Competing for the Academic Workforce in a Global Environment

October 30, 2007

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Why NSF-ADVANCE?

The goal of NSF-ADVANCE is developing systematic approaches to increase the representation and advancement of women in academic science and engineering careers, thereby contributing to the development of a more diverse S & E workforce.

Institutional Transformation awards support innovative and comprehensive programs for institution-wide change. Creative and sustainable strategies are disseminated among the 31 ADVANCE schools and throughout the country.
Academic Careers in Engineering and Science (ACES)

ACES goal is to promote a culture of equity, participation, openness and accountability.

The objectives are:

– the full participation of women at all levels of the university
– improving the climate for women faculty through initiatives which will benefit the entire campus

$3.5 million dollar grant implemented over 5 years in 32 departments in four schools (SOM, CAS, CSE, WSOM)
Age & Retirement Patterns of CWRU Faculty

Faculty Retirement Trends

• Mandatory retirement at age 70 ended on January 1st 1994
• By 2004 the end of mandatory retirement had added one year to retirement age
• 2004 TIAA-CREF study at U of Minnesota and U of North Carolina found that a large majority of faculty planned to retire at 66

Prepared October 11, 2007 by Fred Collopy, Professor and Chair, Information Systems Department, Weatherhead School of Management
The eleven-year mean is just over 68
Mean retirement age of tenured CWRU faculty

The retirement age is rising (‘06 & ‘07 were probably affected by incentives)
The median age of the tenure-track faculty is 52
The population is slightly bimodal with a dip among late 40s & early 50s
About 21% of our faculty is in our historical retirement window
Major Initiatives, Multiple Levels

University Leadership

Commitment of Senior Administrators

Provost’s Annual Leadership Retreat

Grassroots Climate Change Committee

Coaching, mentoring, networking, and training & development of deans, chairs, women faculty in S&E depts.

Opportunity Grants for Women Faculty

Distinguished lectureships

Hotline Coaching for Women faculty

Campus Level

New Structures, Policies & Procedures

Minority student pipeline

Student Gender Awareness

School and Department Level

Search Committee Supports

Departmental Initiative Grants

Accountability of Deans

Commitment of Senior Administrators
Transformation Through Leadership Development

• Annual Provost Leadership Retreat
• Annual “Role of Senior Leadership” workshop for newly promoted faculty
• Department Chair development workshops here and at the University of Washington in Seattle
• Executive coaching provided to deans and chairs
• Facilitators for meetings and strategic planning
Transformational Activities in Departments

- Coaching & mentoring for women faculty
- Educational workshops for departments
- Faculty Search Committee support
- Departmental Initiative Grants
Institutional Transformation Initiatives

- Faculty Development Workshops
- Networking events
- Educational workshops for departments
- Undergraduate/graduate student training
- Faculty search committee support
- Departmental Initiative Grants
- Coaching Hotline
Executive Coaching
Cornerstone of ACES Initiatives

Academic Executive coaching is consistently rated as an invaluable resource and is being replicated at other ADVANCE schools.

“I found the experience beneficial on many levels, in particular for a deeper understanding of the inter-relations of my professional and personal lives...how I impact the people around me and vice versa. In sum, it was one of the best resources the University has provided me since I arrived at Case. … I wish the university [could] provide this resource to every faculty.”

-Male Department Chair
Awarded $549,496 in Opportunity Grants

Provide support for tenure and non-tenure track women faculty in the 32 NSF-ACES departments where funding is difficult to obtain through other sources

• Examples: Seed funding for unusual research opportunities; Travel grants to explore new areas; Child care to attend a professional meeting

• 66 grants with average award of $8,300

• Year 5 - 10 awards, Year 4 - 18 awards, Year 3 - 12 awards, Year 2 - 17 awards, Year 1 - 9 awards

www.case.edu/admin/aces/opportunity.htm
Opportunity Grant Success

“The Aces grant has had the highest impact so far in my career...I could keep the work in the lab going and spend time with my newborn without having to take a break professionally. It has substantially contributed to my ability to publish in a timely manner two articles, put three in review, and present at conferences. Since the grant I have written five research proposals. I hope the university continues to focus on cultivating a flexible and supportive environment for highly motivated women faculty to grow.”

Alexis Abramson, Ph. D., Assistant Professor, Mechanical & Aerospace Engineering, V.P., Technology Innovation Commercialization and Nanotechnology. Nortech
“The Aces grant not only allowed me to keep my lab running but also provided a morale boost by acknowledging my work and my potential. Within a year I developed a related but more fundable research interest and a highly productive collaboration. This led to funding from both NIH and the National Parkinson’s Foundation. Many additional professional doors have opened for me since the ACES funding and I continue to be grateful for the investment this program made in me.”

Amy L. Wilson-Delfosse, Ph.D. Assistant Professor of Pharmacology, Chair, Basic Science Curriculum Council.
“The Aces grant allowed me to attend (and help organize) an important meeting in my field by providing funds for child-care. Leadership in organizing this meeting was looked upon very favorably during my tenure review. I have submitted a paper to a monograph stemming from this meeting and am now an associate editor on the monograph. Being an associate editor has increased my visibility in my field.”

Beverly Saylor, Ph.D., Associate Professor Stratigraphy and Sedimentology. Department of Geology.
Additional Resources

Distinguished Lecturers:
• Objective of increased visibility, role models, networking, and collaboration with Case faculty
• 36 lecturers between January 2004 - May 2008. Roughly one a month during the academic years of the grant.

Departmental Initiative Grants:
• Objective of funding department wide activities to improve the climate/positive departmental change, enhance collegiality, greater inclusion of women and minority faculty
• $56,900 awarded in 8 departments since 2005 (Geology, Chemistry, Physiology & Biophysics, Economics, Biomedical Eng., Mechanical & Aerospace Eng., Sociology, Organizational Behavior)
The Department of Economics used their grant for new faculty development, self-study, and a seminar series.

“We used the money to study what attracted young women to the study of economics and what was unattractive. We...have begun implementing some changes to our curriculum as a result...Research seminars are the life’s blood of a vibrant intellectual community. All junior faculty (both men and women) benefit from having a regular stream of top scholars presenting their work here. ACES recognized this, to their great credit, and understood that by supporting our seminar series they were helping make our department a great place for women as well as men.”

James B. Rebitzer, John R. Mannix Medical Mutual Professor and Chair of Economics
The Department of Chemistry used their grant to hire a facilitator for self-study and strategic planning.

“[the facilitator used] the Appreciative Inquiry (AI) methodology. This approach...was very different from the decision-making practices that we used in the past...Her report...identified important aspects of how the various stakeholders in the department were contributing to the departmental operation and what factors were getting in the way of more effective participation...I think [the facilitator’s] help contributed to a significant paradigm shift in the culture of the department.”

Lawrence M. Sayre, Frank Hovorka Professor and Chair, Department of Chemistry
Institutional Activities/Structures

- Spotlight Series on Women’s Scholarship & Women of Achievement Lunch
- Ad hoc committee in SOM for faculty salary equity and climate concern
- SURP for Minority Women part of HHMI
- Websites for Faculty Diversity & LGBT taskforce
- Faculty Exit & 3rd Year Satisfaction Survey
- Accountability: Deans held accountable by Provost for diversity activities & outcomes, improved processes (e.g., faculty searches)
- Accountability: CSE chair evaluation form reports diversity activities
- Annual Provost’s Leadership Retreat
- Permanent Manager of Faculty Diversity & Development
- Permanent Grad Student position in Center for Women
- Leadership Workshop for newly tenured/full professors
- Participation in the Bryn Mawr Summer Institute for Women
- Expanded New Faculty Orientation
New Policies

• Automatic Tenure Extension Policy
• Work Release Policy
• Partner Hiring Policy
• Domestic Partner Policy
• Mandatory review of candidate pool diversity by Deans
• Cultural Competency Awareness Training mandatory for new faculty within the first fiscal year of hire
• Consensual Relations Policy
• Non-Discrimination Statement goes beyond Ohio law for LGBT and includes gender expression and identity
# Department Chairs in S&E by School and Gender 2003/04 - 2006/07

## Number of Department Chairs in the 31 S&E Departments by School and Gender,
AY 2003-04 and AY 2006-07

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**Legend:**
- **Female**
- **Male**
Number of Full-Time Faculty in S&E
2003/04 - 2006/07

Number of Full-Time Faculty in S&E Departments
from AY2003-04 to AY2006-07

AY2003-04: 400
AY2004-05: 354
AY2005-06: 344
AY2006-07: 369
Percentage of Full-Time Faculty in S&E 2003/04 - 2006/07

Note. Full-time faculty include both tenure-stream and non-tenure-stream faculty.
Number of Tenure Stream Faculty in S&E by Gender 2003/04 - 2006/07

Note. Tenure-stream faculty members are at the levels of assistant, associate and full professors.
Percentage of Tenure Stream Faculty in S&E by Gender 2003/04 - 2006/07

Percentage of Tenure Stream Faculty in S&E Departments by Gender from AY2003-04 to AY2006-07

- AY2003-04: Female 18%, Male 82%
- AY2004-05: Female 0%, Male 80%
- AY2005-06: Female 0%, Male 80%
- AY2006-07: Female 0%, Male 80%
CAS Number of Tenure Stream Faculty in S&E by Gender 2003/04 - 2006/07

Number of Tenure Stream Faculty by Gender in S&E Departments of CAS from AY2003-04 to AY2006-07

![Bar chart showing the number of tenure stream faculty by gender for each academic year from AY2003-04 to AY2006-07.](chart.png)
Percentage of Tenure Stream Faculty by Gender in S&E Departments of CAS from AY2003-04 to AY2006-07

- AY2003-04: 22% Female, 78% Male
- AY2004-05: 24% Female, 76% Male
- AY2005-06: 25% Female, 75% Male
- AY2006-07: 27% Female, 73% Male
CSE Number of Tenure Stream Faculty by Gender 2003/04 - 2006/07

Number of Tenure Stream Faculty by Gender in S&E Departments of CSE from AY2003-04 to AY2006-07

- AY2003-04: Female = 9, Male = 98
- AY2004-05: Female = 12, Male = 99
- AY2005-06: Female = 13, Male = 105
- AY2006-07: Female = 13, Male = 102
CSE Percentage of Tenure Stream Faculty by Gender 2003/04 - 2006/07

Percentage of Tenure Stream Faculty by Gender in S&E Departments of CSE from AY2003-04 to AY2006-07

AY2003-04: 92% Female, 8% Male
AY2004-05: 89% Female, 11% Male
AY2005-06: 89% Female, 11% Male
AY2006-07: 89% Female, 11% Male
WSOM Number of Tenure Stream Faculty in S&E by Gender 2003/04 - 2006/07

Number of Tenure Stream Faculty by Gender in S&E Departments of WSOM from AY2003-04 to AY2006-07

<table>
<thead>
<tr>
<th>Year</th>
<th>Female</th>
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<tr>
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<td>15</td>
<td>52</td>
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<tr>
<td>AY2004-05</td>
<td>14</td>
<td>46</td>
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<tr>
<td>AY2005-06</td>
<td>12</td>
<td>40</td>
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<tr>
<td>AY2006-07</td>
<td>10</td>
<td>36</td>
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WSOM Percentage of Tenure Stream Faculty in S&E by Gender 2003/04 - 2006/07

Percentage of Tenure Stream Faculty by Gender in S&E Departments of WSOM from AY2003-04 to AY2006-07

WSOM

Female  Male

AY2003-04  22%  78%
AY2004-05  23%  77%
AY2005-06  23%  77%
AY2006-07  22%  78%
SOM Basic Science Number of Tenure Stream Faculty by Gender 2003/04 - 2006/07

Number of Tenure Stream Faculty by Gender in Basic Science Departments of SOM from AY2003-04 to AY2006-07

<table>
<thead>
<tr>
<th>Year</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
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<tr>
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<td>61</td>
<td>82</td>
</tr>
<tr>
<td>AY2004-05</td>
<td>26</td>
<td>62</td>
<td>88</td>
</tr>
<tr>
<td>AY2005-06</td>
<td>24</td>
<td>68</td>
<td>92</td>
</tr>
<tr>
<td>AY2006-07</td>
<td>22</td>
<td>64</td>
<td>86</td>
</tr>
</tbody>
</table>

-**X-axis:** Year (AY2003-04, AY2004-05, AY2005-06, AY2006-07)
-**Y-axis:** Number of Faculty

**Legend:**
- Female (striped bars)
- Male (solid bars)
SOM Basic Science Percentage of Tenure Stream Faculty by Gender 2003/04 - 2006/07

Percentage of Tenure Stream Faculty by Gender in Basic Science Departments of SOM from AY2003-04 to AY2006-07

<table>
<thead>
<tr>
<th>Year</th>
<th>Female</th>
<th>Male</th>
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<tbody>
<tr>
<td>AY2003-04</td>
<td>21%</td>
<td>79%</td>
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<tr>
<td>AY2004-05</td>
<td>18%</td>
<td>82%</td>
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<tr>
<td>AY2005-06</td>
<td>20%</td>
<td>80%</td>
</tr>
<tr>
<td>AY2006-07</td>
<td>20%</td>
<td>80%</td>
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</tbody>
</table>
Number of Department Chairs in S&E by School and Gender 2003/04 - 2006/07

Number of Department Chairs in the 31 S&E Departments by School and Gender, AY 2003-04 and AY 2006-07

- AY 2003-2004 CAS:
  - Female: 1
  - Male: 1

- AY 2006-2007 CAS:
  - Female: 10
  - Male: 10

- AY 2003-2004 CSE:
  - Female: 7
  - Male: 5

- AY 2006-2007 CSE:
  - Female: 5
  - Male: 5

- AY 2003-2004 WSOM:
  - Female: 5
  - Male: 5

- AY 2006-2007 WSOM:
  - Female: 5
  - Male: 5

- AY 2003-2004 SOMBS:
  - Female: 1
  - Male: 1

- AY 2006-2007 SOMBS:
  - Female: 6
  - Male: 6
The Collaborative on Academic Careers in Higher Education (COACHE Survey)

• Focus on the experience of junior faculty
• Goal is to improve the recruitment and retention of tenure-track faculty. Evaluation of trends by gender and race
• 42 Universities participated; Case’s response rate: 54%
• Survey conducted in January, 2006
• Case’s selected “peer group” consisted of Brown, Dartmouth, Northeastern, Stanford, Tufts
Institutional Profile, by Thematic Cluster

- **Tenure**
- **Nature of Work**
- **Policies & Practices**
- **Climate, Culture and Collegiality**
- **Global Satisfaction**

% Questions within Cluster

- **Better than peers**
- **About the same as peers**
- **Worse than peers**
Some differences in experiences by gender or race were noted:

- All segments of the junior faculty at Case included “childcare” and “assistance in obtaining externally funded grants” as two of the top three issues ranked as important but ineffective at Case.
- Male junior faculty and white junior faculty included “spouse/partner hiring program” in their top three lists.
- Junior faculty women at Case included “financial assistance in securing housing” as a top-three issue.
- Junior faculty of color at Case included “paid or unpaid research leave during the probationary period” as a top-three issue.
Alfred P. Sloan Foundation Survey

- Focus on family-friendly policies and procedures
- “Faculty flexibility” encompasses policies and procedures that impact on the work-life interface for faculty (e.g. childcare, flexible tenure clocks, faculty development)
- 55 universities surveyed (January-February, 2006)
- Results in aggregate
- Case’s overall score on faculty flexibility (according to the Sloan algorithm) did not reach the median for the group surveyed.
Alfred P. Sloan Foundation Survey
Possible Areas to Pursue Changes

• **Tenure Clock Stoppage** (written statements to internal and external reviews indicating how the time to tenure and how the work of faculty who stop the tenure clock should be evaluated)

• **Leaves** (for new mothers after the standard period; policies for faculty on non-sabbatical leaves)

• **Part Time Appointments with Part Time Pay** (for faculty caring for dependents; job sharing)

• **Workplace Culture and Communications** (committees believing its work effects change; conspicuous commitment to career flexibility; chairs/deans/provosts held accountable for encouraging and managing flexible work arrangements; scheduling not interfere with family responsibilities)
Future Goals

• Continue to raise funds for new endowed chairs
• Determine steps to improve junior faculty and departmental climate issues identified by COACHE survey
• Address gaps in family-friendly policies and practices brought up by Sloan Work-Life survey
• Further examine and rectify salary equity issues identified by Salary Equity Study
• Address recommendations of ad hoc brainstorming meetings to discuss institutionalizing ACES initiatives
Institutional Priorities Identified by the NSF-ADVANCE Site Visit

- Child Care Center
- Office of Faculty Development
- Ombudsperson
- Institutional Research Office
- Presidential Taskforce on Faculty Employment & Life
Questions for Roundtable Discussions

• How do we accelerate positive changes and generalize them to the entire university?
• What should our short-term priorities be for change?
• What specific actions can the leaders in the room do to effect positive change?
Q & A

2:00 - 3:30  Faculty Diversity: Problems and Solutions, Dr. JoAnn Moody
3:45 - 4:45  Presentations by Deans Davis, Taylor, Tien, and Reddy
4:45 - 5:15  Round Table Discussion
5:15 - 5:30  Report out