

# Report on 2010-2011 Academic Recruitment and Hiring 

James W. Maxwell and Colleen Rose

The number of full-time positions under recruitment in mathematics departments increased during the 2010-2011 academic recruitment cycle. The total number of positions under recruitment by all mathematics departments combined was 1,567. This number is up $45 \%$ from the 2009-2010 total and up 7\% from the 2008-2009 total. (Note: Throughout this report, the term tenure-track encompasses positions that come with tenure as well as those which provide the option of earning tenure at some point after appointment.)


The doctoral statistics and biostatistics departments, Group IV, also saw an increase (22\%) in the level of recruitment, though not as precipitous an increase as for the mathematics departments. Group IV consists of 93 departments and so constitutes a much smaller employment pool than the approximately 1,400 mathematics departments. In 2010 there were approximately 1,860 full-time faculty in Group IV compared to approximately 23,023 full-time faculty in all mathematics departments combined.


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## Positions Under Recruitment

The percentage increase in positions under recruitment varied significantly among the various reporting groups within the combined mathematics departments. There was a 34\% increase for the doctoral mathematics departments combined, a $63 \%$ increase for masters mathematics departments (Group M) and a $51 \%$ increase for bachelors mathematics departments (Group B). Similarly, the increases in tenure-track positions under recruitment for these same department groupings were $20 \%$, $27 \%$, and $25 \%$, respectively.



## Positions Filled

A total of 1,290 positions were filled during the 2010-2011 academic cycle for employment beginning in fall 2011 by all mathematics departments combined. This total is up 34\% from the 2009-2010 total and up 1\% from the 2008-2009 total.


## Positions Filled

The situtation for doctoral statistics departments and biostatistics departments combined was much the same, as demonstrated by the accompanying figure. The total of filled positions, is up $21 \%$ from the 2009-2010 total and up $15 \%$ from the 2008-2009 total.

Figure F.2: Positions Filled in Doctoral Statistics \& Biostatistics Departments Combined


The increase in positions filled for fall 2011 also varied widely among the various reporting groups within all mathematics departments. For the doctoral mathematics departments combined, the number of positions filled was 606, an increase of $32 \%$ from the fall 2010 and fall 2009 counts. For Group M the count was 178, up $32 \%$ from fall 2010 and up $17 \%$ from the fall 2009 count. For Group B the count was 506, up $38 \%$ from fall 2010 and down $24 \%$ from fall 2009.


## Positions Filled

The total tenure-track positions filled during the 2010-2011 academic cycle by all mathematics departments combined was 623 , up $30 \%$ from the 2009-2010 total of 479 . This total is down $12 \%$ from the 2008-2009 figure of 710 and down $36 \%$ from the 2007-2008 total of 978 (the ten year high).


## Faculty Attrition

Figure A. 1 shows the trends in attrition from deaths and retirements among the full-time faculty for the academic years 1994-1995 through 2010-2011. In the late 1990s attrition leveled off, then began dropping after 2000, reaching the smallest rate of attrition in 2009-2010.


* The percentage of full-time faculty who died or retired is the number of faculty who died or retired at some point during the academic year (September 1 through August 31) divided by the number of full-time faculty at the start of the academic year.
- Group Va reported the smallest rate of attrition, $0.2 \%$
- Group I Pub reported the highest rate of attrition, $2.5 \%$.
- Group II reported the largest percentage increase in attrition at 2.4\% up from 1.1\% last year.


## Faculty Attrition

Figure A. 2 shows an alternative way of looking at the trends in annual faculty retirements compared to that offered in Figure A.1. It seems highly likely that the vast majority of individuals who are reported by their department as retiring are, in fact, members of the tenured faculty. Given that, it makes sense to look at the ratio of those retiring during an academic year to the total tenured faculty at the start of that year, as is done in A.2. Data collected for the first time during the 2011 Annual Survey confirmed that over $90 \%$ of those retiring where tenured. For 2011, the percentage of tenured faculty that retired from Groups I-Va was 3.3; among Groups M \& B this percentage was 3.4.

Figure A.2: Retired Faculty as a Percentage of Tenured Faculty


* Each percentage in this figure is the number of full-time faculty that retired at some point during the academic year (September 1 through August 31) divided by the number of full-time tenured faculty at the start of the academic year.


## Other Information

The interested reader may view additional details on the results of this survey and prior year trends by visiting the AMS website at www.ams.org/annualsurvey. Survey results for the doctoral departments in statistics and biostatistics are available there.

## Survey Response Rates

## Faculty Recruitment \& Hiring Response Rates

| Department* | Number | Percent |
| :--- | :---: | :---: |
| Group I (Public) | 19 of 25 | 76 |
| Group I (Private) | 15 of 23 | 65 |
| Group II | 47 of 56 | 84 |
| Group III | 65 of 81 | 80 |
| Group IV (Statistics) | 37 of 58 | 64 |
| Group IV (Biostatistics) | 19 of 35 | 54 |
| Group Va | 17 of 20 | 85 |
| Group M | 99 of 179 | 55 |
| Group B | 440 of 1013 | 43 |

* Departments and programs that do not formally "house" faculty and their salaries are excluded from this survey.


## Group Descriptions

Group I is composed of 48 departments with scores in the 3.00-5.00 range. Group I Public and Group I Private are Group I departments at public institutions and private institutions, respectively.
Group II is composed of 56 departments with scores in the 2.00-2.99 range.
Group III contains the remaining U.S. departments reporting a doctoral program, including a number of departments not included in the 1995 ranking of program faculty.
Group IV contains U.S. departments (or programs) of statistics, biostatistics, and biometrics reporting a doctoral program.
Group V contains U.S. departments (or programs) in applied mathematics/applied science, operations research, and management science that report a doctoral program.
Group Va is applied mathematics/applied science; Group Vb, which was no longer surveyed as of 1998-99, was operations research and management science.
Group M contains U.S. departments granting a master's degree as the highest graduate degree.
Group B contains U.S. departments granting a baccalaureate degree only.

Listings of the actual departments which compose these groups are available on the AMS website at www. ams.org/ annual-survey/groups_des.

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Supplemental Table(s) for the Report on Academic Recruitment and Hiring

Supplemental Table R.1: Recruitment of Faculty with a Doctorate, Fall 2011

|  | Group I (Public) Math. | Group I <br> (Private) <br> Math. | Group II Math. | Group III Math. | Group Va Applied Math. | Total Groups <br> I - III \& Va | Master's | Bachelor's | Total Groups $\begin{gathered} \text { I - III, Va, } \\ \text { M \& B } \end{gathered}$ | Group IV <br> Statistics |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Posted Doctoral Positions Total Number | 130 | 129 | 211 | 170 | 33 | 673 | 243 | 651 | 1567 | 161 |
| Standard Error | 10 | 19 | 13 | 10 | 4 | 27 | 23 | 37 | 38 | 14 |
| Tenured/tenure-track | 46 | 28 | 69 | 83 | 14 | 240 | 131 | 366 | 737 | 100 |
| Open to new doctoral recipients | 28 | 12 | 62 | 66 | 12 | 179 | 121 | 349 | 649 | 83 |
| Open to assoc/full level | 22 | 17 | 10 | 11 | 7 | 67 | 22 | 54 | 144 | 37 |
| Non-tenure-track | 84 | 101 | 141 | 87 | 19 | 432 | 112 | 285 | 829 | 61 |
| Open to new doctoral recipients | 74 | 92 | 129 | 78 | 19 | 392 | 110 | 258 | 760 | 54 |
| Temporary 1-year appointments | 18 | 23 | 41 | 40 | 5 | 128 | 68 | 175 | 371 | 26 |
| Reported Hires for Above Total number | 124 | 118 | 196 | 140 | 28 | 606 | 178 | 506 | 1290 | 138 |
| Male doctoral hires | 99 | 94 | 141 | 106 | 24 | 463 | 124 | 316 | 903 | 88 |
| Tenured/tenure-track | 30 | 15 | 46 | 58 | 9 | 159 | 81 | 199 | 439 | 61 |
| Non-tenure-track | 68 | 78 | 95 | 48 | 14 | 304 | 43 | 118 | 465 | 28 |
| Postdoc appointments | 55 | 63 | 66 | 18 | 7 | 209 | 9 | 14 | 231 | 16 |
| 1-year appointments | 8 | 9 | 21 | 13 | 4 | 54 | 40 | 57 | 151 | 3 |
| Female doctoral hires | 25 | 25 | 55 | 34 | 5 | 143 | 54 | 189 | 386 | 50 |
| Tenured/tenure-track | 9 | 2 | 15 | 16 | 2 | 44 | 31 | 109 | 184 | 16 |
| Non-tenure-track | 16 | 23 | 40 | 18 | 2 | 99 | 23 | 80 | 202 | 13 |
| Postdoc appointments | 7 | 18 | 18 | 8 | 1 | 52 | 0 | 12 | 64 | 10 |
| 1-year appointments | 3 | 0 | 12 | 4 | 1 | 20 | 17 | 57 | 94 | 8 |
| Total new doctoral hires | 54 | 72 | 78 | 39 | 13 | 256 | 80 | 199 | 535 | 50 |
| Male new doctoral hires | 41 | 57 | 58 | 29 | 12 | 197 | 61 | 127 | 385 | 33 |
| Tenured/tenure-track | 0 | 0 | 4 | 6 | 4 | 13 | 28 | 73 | 114 | 25 |
| Female new doctoral hires | 13 | 15 | 19 | 10 | 1 | 59 | 19 | 72 | 150 | 17 |
| Tenurd/tenure-track | 1 | 0 | 0 | 1 | 0 | 3 | 15 | 43 | 60 | 4 |
| Unfilled positions | 7 | 11 | 15 | 30 | 5 | 67 | 79 | 146 | 292 | 23 |

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## Supplemental Table(s) for the Report on Academic Recruitment and Hiring

Supplemental Table R.2: Summary of Recruitment of Faculty with a Doctorate,
Fall 2011

|  | Groups <br> I - III \& Va | Master's and Bachelor's | Group IV <br> Statistics | Total |
| :---: | :---: | :---: | :---: | :---: |
| Posted Doctoral Positions |  |  |  |  |
| Total Number | 673 | 894 | 161 | 1727 |
| Tenure/tenure-track | 240 | 497 | 100 | 837 |
| Open to new doctoral recipients | 179 | 470 | 83 | 732 |
| Tenure/tenure-track | 16 | 170 | 28 | 215 |
| Non-tenure-track | 432 | 397 | 61 | 890 |
| Open to new doctoral recipients | 392 | 368 | 54 | 814 |
| Reported Hires for Above, excluding temporary hires |  |  |  |  |
| Total doctoral hires | 606 | 684 | 138 | 1428 |
| Tenure/tenure-track | 203 | 419 | 77 | 700 |
| Previously in non-tenure-track | 48 | 102 | 12 | 161 |
| Previously in postdoc | 123 | 79 | 20 | 222 |
| Non-tenure-track | 310 | 376 | 53 | 740 |
| 1-year appointments | 128 | 243 | 26 | 396 |
| Postdoc appointments | 261 | 34 | 26 | 321 |
| Total new doctoral hires | 256 | 279 | 50 | 585 |
| Tenured/tenure-track | 16 | 157 | 28 | 202 |
| Male | 197 | 188 | 33 | 418 |
| Tenured/tenure-track | 13 | 100 | 25 | 138 |
| Female | 59 | 91 | 17 | 167 |
| Tenured/tenure-track | 3 | 57 | 4 | 63 |
| Total not-new doctoral hires | 350 | 404 | 88 | 842 |
| Tenured/tenure-track | 187 | 262 | 49 | 498 |
| Male | 266 | 252 | 55 | 573 |
| Tenured/tenure-track | 146 | 179 | 36 | 361 |
| Female | 84 | 152 | 33 | 269 |
| Tenured/tenure-track | 42 | 83 | 13 | 137 |
| Total Non-doctoral hires | 13 | 98 | 5 | 115 |
| Male | 5 | 58 | 2 | 65 |
| Female | 8 | 39 | 3 | 50 |

## Annual Survey

Supplemental Table(s) for the Report on Academic Recruitment and Hiring

Supplemental Table R.3: Positions Posted and Filled, Fall 2011

| Positions | Groups <br> I - III \& Va | $\begin{aligned} & \text { Master's } \\ & \text { and } \\ & \text { Bachelor's } \end{aligned}$ | Group IV <br> Statistics | Total |
| :---: | :---: | :---: | :---: | :---: |
| Posted positions open to new doctoral recipients | 179 | 470 | 83 | 732 |
| \% tenured/tenure-track | 9\% | 36\% | 34\% | 29\% |
| Positions filled by new doctoral recipients | 256 | 279 | 50 | 585 |
| \% tenured/tenure-track | 6\% | 56\% | 56\% | 34\% |
| Positions filled by not-new doctoral recipients | 350 | 404 | 88 | 842 |
| \% tenured/tenure-track | 54\% | 65\% | 56\% | 59\% |

Supplemental Table(s) for the Report on Academic Recruitment and Hiring
Section on Faculty Attrition

Supplemental Table A.1: Faculty Deaths \& Retirements, Fall 2011

|  | Group I (Public) Math. | Group I (Private) Math. | Group II Math. | Group III Math. | Group Va Applied Math. | Total Groups I - III \& Va | Master's | Bachelor's | Total Groups I - III, Va, M \& B | Group IV Statistics |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Full-time faculty who retired or died | 45 | 14 | 62 | 61 | 4 | 185 | 96 | 232 | 512 | 26 |
| Standard Error | 4 | 2 | 5 | 5 | 1 | 4 | 9 | 19 | 19 | 5 |
| \% of Full-time faculty | 2.5\% | 1.3\% | 2.4\% | 2.4\% | 0.2\% | 2.2\% | 2.3\% | 2.2\% | 2.2\% | 0.3\% |
| Died | 14 | 2 | 1 | 1 | 0 | 18 | 5 | 17 | 40 | 2 |
| Retired | 41 | 12 | 61 | 59 | 6 | 179 | 89 | 215 | 483 | 25 |
| Tenured Faculty | 41 | 12 | 58 | 47 | 6 | 165 | 76 | 197 | 438 | 23 |

Supplemental Table A.2: Tenured Faculty Retirements, Fall 2011

|  | Group I <br> (Public) Math | Group I <br> (Private) Math. | Group II Math. | Group III Math. | Group Va Applied Math. | Total Groups I- III \& Va | Master's | Bachelor's | Total Groups I - III, Va, $M \& B$ | Group IV Statistics | Total Groups I-Va M B |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Full-time Tenured faculty who retired | 41 | 12 | 58 | 47 | 6 | 165 | 76 | 197 | 438 | 23 | 461 |
| Standard Error | 4 | 2 | 5 | 4 | 1 | 4 | 8 | 18 | 6 | 5 |  |
| \% of Full-time tenured faculty | 3.7\% | 2.2\% | 3.8\% | 3.4\% | 2.9\% | 3.5\% | 3.1\% | 3.0\% | 3.4\% | 2.5\% | 3.4\% |


[^0]:    James W. Maxwell is AMS associate executive director for special projects. Colleen A. Rose is AMS survey analyst.

