Graduate Engineering Research Scholars Program (GERS)

Prof. Douglass Henderson, Kelly Burton, and all the other supporters
University of Texas at El Paso
November 3 - 4, 2011
Graduate Engineering Research Scholars
A little bit about myself ...

• Father was in the Military (Army)
  - Department of Defense Dependent Schools (DoDSS) - Europe
  - Frankfurt American High School in Frankfurt, Germany

• Undergraduate Education
  - University of Arizona (8/74 – 5/78) BS
  - Football Scholarship and participated in Track and Field
  - Nuclear Engineering Major

• Graduate Education
  - University of Wisconsin – Madison (8/78 – 12/79) MS
  - University of Wisconsin – Madison (8/83 – 7/87) PhD
  - Nuclear Engineering Major

• Professional Employment
  - Nuclear Research Center in Karlsruhe, Germany (1/80 – 8/83)
  - Oak Ridge National Laboratory, Tennessee (8/87 – 7/89)
  - UW-Madison, faculty (8/89 – present)
Midwest
### Population Demographics

<table>
<thead>
<tr>
<th>State and National Racial/Ethnic Population Distributions and Rates of Change from 2000 to 2010</th>
<th>Wisconsin</th>
<th>U.S.A.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent 2010</td>
<td>Change 2000-2010</td>
</tr>
<tr>
<td>White alone</td>
<td>86.2%</td>
<td>2.8% ↑</td>
</tr>
<tr>
<td>Black or African American alone</td>
<td>6.3%</td>
<td>18.0% ↑</td>
</tr>
<tr>
<td>American Indian &amp; Alaska Native alone</td>
<td>1.0%</td>
<td>15.5% ↑</td>
</tr>
<tr>
<td>Asian alone</td>
<td>2.3%</td>
<td>45.6% ↑</td>
</tr>
<tr>
<td>Native Hawaiian and Other Pacific Islander alone</td>
<td>&lt;0.5%</td>
<td>12.1% ↑</td>
</tr>
<tr>
<td>Some Other Race alone</td>
<td>2.4%</td>
<td>60.1% ↑</td>
</tr>
<tr>
<td>Two or More Races</td>
<td>1.8%</td>
<td>55.9% ↑</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>5.9%</td>
<td>74.2% ↑</td>
</tr>
<tr>
<td>Not Hispanic or Latino</td>
<td>94.1%</td>
<td>3.5% ↑</td>
</tr>
</tbody>
</table>
University of Wisconsin – Madison: An Excellent Choice for Graduate Education
UW-Madison: A Research Leader

- Celebrating its 150th Anniversary in 2011
- ~$1B in research investments in 2010
- No. 2 ranking among all public universities (2010)
- 43K students (~11K post bac)
- 10K acres (including farms, arboretum, etc.), 933 acres along lake
- 40 programs ranked in top 10
- Top 5 in US in Federal R&D funding for 20 consecutive years
- 18 Nobels (fac or alumni)
  - John Bardeen (2) – transistors, superconductivity
  - Howard Temin – retroviruses
  - Oliver Smithies – gene modifications in SCs
- 29 Pulitzer Prize winners
- 23 Nat Academy of Engineering
- 42 Nat Academy of Science
- Ranked 1st of public universities for faculty to win prestigious awards or grants.
- Culture for Research
  - Interdisciplinary
  - WARF
  - WID/MIR
  - NSF and NIH Research Centers
  - WIMR
  - MRSEC, NSEC, CNTech
<table>
<thead>
<tr>
<th>Institution</th>
<th># Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>UC-Berkeley</td>
<td>47</td>
</tr>
<tr>
<td>Harvard</td>
<td>46</td>
</tr>
<tr>
<td><strong>UW-Madison</strong></td>
<td><strong>40</strong></td>
</tr>
<tr>
<td>UCLA</td>
<td>40</td>
</tr>
<tr>
<td>Stanford</td>
<td>39</td>
</tr>
<tr>
<td>Univ of Michigan</td>
<td>37</td>
</tr>
<tr>
<td>Yale</td>
<td>32</td>
</tr>
<tr>
<td>Cornell</td>
<td>29</td>
</tr>
<tr>
<td>Princeton</td>
<td>28</td>
</tr>
<tr>
<td>Columbia</td>
<td>28</td>
</tr>
<tr>
<td>Univ of Texas at Austin</td>
<td>27</td>
</tr>
<tr>
<td>Univ of Pennsylvania</td>
<td>26</td>
</tr>
<tr>
<td>Penn State Univ</td>
<td>26</td>
</tr>
<tr>
<td>UNC at Chapel Hill</td>
<td>26</td>
</tr>
<tr>
<td>MIT</td>
<td>25</td>
</tr>
<tr>
<td>Univ of Chicago</td>
<td>23</td>
</tr>
<tr>
<td>New York Univ</td>
<td>22</td>
</tr>
<tr>
<td>Univ of Maryland</td>
<td>21</td>
</tr>
<tr>
<td>Univ of Illinois-UC</td>
<td>19</td>
</tr>
<tr>
<td>Duke</td>
<td>18</td>
</tr>
<tr>
<td>California Inst of Tech</td>
<td>18</td>
</tr>
<tr>
<td>Ohio State</td>
<td>17</td>
</tr>
<tr>
<td>Univ of Washington</td>
<td>17</td>
</tr>
<tr>
<td>Purdue</td>
<td>17</td>
</tr>
<tr>
<td>Univ of Minn-Twin Cities</td>
<td>17</td>
</tr>
</tbody>
</table>
UW-Madison: A world class university, BUT

how do you change its culture so that it will address the important problem of the lack of minority representation in STEM at the graduate and academic leadership level?

You bring in a champion to discuss the issue with the deans and upper administration.

During the academic year 1998-1999 Prof. Richard Tapia from Rice University met with the Deans of the College of Engineering (CoE) and the Graduate School on several occasions to discuss the importance of minorities in STEM.

Prof. Tapia had successfully increased the number of PhD degrees to minorities from his Department of Computational and Applied Mathematics at RICE.

Prof. Tapia submitted a NSF AGEP grant and UW-Madison was a participant (0 dollars) - The CoE adapted Tapia’s model and became the pilot program for the campus
US Doctoral Degrees Awarded 2001-2010

(Engineering Degrees)
College of Engineering (CoE) attracts more than $140M of research funding annually.
# CoE Faculty Breakdown

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men:</strong></td>
<td>163</td>
<td>172</td>
<td>173</td>
<td>----</td>
</tr>
<tr>
<td><strong>Women:</strong></td>
<td>17</td>
<td>22</td>
<td>25</td>
<td>----</td>
</tr>
<tr>
<td><strong>African American:</strong></td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Native American:</strong></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Hispanic:</strong></td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total Faculty:</strong></td>
<td>180</td>
<td>194</td>
<td>198</td>
<td>183</td>
</tr>
</tbody>
</table>
### Graduate Student Enrollment in the COE

**Graduate Enrollment, College of Engineering, UW-Madison, Fall 2009**

<table>
<thead>
<tr>
<th>By Ethnicity</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>16</td>
<td>1.24%</td>
</tr>
<tr>
<td>Asian targeted</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>38</td>
<td>2.95%</td>
</tr>
<tr>
<td>Native American</td>
<td>6</td>
<td>0.47%</td>
</tr>
<tr>
<td>Native Hawaiian/Oth Pac Island</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>519</td>
<td>40.23%</td>
</tr>
<tr>
<td>Asian non-targeted</td>
<td>54</td>
<td>4.19%</td>
</tr>
<tr>
<td>International</td>
<td>623</td>
<td>48.29%</td>
</tr>
<tr>
<td>Not Specified</td>
<td>34</td>
<td>2.64%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1290</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>By Ethnicity</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Targeted Minority</td>
<td>60</td>
<td>4.70%</td>
</tr>
<tr>
<td>Non-Minority</td>
<td>573</td>
<td>44.40%</td>
</tr>
<tr>
<td>International</td>
<td>623</td>
<td>48.30%</td>
</tr>
<tr>
<td>Not Specified</td>
<td>34</td>
<td>2.60%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1290</td>
<td>100.00%</td>
</tr>
</tbody>
</table>
The College of Engineering prior to GERS (1999).

- There were approximately 11 – 14 URM students in the college out of a graduate population greater than 1200 (approximately 1 percent of the graduate student population).

- Several of departments had and still have an international student population greater the 60%. (Faculty commonly considered international students when discussing ‘diversity’, and non-targeted Asian were always included in diversity reporting.)

- Pre-GERS: between Fall 1992 and Spring 1999 5 PhDs were awarded to URM.
Campus Culture (and faculty bias)

Inaccurate Biases and Unconscious Assumptions:
- URM students underperform.
- Hard to find students that are interested in your research.
- We can’t recruit students to Wisconsin because of the cold weather.

Recruiting Diverse Faculty:
- Can’t find URM PhDs competitive enough to fill faculty ranks.
- Pool is too small (or non existent), or
- Can’t compete with higher ranked engineering schools for small pool of qualified candidates.
- Can’t recruit URM PhDs because of WI cold weather.
- Recruiting URM faculty is a waste time, effort, and money because they just ‘leave after a few years.’
URM Recruiting

Recruiting programs were in place but not coordinated:

- SURE – Summer Undergraduate Research Experience. Started by the College and Faculty.
- OPPS – Opportunities in Engineering Conference. Started by the faculty (Engineering and Chemistry).

Retention

The few students we had felt isolated.

- we need a program which brings student together, coordinates meetings, events.
- we need to make sure students are making progress towards a degree and are getting the correct advice to help their professional career (go to conferences, write papers, etc). This remains the case and is key to changing the campus culture for URM students long term.
Student Funding

-Most Ph.D. students are completely funded (at admission) and immediately join a faculty member/ research group. (Not the case for URM students prior to GERS.)

-Funding consists of RA, Fellowships, and some TA’s

-Prior to GERS incoming URM students were given AOFs and told to take courses their first year, and “not to worry about research” because they could “shop around” for a research group until the end of the first year.

-URM were not treated the same as other graduate students. It was assumed their performance would be subpar.

-In a culture of supporting students URM students were treated differently.
Solution:

Develop a faculty run program
- faculty director
- full-time dedicated coordinator
- oversight of Graduate School Advanced Opportunities Fellowship (AOF) dollars
- oversight and responsibility for summer research experience (SURE) program and fall recruitment program (Opportunities Conference)
- Intense follow-up and tracking of students
- develop student funding / award packages and work with faculty
Graduate Engineering Research Scholars premise:

- All students should be treated the same.
- A good student is a good student.
Graduate Engineering Research Scholars
Organizational Structure

Program Director
(Faculty Member)

Faculty Advisory Committee
(A faculty member from each department)

Coordinator

Student Hourly

Recruitment
(Summer Research Prgms)
(UW OPPS Conference)
(National Meetings)

Retention
(Community Building)
(Mentoring)

Professional Development
(Presentation + Posters)
(Journal Publications)
(Teaching Techniques)

Financial Support
(Fellowships)
(Research Assistantships)
GERS Faculty Committee 2011-12

Douglass Henderson, PhD
GERS Committee Chairperson
Professor, Engineering Physics

David Noyce, PhD
Professor
Civil & Environmental Engineering

Shiyu Zhou, PhD
Professor
Industrial Engineering

Michael Corradini, PhD
Professor
Engineering Physics

Kati Compton, PhD
Associate Professor
Electrical & Computer Engineering

Paul Nealy, PhD
Professor
Chemical & Biological Engineering

Greg Nellis, PhD
Professor
Mechanical Engineering

Don Stone, PhD
Professor
Materials Science & Engineering

Beth Meyerand, PhD
Professor, Dept. Chair
Biomedical Engineering
Graduate Engineering Research Scholars (GERS) Program*

Graduate Engineering Research Scholars Program
Goal: to build a community of Graduate Scholars for the Professoriate

- Administered by a Faculty Committee made up of a faculty member from each of the engineering departments in the College of Engineering.

- Administrative support is provided by the College of Engineering.

- Financial support for all program functions is provided through the Graduate School, the College of Engineering, and industry gift funds.

Recruitment
- Faculty linkages
- LSAMP, NSBE, BEYA, SHPE, AISES, SACNAS conferences
- Summer Undergraduate Research Program, Opportunities Conference, other UW programs.

Retention
- Weekly meetings with scholars
- Outside speakers
- Faculty discussions about careers in academia
- CIRTL - NSF program

Graduate Student Support
- Sloan - UW Fellowships
- Ford - Faculty funds
- NIH - DoE - Industry
- NHI - R.A.'s - NSF
- T.A.'s - Etc.

*GERS program got started in the fall of 1999 with the hiring of a student services coordinator for graduate students
Admission, Nomination and Funding

Process

• Students apply to Graduate School and the Departments

• Students are nominated by Faculty member
  - Faculty must submit a nomination form
  - Nomination form contains student support / funding information
  - Faculty must sign form

• Nomination packets are reviewed by 2 faculty committee members and the program chair

• Faculty committee members play an important role by advocating for students and discussions with colleagues
Graduate Student Funding History in CoE

Student Funding Prior to GERS:

Fellowship award:
- Departments were to a large extent relying on the Graduate School Advanced Opportunity Fellowship (AOF) awards to diversify the graduate student population
- Fellowship award was for one year and a second year was provided if needed
- Departments were to supplement the award or a research advisor would be found

Problems:
- Very limited number of awards
- Lack of program commitment by departments and involvement of faculty
- Students usually were not involved in research their first year (AOF year) or involved in teaching
- Faculty found these students less attractive because the students had been on campus for a year however, usually, they had not sought out research opportunities until the end of their first year
### Funding Types

**(Rates based on figures for 2011-2012)**

**PA** (Figures based on 100% at $32,901 for 2011-2012)
- 33% - $11,525
- 50% - $17,287

**TA** (Figures based on 2005-2007 contract and ‘regular’ rate; 100% - $34,380)
- 33% - $9,392
- 50% - $14,087

**RA** (Figures based on 100% - $40,368)
- 33% - $13,600
- 50% - $20,400

**AOF** (Figures based on $44,448)
- 33% - $14,816
- 50% - $22,440 (2011-2012)
Sample PhD Financial Plan

Application (PhD Students):
Application for a GERS Scholarship is made by a department on behalf of a prospective graduate student. We ask that departments submit a nomination packet consisting of the application to the Graduate School and to the department along with all appropriate documentation, financial aid request and a 5-year support plan. Students are eligible for 2 years of AOF funding. GERS funding cannot be packaged in consecutive years; in the example below, GERS funding is used in years 1 and 3 but could not be used years 1 and 2.

Sample plan:

PhD Nomination:

Year 1 (September 1, 2011-August 31, 2012): GERS (AOF) support at 50% RA level
Year 2 (September 1, 2012-August 31, 2013): 50% Faculty RA support through XXXX grant
Year 3 (September 1, 2013-August 31, 2014): GERS (AOF) support at 50% RA level
Year 4 (September 1, 2014-August 31, 2015): 50% Faculty RA support through XXXX grant
Year 5 (September 1, 2015-August 31, 2016): 50% Faculty RA support through XXXX grant
Sample MS Financial Plan

Application (MS Students):

Application for MS only students is the same as for Ph.D. students with the exception of the support plan, which covers a 2.5-year period. The nomination letter should indicate the type and extent of the research (thesis, or major with a strong research component). Non-thesis MS nominations will not be accepted. MS students are only eligible for one year of AOF funding.

Sample plan:

MS Nomination
Year 1 (September 1, 2011-August 31, 2012): GERS (AOF) support at 50% RA level
Year 2 (September 1, 2012-August 31, 2013): 50% Faculty RA support through XXXX grant
Year 3 (September 1, 2013-January 15, 2014): 50% Faculty RA support through XXXX grant
## URM Recruitment Data for CoE 2000-2006

<table>
<thead>
<tr>
<th>Department</th>
<th>Number of Applicants</th>
<th>Number of Offers Made</th>
<th>Number of Offers Accepted</th>
<th>Number of Offers declined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomedical</td>
<td>51</td>
<td>14</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>Chemical and Biological</td>
<td>50</td>
<td>12</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Civil &amp; Environmental</td>
<td>44</td>
<td>18</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>Electrical &amp; Computer</td>
<td>38</td>
<td>17</td>
<td>13</td>
<td>7</td>
</tr>
<tr>
<td>Industrial</td>
<td>30</td>
<td>12</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Materials Science</td>
<td>23</td>
<td>9</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Mechanical</td>
<td>71</td>
<td>12</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Nuclear/Engineering Physics</td>
<td>13</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
Key GERS Student Advocacy Points

- Active tracking of student application once admitted

- Active participation in student placement with faculty

- Active participation in student financial support (Research Assistantships, Fellowships)
  - Putting student support packages in place before students arrive on campus
GERS PhD Scholars Enrolled
Graduate Engineering Research Scholars
GERS NSF Student Awards

2010 NSF Graduate Fellowship Recipients
- NSF awarded 2000 nationwide
- 36 were awarded to the UW-Madison
- 9 were awarded to students in the COE
- 4 were awarded to GERS scholars (3 women)

2011 NSF Graduate Fellowship Recipients
- 4 were awarded to GERS scholars
GERS PhD Graduates, AY 2000 - 2011

- Faculty 9
- Post-Docs 8
- National Lab 7
- Industry 16
- MD-PhD 2
Keys Components:

• Financial plan
• Research Involvement
  - Student assigned to research group the day they enter the University and Degree Program
  - Faculty advisor involved with student from the beginning
• Advocates (pre-application to PhD)
  - Program staff
  - Faculty committee
  - Departmental allies
  - Graduate School
Factors influencing success of program:

- Availability of faculty funding to supplement University Fellowship (AOF - Advanced Opportunity Fellowship)
- Faculty committing to 5 years with a student “sight unseen”
- Faculty committed to diversifying departments
- International competition. (External “influence” VERY helpful i.e. NSF, NIH.)
- “Diversity” money still viewed as only source of support for underrepresented students. (Campus Climate)
GERS Impact on Climate

- Visible diversity on campus
- GERS students model/mentor undergrads through student orgs.
- URM Students performing in labs (NSF, NASA, NIH fellows in GERS)
- Faculty see experiences of URM student in classroom (and modify behavior – assigning groups, time in class for groups to meet, etc).
- Faculty on committee dialogue about student experience and share ‘modification’ strategies.
Systemic Changes in Graduate Recruitment Resulting from GERS – (1)

- GERS Faculty represent diversity applicants on departmental admissions committees and draw attention to the demographics of applicant pool.

- GERS Faculty dialogue with other faculty in reviewing applications for diversity students. Explaining available funds through GERS has helped faculty to accept a student they might otherwise not have been able to support (and the student would not have been admitted).

- Faculty come to us to assist in recruitment (student referrals from faculty friends, etc.)

- Faculty request to include our efforts in proposals (ex. Materials Science) and others with REUs.
Systemic Changes in Graduate Recruitment Resulting from GERS – (2)

- Faculty now dialogue about what measures success rather than simply using test scores as a screening tool.

-Schools who have sent us graduate students share our programs with other students and funding agencies

- SURE/REU students now placed in area of research interest (rather than given any research experience)

- Our programs are now recognized as sources for good graduate students rather than “outreach”

- We have students transitioning from MS into PhD Programs

- GERS Scholars active in recruiting process.

- GERS Scholars are “happy”
GERS is Expanded Campus-wide

- Sci-Med GRS (Biological Sciences and Med School)
- C-GRS (Letters and Science)
- Ed-GRS (School of Education)
Graduate School

Faculty Governance Committee (Summer 2010)

Graduate Research Scholars (GRS) Communities

- College of Letters and Science: C-GRS
- School of Education: Ed-GRS
- College of Engineering: GERS
- College of Agriculture and Life Sciences combined with the School of Medicine and Public Health: SciMed-GRS
- Gaylord Nelson Institute for Environmental Studies: Enviro- GRS
- Business School: Business GRS
- School of Nursing: Nursing GRS
Fall Semester Graduate Student Enrollment
All Ethnic Minorities

Number of Students

Year

2001 2002 2003 2004 2005 2006 2007 2008 2009 2010
### Numbers and Percentages of Engineering PhDs, by Race/Ethnicity and Gender (2004-2006)

<table>
<thead>
<tr>
<th>Institution</th>
<th>#URM Women</th>
<th>#URM Men</th>
<th>#URM's</th>
<th>#PhD Stud.</th>
<th>%URM Women</th>
<th>% URM Men</th>
<th>%URMs USNews Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Massachusetts Institute of Technology</td>
<td>2</td>
<td>11</td>
<td>13</td>
<td>635</td>
<td>0.3%</td>
<td>1.7%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Stanford University</td>
<td>6</td>
<td>8</td>
<td>14</td>
<td>618</td>
<td>1.0%</td>
<td>1.3%</td>
<td>2.3%</td>
</tr>
<tr>
<td>University of California-Berkeley</td>
<td>4</td>
<td>12</td>
<td>16</td>
<td>481</td>
<td>0.8%</td>
<td>2.5%</td>
<td>3.3%</td>
</tr>
<tr>
<td>Georgia Institute of Technology</td>
<td>16</td>
<td>29</td>
<td>45</td>
<td>739</td>
<td>2.2%</td>
<td>3.9%</td>
<td>6.1%</td>
</tr>
<tr>
<td>University of Illinois at Urbana-Champ.</td>
<td>3</td>
<td>8</td>
<td>11</td>
<td>435</td>
<td>0.7%</td>
<td>1.8%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Carnegie Mellon University</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>247</td>
<td>0.4%</td>
<td>1.2%</td>
<td>1.6%</td>
</tr>
<tr>
<td>California Institute of Technology</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>161</td>
<td>0.0%</td>
<td>1.2%</td>
<td>1.2%</td>
</tr>
<tr>
<td>University of Southern California</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>271</td>
<td>0.0%</td>
<td>1.1%</td>
<td>1.1%</td>
</tr>
<tr>
<td>University of Michigan at Ann Arbor</td>
<td>5</td>
<td>19</td>
<td>24</td>
<td>571</td>
<td>0.9%</td>
<td>3.3%</td>
<td>4.2%</td>
</tr>
<tr>
<td>University of Texas at Austin</td>
<td>2</td>
<td>6</td>
<td>8</td>
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* Data from NSF WebCASPAR system for years 2004-2006. URM includes US Citizens or Permanent Residents who are: Black (Non-Hispanic), Hispanic, American Indian or Alaska Native, or Native Hawaiian or other Pacific Islander. Total PhD numbers include all PhDs regardless of citizenship status. US News & World Report Rankings are from the 2009 Survey.
NSF, URM PhD's Awarded in Engineering
2000-2009
2009 Presidential Awards for Excellence in Science, Mathematics, and Engineering Mentoring (PAESMEM)
2009 Presidential Awards for Excellence in Science, Mathematics, and Engineering Mentoring (PAESMEM)