AT&T Labs and Lucent Bell Laboratories Ph.D. Fellowship Programs 1972 - 2002 Program Results/Data

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AT&T Labs and Lucent Bell Laboratories Ph.D. Fellowship Programs --Results Summary

• Total Awards by Program
• Completion Data--MS and Ph.D.
• Comparison Completion Data
• Average Number of Years to Complete Ph.D.s
• Companies and Research Institutes that Employ Fellowship Alumni
• Universities that Employ Fellowship Alumni
• Program Awards and Recognition
• Program Impact
• Other Data (optional)
### AT&T Labs and Lucent Bell Laboratories Ph.D. Fellowship Programs -- Total Awards

<table>
<thead>
<tr>
<th>Years</th>
<th>CRFP</th>
<th>GRPW</th>
<th>ALFP</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1972 - 1995</td>
<td>216</td>
<td>152</td>
<td></td>
<td>368</td>
</tr>
<tr>
<td>1996 - 2002</td>
<td>46*</td>
<td>41*</td>
<td>43</td>
<td>130</td>
</tr>
<tr>
<td>Total</td>
<td>262</td>
<td>193</td>
<td>43</td>
<td>498</td>
</tr>
</tbody>
</table>

*Lucent Funded
### CRFP and GRPW Students--Fields of Study

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>CRFP</th>
<th>GRPW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Electrical Engineering</td>
<td>34%</td>
<td>19%</td>
</tr>
<tr>
<td>• Mechanical Engineering</td>
<td>5%</td>
<td>0%</td>
</tr>
<tr>
<td>• Industrial Engineering and O. R.</td>
<td>5%</td>
<td>3%</td>
</tr>
<tr>
<td>• Material Science</td>
<td>4%</td>
<td>6%</td>
</tr>
<tr>
<td>• Chemical Engineering</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>• Other</td>
<td>&lt;1%</td>
<td>1%</td>
</tr>
<tr>
<td>Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Physics</td>
<td>17%</td>
<td>24%</td>
</tr>
<tr>
<td>• Computer Science</td>
<td>13%</td>
<td>18%</td>
</tr>
<tr>
<td>• Chemistry</td>
<td>12%</td>
<td>15%</td>
</tr>
<tr>
<td>• Mathematics</td>
<td>6%</td>
<td>12%</td>
</tr>
<tr>
<td>• Economics and Psychology</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>• Other</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>
### AT&T Labs and Lucent Bell Laboratories Ph. D. Fellowship Programs--Completion Data-Summary 1972-1995

<table>
<thead>
<tr>
<th>Program</th>
<th>PHD</th>
<th>MS</th>
<th>Withdrew</th>
<th>In-Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRFP</td>
<td>152</td>
<td>38</td>
<td>26</td>
<td>0</td>
</tr>
<tr>
<td>GRPW</td>
<td>119</td>
<td>6</td>
<td>23</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>271</td>
<td>44</td>
<td>49</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>%</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PHD</td>
<td>74%</td>
<td>12%</td>
<td>13%</td>
<td>1%</td>
</tr>
</tbody>
</table>

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AT&T Labs and Lucent Bell Laboratories Ph. D. Fellowship Programs--Completion Data-CRFP 1972-1995

CRFP 1972-1995

- Ph.D.: 151, 69.9%
- M.S.: 38, 17.6%
- Withdrawn: 27, 12.5%
- In Progress: 0, 0.0%

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AT&T Labs and Lucent Bell Laboratories Ph. D. Fellowship Programs--Completion Data-GRPW (Fellows) 1975-1995

GRPW Award Year (Fellows) 1975-1995

- Withdrawn, 11, 20%
- In Progress, 1, 2%
- M.S, 4, 7%
- Ph.D, 40, 71%

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AT&T Labs and Lucent Bell Laboratories Ph. D. Fellowship Programs--Completion Data-GRPW 1975-1995

- Ph.D., 119, 78%
- M.S., 6, 4%
- In Progress, 4, 3%
- Withdrawn, 23, 15%

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## Comparison Completion Data

<table>
<thead>
<tr>
<th>Program</th>
<th>Award years</th>
<th>As of</th>
<th>Registered time to degree(RTD)</th>
<th>PHD</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEM Ph.D. Fellowship</td>
<td>1990-2002</td>
<td>2002</td>
<td>NA</td>
<td>73%</td>
</tr>
<tr>
<td>Ford Foundation Pre-doctoral Minority Fellowship</td>
<td>1986-1988</td>
<td>1995</td>
<td>7 years</td>
<td>41%</td>
</tr>
<tr>
<td>National Science Foundation Minority Graduate Fellowship</td>
<td>1979-1981</td>
<td>1989</td>
<td>8 years</td>
<td>41%</td>
</tr>
<tr>
<td>Illinois Minority Graduate Incentive Program (IMGIP)</td>
<td>1986-1995</td>
<td>2000</td>
<td>5 years</td>
<td>55%</td>
</tr>
<tr>
<td>CRFP</td>
<td>1972-1995</td>
<td>2002</td>
<td>7 years</td>
<td>70%</td>
</tr>
</tbody>
</table>
AT&T Labs and Lucent Bell Laboratories Ph.D. Fellowship Programs- Average Years to Complete

CRFP Completion Statistics

Award Year

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AT&T Labs and Lucent Bell Laboratories Ph.D. Fellowship Programs- Average Years to Complete Degrees--GRPW

GRPW Completion Statistics

Award Year

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Companies and Research Institutes That Employ Fellowship Alumni

- Agere
- Agilent Labs
- Allied Signal
- Apple
- AT&T
- Bellcore/Telcordia
- Bell South
- Booz-Allen Hamilton
- Bose
- Chronicle of Higher Education
- Corning
- DARPA
- Dow
- Dupont
- GE Research
- Goddard Institute
- Hewlett Packard
- IBM
- Interval Research
- Jet Propulsion Laboratory

- Lawrence Berkeley Lab
- Lehman Brothers
- Los Alamos National Laboratory
- Lotus
- Lucent Technologies
- Kodak
- Mitre
- Motorola
- National Institute of Standards
- NASA
- Nuclear Regulatory Commission
- Rockwell Semiconductor Systems
- Sandia National Laboratory
- Seagate Technologies
- Schlumberger
- Silicon Graphics
- Texas Instruments
- USGA
- Xerox
Universities that Employ Fellowship Alumni

• Auburn University
• Arizona State University
• Boston University
• California Institute of Technology
• Careton College
• Carnegie Mellon University
• Clark Atlanta University
• City College of New York
• Cornell University
• Dartmouth College
• Duke University
• Florida A&M University
• Georgetown University
• Georgia Institute of Technology
• Harvard University
• Hiriam College
• Hofstra University
• Howard University
• James Madison University
• Loyola University
• Massachusetts Institute of Technology
• Morehouse College
• Morgan State University
• North Carolina A&T University
• Northeastern University
• New Jersey Institute of Technology
• New Mexico State University
• Oberlin College
• Oregon State University

• Pennsylvania State University
• Polytechnic University
• Pomona College
• Princeton University
• Rutgers University
• Smith College
• Spelman College
• Stanford University
• Texas A&M
• University of California – Berkeley, Davis, Irvine, San Diego
• University of Chicago
• University of Dayton
• University of Maryland–Baltimore County, College Park
• University of Massachusetts–Lowell
• University of Michigan
• University of Nebraska
• University of Pittsburgh
• University of Puerto Rico
• University of Texas–Austin
• University of Washington
• University of Wisconsin–Madison
• Vassar
• Wesleyan
• Williams College
• Yale University
AT&T Labs and Lucent Bell Laboratories Ph.D. Fellowship Programs--Awards and Recognition

• Program Awards--
  • 1998--AT&T Labs Fellowship Program-- Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring
  • 1998--Women in Engineering Programs & Advocates Network--Breakthrough Award
  • 1999--Lucent GRPW--Maria Mitchell Women in Science Award
AT&T Labs and Lucent Bell Laboratories Ph.D. Fellowship Programs--Awards and Recognition

• Graduate Awards--Mentoring
  • 1997-- Dr. Charles Thompson--University of Massachusetts-Lowell-- Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring
  • 1998-- Dr. Armando Rodriguez--Arizona State University--Presidental Award for Excellence in Science, Mathematics, and Engineering Mentoring
AT&T Labs and Lucent Bell Laboratories Ph.D. Fellowship Programs-- Impact

• 1972-2002--30 years of Ph.D. fellowship support programs for women and under-represented minorities
• Financial Support, Summer Internships, and one-on-one Mentoring key aspects of the programs success
• Intern programs for minorities and women and majority students
• Growth of a Mentoring Culture across AT&T Labs and Lucent Bell Laboratories for fellowship students, interns, new hires
• Approximately 500 total participants
• 275 Ph.D.s (74% completion rate)
• 44 MS degrees (12% completion rate)
• 30% of graduates at top US Academic Institutions as Faculty
• 17% are in Leadership and Academic Positions
• Presidential, Maria Mitchell, WEPAN Awards for Excellence in Mentoring
AT&T Labs and Lucent Bell Laboratories Ph.D. Fellowship Programs-- Other Data

- **Total CRFP/ALFP Students Race/ Sex/%**
  - African American Male 51%
  - African American Female 24%
  - Hispanic Male 17%
  - Hispanic Female 7%
  - Native American Female .5%
  - Native American Male .5%

- **Total GRPW Students--Women’s Program (Note--estimated):**
  - White Females 55%
  - Asian Females 35%
  - Others 10%

  - Notes: Total all females 93 (CRFP/ALFP), 193 (GRPW)= 286
    - 286 / 498 = 57.5%
  - Notes: Total all minority males: 498-286 = 212;
    - 212 / 498 = 42.5%
AT&T Labs and Lucent Bell Laboratories Ph.D. Fellowship Programs-- Other Data

• Program Applicant Credentials
  • GPA - Top 10% of class (average 3.4 GPA)
  • Competitive scores on SAT verbal (high 560s), math (mid 600s), and advanced tests (600-700)
  • Applicants from wide cross section of US universities
AT&T Labs and Lucent Bell Laboratories Ph.D. Fellowship Programs--Other Data

- CRFP/ALFP Completion Rate
  - 69% received Ph.D.
  - 18% received Master's only
- CRFP/ALFP Student School Enrollments for the Ph.D.
  - MIT 21%
  - Berkeley 16%
  - Stanford 12%
  - Georgia Tech 6%
  - Cornell 5%
  - Columbia 3%
  - Harvard 2%
  - CalTech 2%
  - Princeton 1%
AT&T Labs and Lucent Bell Laboratories Ph.D. Fellowship Programs-- Other Data

- **GRPW Completion Rate**
  - 74.5% (grants and fellowships combined)
  - 71% fellowship students only
  - 78% grant students only

- **GRPW Fellowship/Grant Students-- School Enrollments for the Ph.D.**
  - MIT 26%
  - Stanford 22%
  - Berkeley 11%
  - Harvard 9%
  - Princeton 9%
  - Cornell 5%
  - CalTech 3%
### CRFP Graduates 1983 - 1999
Percentage of Total Ph.D. Graduates in Electrical Engineering, Chemistry, Physics, Computer Science, Mathematics

<table>
<thead>
<tr>
<th>Group</th>
<th>EE</th>
<th>Chem</th>
<th>Physics</th>
<th>CS</th>
<th>Math</th>
</tr>
</thead>
<tbody>
<tr>
<td>African Am</td>
<td>12%</td>
<td>2%</td>
<td>9%</td>
<td>8%</td>
<td>5%</td>
</tr>
<tr>
<td>Hispanics</td>
<td>5%</td>
<td>1%</td>
<td>1%</td>
<td>4%</td>
<td>1%</td>
</tr>
<tr>
<td>Nat. Am.</td>
<td>.5%</td>
<td>.02%</td>
<td>.3%</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

- Based on Data reported by NSF--Women, Minorities and Persons with Disabilities in Science and Engineering:2000, NSF 00-327, Table 4-12 (compared with CRFP graduate data 1983-1999)
### GRPW Graduates 1983 - 1999

**Percentage of Total Ph.D. Graduates in Electrical Engineering, Chemistry, Physics, Computer Science, Mathematics**

<table>
<thead>
<tr>
<th>Group</th>
<th>EE</th>
<th>Chem</th>
<th>Physics</th>
<th>CS</th>
<th>Math</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Females</td>
<td>2.6%</td>
<td>.3%</td>
<td>2%</td>
<td>1.3%</td>
<td>.5%</td>
</tr>
<tr>
<td>Asian Females</td>
<td>3.1%</td>
<td>.3%</td>
<td>.9%</td>
<td>1.9%</td>
<td>0%</td>
</tr>
</tbody>
</table>

- Based on Data reported by NSF--Women, Minorities and Persons with Disabilities in Science and Engineering:2000, NSF 00-327, Table 4-12 (compared with CRFP graduate data 1983-1999)