

## Overview

- Background information about URI
- < 2000: Chilly Climate for women in Engg
- > 2000: The Thaw
  - ✓ Increased Administrative support for women in STEM resulting from Faculty Union Grievance
  - ✓ Award NSF ADVANCE Grant (2003-08)

2

## The Climate in Engineering Pre-2000



4



## A Model for Hiring and Retaining Top Female Engineering Faculty

Faye Boudreaux-Bartels	Electrical Engineering
Barb Silver	Psychology / Women's Studies
Lisa Harlow	Psychology
Joan Peckham	Computer Science
Mercedes Rivero-Hudec	Chemical Engineering
Karen Wishner	Biological Oceanography

Presented at the 2007 ASEE New England Regional Conference,  
University of Rhode Island, April 22, 2007

Supported in part by National Science Foundation Institutional Transformation Award SBE-0245039

## University of Rhode Island

- Medium sized University
  - 600 + faculty
  - 12,000 undergrads; (3,000 grads)
  - \* Public Research, Land-Sea/Urban Grant
- Engineering is 1 of 6 URI "Colleges"
  - 8 engineering BS programs (6 MS, PhD)
  - faculty
  - 60 - 70 undergraduates
  - 850 - 950
- Heavily Unionized University & State
  - active AAUP (Amer. Assoc. of University Professors)
- Small State – all politics are local

3

## Gender Differences – Female Engineering faculty received . . .

- | LESS   | MORE   |
|--|--|
| <ul style="list-style-type: none"><li>• Lab/office space<ul style="list-style-type: none"><li>- Size, location, quality</li><li>- time to renovate/repair</li></ul></li><li>• Professional respect<ul style="list-style-type: none"><li>- Men → “Dr. Smith”</li><li>- Women → “Suzie”</li></ul></li><li>• Informal access to chairs and networks of support &amp; information<ul style="list-style-type: none"><li>- e.g. advance notice of grant opportunities</li></ul></li><li>• etc.</li></ul> | <ul style="list-style-type: none"><li>• Committee work</li><li>• Student advising or outreach activities</li><li>• Unwelcome comments / reprimands<ul style="list-style-type: none"><li>- appearance or apparel</li><li>- unwanted pornography in classroom/labs</li></ul></li><li>• Denigrating rumors or attacks<ul style="list-style-type: none"><li>- job credentials</li><li>- personal life</li></ul></li><li>• etc.</li></ul> |

5

## The Revolving Door – Female Engineering Faculty at URI

Years	#	# Tenured	# Hired	# Left URI
< 1984	0-1	0	2	1
1984-1992	1-2	1	2	1
1992-2000	2-3	2	3	3

6

## Pro-active steps taken since 2000

- Strong, public advocacy from President and Provost Offices in support of women in STEM fields
- New Engineering Administration
  - Revived Engineering Diversity Committee
  - Increased efforts and financial support
    - Increased representation from *outside* of Engineering
- Support for an NSF ADVANCE proposal
- President's 2006-2009 Strategic Plan

7

## 2003 NSF ADVANCE *Institutional Transformation Grant*

- 5 years, \$3.5 M
  - Recruitment: Faculty Fellows Program
  - Faculty Development
    - Work-Life
    - Climate Change
    - Evaluation/Assessment

8

## ADVANCE Recruitment – Faculty Fellows program (*Win-Win*)

- **ADVANCE benefits** from increase in # female faculty in STEM fields
- **URI saves money** - Grant money provides part of salary and start-up packages for new faculty
- **Administration & department maintain control** over Fellow hiring decisions.
  - Provost and Deans determined which STEM department would receive Fellow; also, salary & start-up
  - Department selected research area, search committee, and candidate to hire
- **Fellows receive extensive incentives & support network**

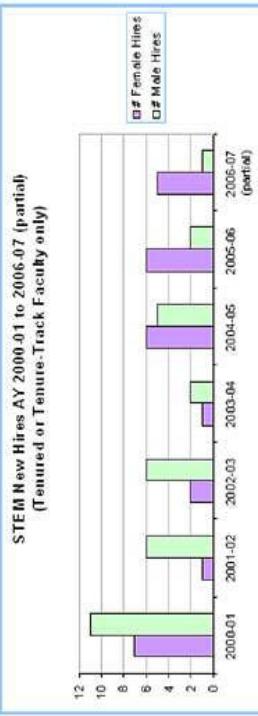
9

## STEM Departments hiring Fellow

- Competed to “pre-book” faculty line
  - First 2 Fellows hired in Engineering
  - Large, Outstanding applicant pool convinced skeptics in several depts.
- Included ADVANCE representative on search committee
  - Scheduled each Fellow candidate to have lunch meeting with ADVANCE during on-campus interview
- Participated in ADVANCE workshops
  - Department Strategic Planning workshop
  - Climate Workshop
  - Best Practices for Recruitment and Searches
  - Mentoring

10

## FACULTY FELLOWS PROGRAM VERY SUCCESSFUL



Updated 7/17/2006

## 10 Faculty Fellows: Incentives

- Prestige of affiliation with NSF
  - Reputation ADVANCE program
- Minimal teaching loads and no service for first 1-2 years to get head start on research
  - Assurances that Fellow position
    - will transition to tenure-track when faculty line opens
    - counts towards tenure clock, at Fellow's discretion
- Opportunity to talk confidentially with women scientists during interview about climate, maternity leave policy, dual career issues, etc. (*bias avoidance*) & negotiating start-up packages.
- ADVANCE Faculty Development Workshops and support network

12

## ADVANCE Faculty Development – Retention Activities

- Workshops
  - Mentoring, Grant Development, How to Negotiate, Writing, Interdisciplinary Collaborations ...
- Monthly Topical Luncheons
  - Thinking about tenure from the start
  - Gender-sensitive teaching
  - Dual Career issues
  - Work-work and home-work
  - Visiting Speakers (Vallian – “Why so Slow”, Drago “Bias Avoidance”)
  - Didn’t I just say that? How to be heard
  - etc.

13

## ADVANCE Faculty Development – Retention Activities (cont'd)

- \$20-40k/yr Incentive Grants
  - to promote women in STEM fields
  - 32+ grants (given to men & women)
- ADVANCE Resource Center
  - resource for information and confidential advice
- Mentoring Program
  - Training for both mentors/mentees
  - Assignment of 2+ mentors
  - Fellows breakfasts
- Social Activities after work to reduce sense of isolation
  - book club, pot luck dinners, subsidized tickets to plays, concerts, ...

14

## Work-Life

**Parental Leave Policy** for birth or adoption developed & passed providing 6 weeks paid leave and optional 1 year delay of tenure clock

- Campus Involvement & Support
  - many participants (including several men)
  - Focus on inclusiveness, can benefit men & women
- **Dual Career Policy** – policy adopted; guidelines under development; regional network planned
  - Administrative Encouragement
  - Complicated, but critical issue - Union concerns and proper procedures

### Work-Life Virtual Office ([www.uri.edu/wlfc](http://www.uri.edu/wlfc))

- To become actual office
- Lactation site to be opened this summer

15

## Work Climate

Departmental Climate Workshops offered by  
ADVANCE

- Help STEM departments identify strengths, set strategic goals, and improve departmental dynamics
  - Set positive, pro-active goals
  - Improve Inclusiveness and Openness
    - benefit all
    - “Rising Tide lifts all boats”

16

## Work Climate

Workshops and Best Practices integrated with theoretical models of organizational change

– Appreciative Inquiry:

- emphasis on how all faculty can benefit from analysis of what contributes to an excellent work environment

– Transtheoretical Model:

- system of matching change strategies to defined levels of readiness for change

– 3-level Model: (~ 3 legged table; B. Risman)

- Administrative policy, Top-Down (Institutional)
- department practices and culture (Interactional)
- Grass roots, Bottom-Up (Individual)

17

## Assessment and Evaluation

- 2003 Campus wide climate survey conducted (39% response rate); to be repeated in 2007.
- Most Important factors for Career Satisfaction
  - Work Respect, Influence at Work, Positive Work Climate, Resources, Work-Family Balance
- Men Report More Positive Work Environment:
  - More Career Satisfaction, More Influence Over Careers, Less Discrimination
- Women Report More Interpersonal-Work Challenges:
  - Less Interpersonal Support & Respect, Less Likely to Decide to Have Children, More Consideration of Partner's Job Opportunities, More Belief in Combining Career & Parenting

## Conclusions ([www.uri.edu/advance](http://www.uri.edu/advance))

- NSF ADVANCE has improved recruitment, retention and climate for female faculty in STEM fields at URI
- Many Benefits of having a Multi-disciplinary team
  - Engineering, Physical Sciences, Social Sciences, Administrators
  - Social Theory on change very helpful
- Work being done to sustain change beyond grant
  - Institutionalized within existing campus committees/groups
- Many activities can be done at low cost
  - Ask Senior Faculty to lead workshops or Topical lunches
  - Seek ways to publicize existing Work-Life Balance initiatives
    - Knowledge is power for new faculty in negotiations with chair
  - Organize low cost social events to reduce sense of isolation

20

## The Revolving Door – Female Engineering Faculty at URI

Years	#	# Tenured	# Hired	# Left URI
< 1984	0-1	0	2	1
1984-1992	1-2	1	2	1
1992-2000	2-3	2	3	3
2000-2006	8	4	6	0

19