departments in the science, technology, engineering, and mathematics fields at the University of Arizona fall under the scope of ADVANCE endeavors, including social sciences and relevant departments in professional schools. We work with tenure-track faculty only and CREO works with faculty who are not part of STEM and with other UA employee constituents (staff, graduate students, non-tenure track and non-STEM faculty).

PRODUCTS

- Research bibliographies on department climate, mentoring, evaluation, and equitable hiring practices
- Search Committee Orientation on unconscious bias in the hiring process and interview toolkit
- Workshops on department climate, mentoring, and evaluation
- Active Resource Links
- UA Discusses Unconscious Bias, a year long activity spearheaded by the Diversity Resource Office

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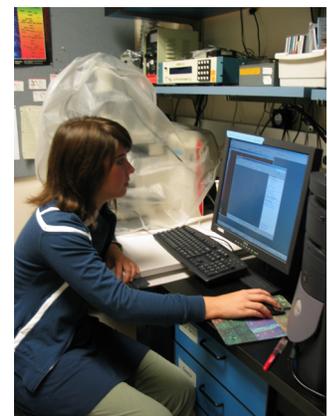
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GOAL of WISEST

Increase the number, participation and leadership status of women in academic science and engineering at UIC (STEM)

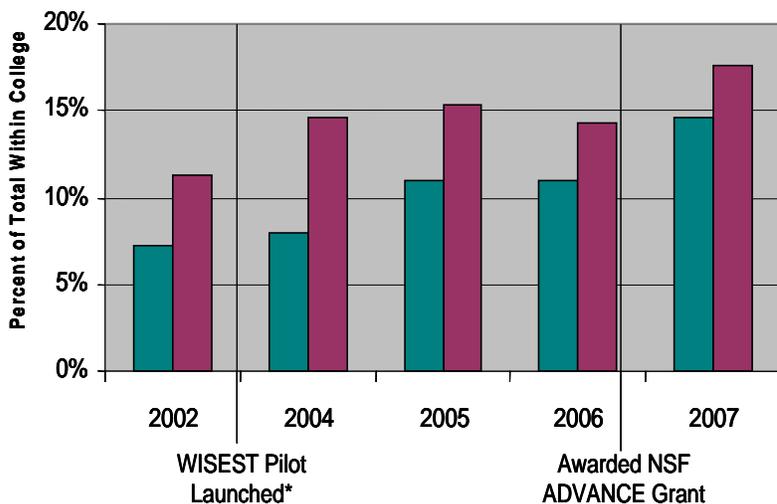
Program: NSF ADVANCE Institutional Transformation

Funding Agency: National Science Foundation

Constituents: 11 Science, Technology, Engineering, & Mathematics (STEM) departments: Biological Sciences, Chemistry, Earth and Environmental Sciences, Physics, Bioengineering, Chemical Engineering, Civil and Materials Engineering, Computer Science, Electrical and Computer Engineering, Mechanical and Industrial Engineering and Mathematics, Statistics and Computer Science.

The six strategies for WISEST at UIC:	Initiatives
1. Warm the climate & decrease the isolation of women STEM faculty.	<input type="checkbox"/> Climate Survey Task Force <input type="checkbox"/> Life-Friendly Policies Review <input type="checkbox"/> Faculty Women Networking
2. Pilot initiatives to attract & recruit minority women faculty.	<input type="checkbox"/> Post Doctoral Research Associates for Academic Diversity <input type="checkbox"/> Start-up Funds
3. Transform STEM departments to foster diversity & women's leadership.	<input type="checkbox"/> Department Facilitators Model <input type="checkbox"/> Faculty Search Committee Training and Tool Kit <input type="checkbox"/> Department Climate Action Plans
4. Promote STEM women's scholarship & teaching.	<input type="checkbox"/> Visiting Scholars <input type="checkbox"/> WISER "Back-on-Track" Fund
5. Improve the ability to track & report on gender equity in STEM.	<input type="checkbox"/> Ongoing Evaluation <input type="checkbox"/> Interviews & Focus Groups <input type="checkbox"/> Salary Equity Study <input type="checkbox"/> Exit Interview Task Force
6. Advocate & collaborate across UIC & nationally to increase the presence & influence of STEM women in the academy & workforce.	<input type="checkbox"/> Annual Town Hall <input type="checkbox"/> Leadership Seminars <input type="checkbox"/> Strategic Planning <input type="checkbox"/> Website

Women Tenured/Tenure-Track (T/TT) Faculty as a Percentage of Total T/TT Faculty at UIC**



**Chart as of 04/07

■ College of Engineering ■ LAS

* WISEST initiative was launched as a pilot project in 2003 with a small amount of funding from NSF and a match from the university.

Selected Accomplishments August 2006 – October 2007

- 4 New Women Faculty Hired
- 8 Visiting Scholar Funds Awarded
- 5 Post doctoral Research Associates Started
- Website Launched www.uicwisest.org
- Climate Survey Task Force Issued Report
- Exit and Salary Equity study groups launched
- Department Action Plans Completed
- WISER Fund Awarded
- Leadership Seminars & Town Hall Offered



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Objective “ADVANCE: UNC Charlotte Institutional Transformations for the Future of the Faculty” is a five-year project focused on recruitment, retention, and advancement of women in STEM faculty positions and women in university-wide leadership positions. Strategies for change focus on structural reform, broad faculty awareness and engagement, and decision-maker accountability. The grant is led by the Provost’s Office and administered through a newly established ADVANCE Office.

Constituents Primary targets include STEM women faculty in the Colleges of Engineering, Computing and Informatics, and Arts and Sciences; as well as social, behavioral, and life scientists in other selected departments. However, our transformational efforts target policies, procedures, and practices to ensure equity and inclusiveness for all members of the university community. Our programs include men and women faculty and staff participants throughout the university, and we aspire to be an institution where all faculty perceive that access to resources, rewards, promotions, and leadership opportunities are equitably distributed.

Program Initiatives

Competitive Awards

- Bonnie Cone Fellowships for individual women scientists
- Solution Team Awards for unit-based transformations

Women’s Academy

A center to support women faculty, highlight their work, reduce isolation, and promote professional development

Leadership UNC Charlotte

A cohort-based leadership institute for chairs and emerging leaders

Future of the Faculty

Policy arm of the grant; reviews current practices related to ADVANCE goals and recommends policy changes to remove barriers and promote the success and work life of all faculty

Mentoring and Faculty Development

University-wide mentoring program for all faculty in all units, and a mid-career mentoring program for women in STEM

Selected Results

Baseline data have been collected for the five years before the grant, and the first year of the award. These include the following for all STEM units: median start-up funding, tenure rates for men and women, office and research space, and gender representation across STEM units by rank. Pre-award climate measures are also available from HERI and COACHE.

Impact and Products

- The Future of the Faculty Committee has made recommendations for improving dual career couple placement, faculty advocacy, extensions to the tenure clock, and flexibility in faculty appointment structures.
- Created a forum for discussion of ADVANCE issues at the departmental level
- Brought data about gender equity to the foreground for faculty and administrators
- Workshops on recruiting and hiring a diverse faculty
- Workshops on writing competitive awards proposals
- New ADVANCE web site launched
- Quarterly ADVANCE Newsletter
- Round One Competitive Awards given to 3 STEM units and 7 individual faculty

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ADVANCE Institutional Transformation Program

Funding Agency - National Science Foundation
Rice University



- Objective** NSF ADVANCE at Rice University is a five-year, \$3.3 million project to transform the Schools of Natural Sciences and Engineering by increasing the participation of women at all levels and building a climate that fosters and supports each individual faculty member.
- Constituents** Tenure and tenure-track faculty in the Schools of Natural Sciences and Engineering are the primary target for the early years of the grant with a plan to expand to the Schools of Social Science, Humanities, and Architecture in future years. The total population of science and engineering is 220 faculty (15% women) in 14 departments.
- Activities** Evaluation of the programs is built into the fabric of the planning and execution of each of the initiatives to provide continuous feedback and improvement.

Recruitment of a Diverse Faculty	Retention and Climate Change	Evaluation and Research
<p>Negotiating the Ideal Faculty Position Workshop</p> <ul style="list-style-type: none"> 70 participants National scope <p>National Database of Female Ph.D. and Postdoctoral Fellows</p> <ul style="list-style-type: none"> Over 700 women Ethnic diversity of 14% Accessed by 223 universities 64% of inquiries report being part of a search committee <p>Faculty Search Committee Workshops</p> <ul style="list-style-type: none"> In conjunction with Rice University Diversity Task Force Provost established new diversity search guidelines Training for search committee members Equity process faculty member a part of each committee 	<p>Mentoring</p> <ul style="list-style-type: none"> Triad Mentoring: Two assistant female professors are matched with a senior female professor Speedmentoring for all assistant professors Informal lunch discussions for women faculty <p>Professional Development</p> <ul style="list-style-type: none"> Assistant professor career development workshop Department chair discussions Discourse on Leadership and Diversity Leadership travel grants Staff gender awareness discussions <p>Work Life Policies</p> <p>Faculty Awards Database</p>	<p>Campus-wide Climate Survey</p> <ul style="list-style-type: none"> Repeat of 2003 survey <p>Faculty Exit Survey</p> <ul style="list-style-type: none"> Identity retention issues Build a model for faculty exit surveys for the university <p>Factors Involved in Candidate Acceptance of Job Offer</p> <ul style="list-style-type: none"> Improve faculty offer processes Study differences in gender and race <p>Dissemination</p> <ul style="list-style-type: none"> <i>Connexions</i>: cnx.org/content/col10442/latest/ website: www.advance.rice.edu

Selected Results

Recruitment:

- Five female faculty members were hired in 2006-07, one was a senior female
- Percentage of female faculty has risen from 12.7% (2003) to 16% (2006)

Most exciting is the increase in the percentage of new hires that are female. This percentage has doubled in the last two years as shown in the table below.

One senior woman was promoted to chair, raising the number of female chairs to 4 out of 14 departments.

% Female Tenure/tenure track new hires

YEAR	ASSISTANT	ASSOCIATE	FULL
2006-07	22.2%	0%	0%
2005-06	27.3%	0%	66.7%
2004-05	12.5%	0%	0%
2003-04	12.5%	50%	0%

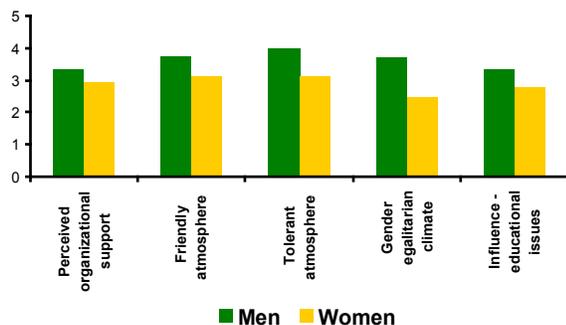
Breakdown of 2006-2007 hires

	ENGINEERING		NATURAL SCIENCES	
Rank	Female	Male	Female	Male
Full	1	2	0	0
Associate	0	1	0	0
Assistant	3	5	1	1
Total	4	8	1	1
<i>Grand Total</i>	12		2	

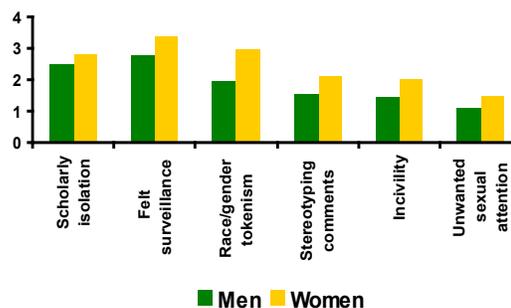
Baseline Climate Survey (2003)

On many of the “objective” measures (*i.e.*, salary, start-up), no gender differences emerge. There are significant differences between how male and female faculty members perceive Rice, the quality of Rice as a workplace, and their level of satisfaction with Rice. In almost every category, female faculty members are less satisfied with their Rice work experience, and have higher levels of active dissatisfaction. The differences are not enormous, but they are clearly systematic and significant. Climate survey will be repeated Fall 2007 and Fall 2010.

Positive Climate Dimensions by Gender



Negative Climate Dimensions by Gender



Products

Workshop materials are on line (www.advance.rice.edu) and in *Connexions*, an online repository for collaborative development and quick publishing:

- *Negotiating the Ideal Faculty Position* workshop (cnx.org/content/col10442/latest/)
- *Faculty Career Success* workshop (cnx.org/content/col10444/latest/)
- Faculty Search Committee Guide (cohesion.rice.edu/centersandinst/advance/goals.cfm?doc_id=10650)
- Baseline Campus Climate Survey (2003) Report
- Good Practices for the Campus Interview

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