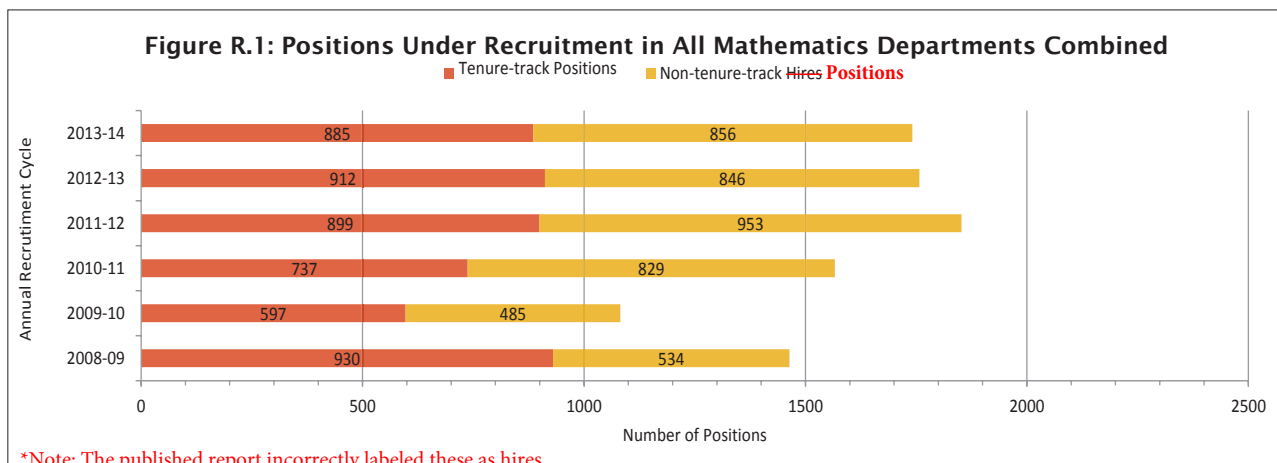


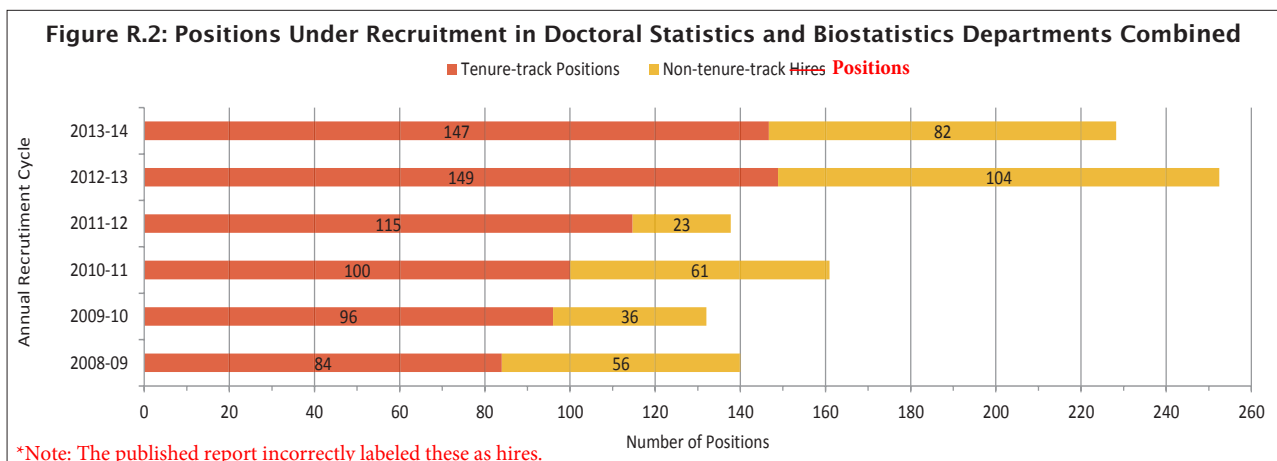
# Report on 2013–2014 Academic Recruitment and Hiring

*William Yslas Vélez, James W. Maxwell, and Colleen Rose*

The number of full-time positions under recruitment in mathematics departments was 1,741 during the 2013–14 academic recruitment cycle (for employment beginning in fall 2014). Recruitment of tenure-track positions increased in doctoral and masters departments and decreased in bachelors departments. When compared to the 2003–04 recruitment cycle, a year that was representative of the years from 2003–07, total tenure-track positions are down 22% (from 1,128) and non-tenure-track positions are up 45% (from 593).



The doctoral statistics and biostatistics department groupings each reported a decrease (4% and 10%) in the number of positions under recruitment over the numbers reported for the prior year, an (estimated<sup>1</sup>) combined total of 228 positions under recruitment for the 2013–14 recruitment cycle. Compared to the 2008–09 data, the total number of positions increased by 63% and the numbers of tenure-track and of non-tenure-track full-time positions represent an increase of 75% and 46%, respectively. Looking back even further to the 2003–04 data we see that the number of non-tenure-track full-time positions has doubled (from 41) and tenure-track positions have increased by 11% (from 132).

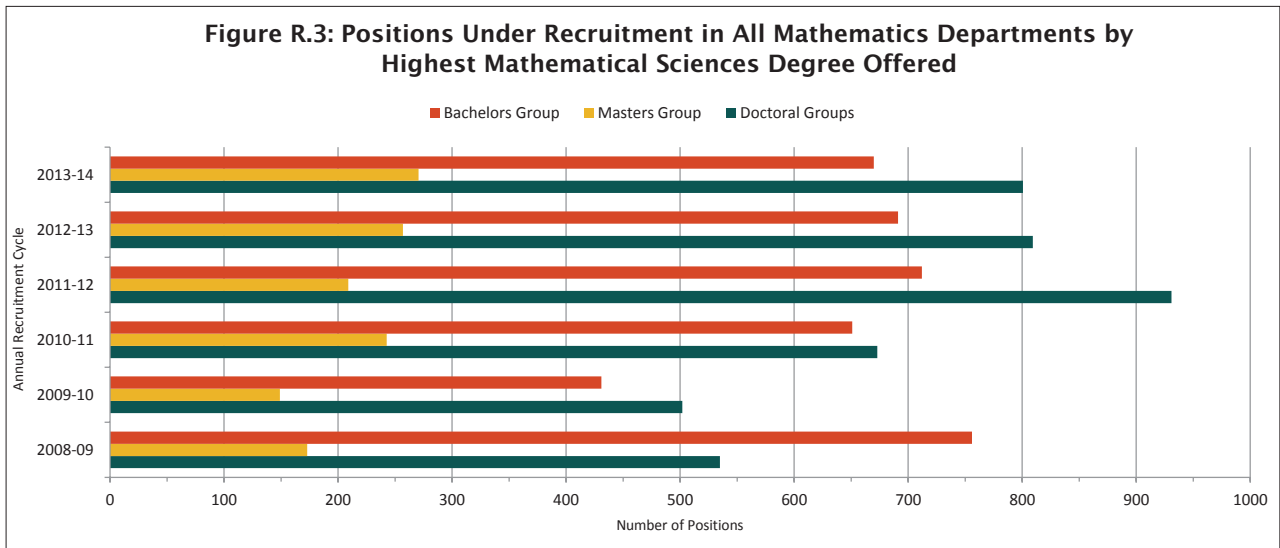


<sup>1</sup>All numbers reported are estimates made to account for non-responding departments. See page 538 for response rates.

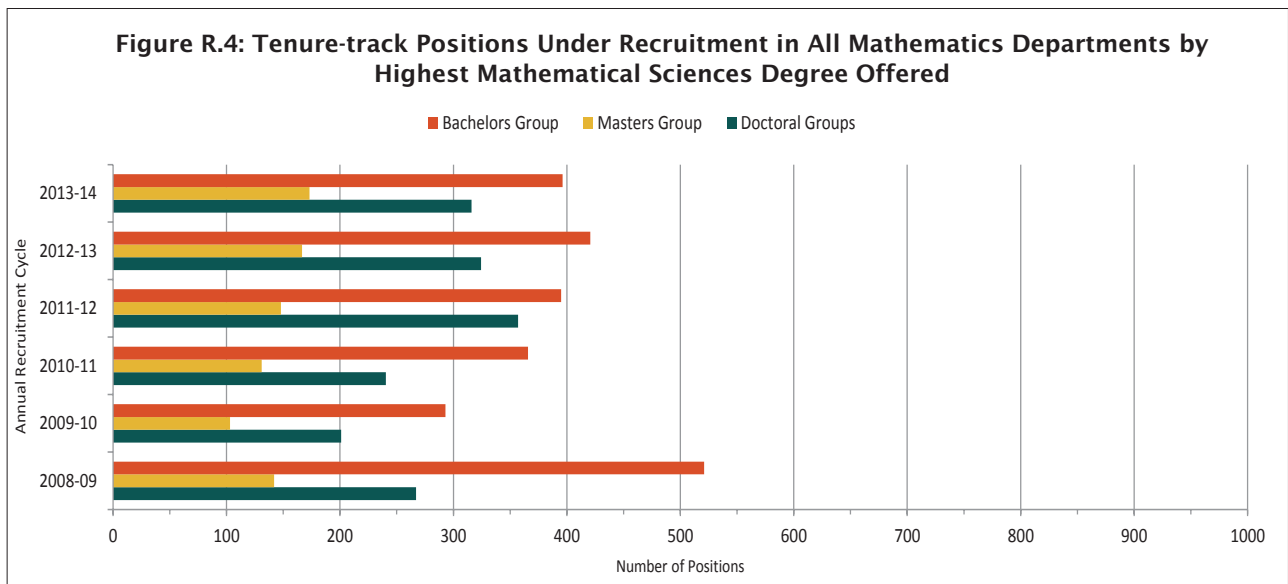
William Yslas Vélez is a professor in the Department of Mathematics at University of Arizona. James W. Maxwell is AMS Coordinator for special projects. Colleen A. Rose is AMS survey analyst.

## Positions Under Recruitment

The overall number of full-time positions under recruitment decreased among mathematics departments. There was a 1% decrease for the doctoral mathematics groups combined, a 5% increase for the masters group, and a 3% decrease for the bachelors group. Recruitment of tenure-track positions decreased overall, but increased 4% in the masters and decreased in both the doctoral mathematics groups combined and bachelors groups by 3% and 6%, respectively. Comparing current levels of recruitment with 2008-09 and 2003-04, we see that it has increased in doctoral departments by 50% and 25%, respectively; in masters departments it has increased 57% since 2008-09 and decreased 21% since 2003-04; in bachelors departments it has decreased by 11% since 2008-09 and decreased by 9% since 2003-04.

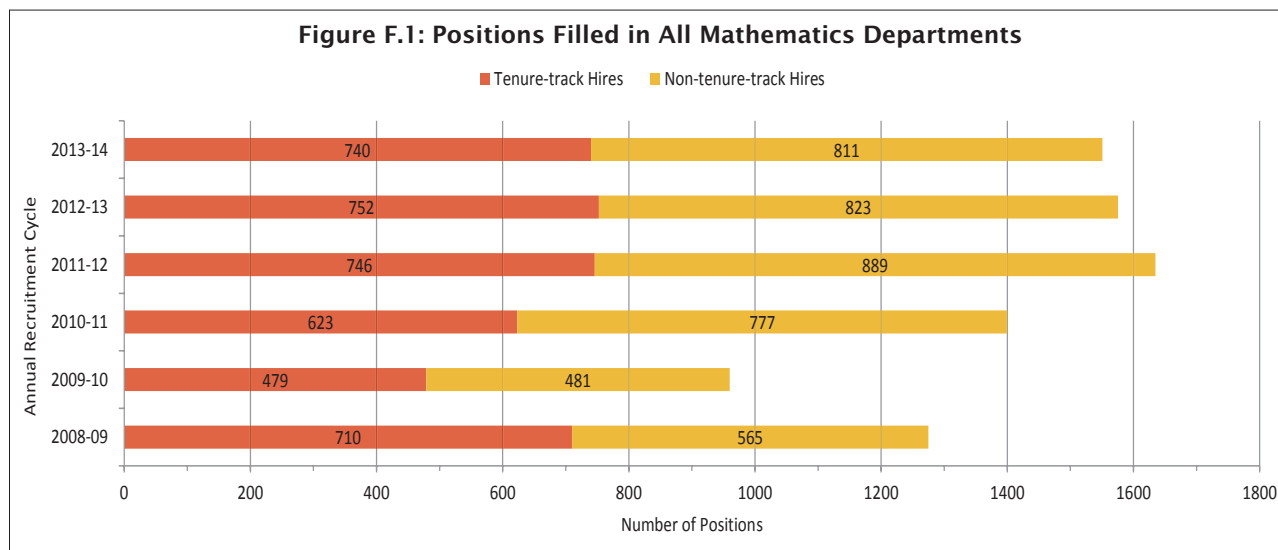


The overall number of tenure-track positions under recruitment has decreased 3% from its level in 2012-13; dropping 3% in the doctoral departments, increasing 4% in the masters departments and dropping 6% among the bachelors departments. Comparing current levels of tenure-track recruitment with 2008-09 and 2003-04, we see that it has increased in doctoral departments by 18% and 2%, respectively; in masters departments it has increased 22% since 2008-09 and decreased 36% since 2003-04; in bachelors departments it has decreased by 24% and 28%, respectively.

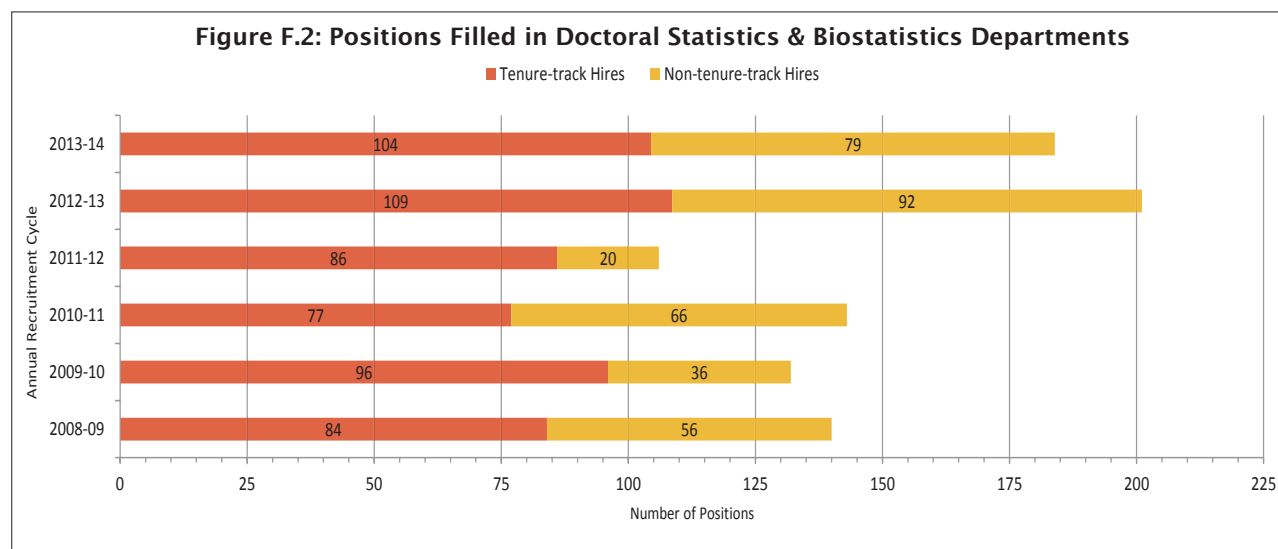


## Positions Filled

A total of 1,551 full-time positions were filled during the 2013-14 academic cycle for employment beginning in fall 2014 by all mathematics groups combined. This total is up 22% from the 2008-09 total and up 4% from the 2003-04 total. This year 89% of the positions under recruitment were filled in the mathematics departments.

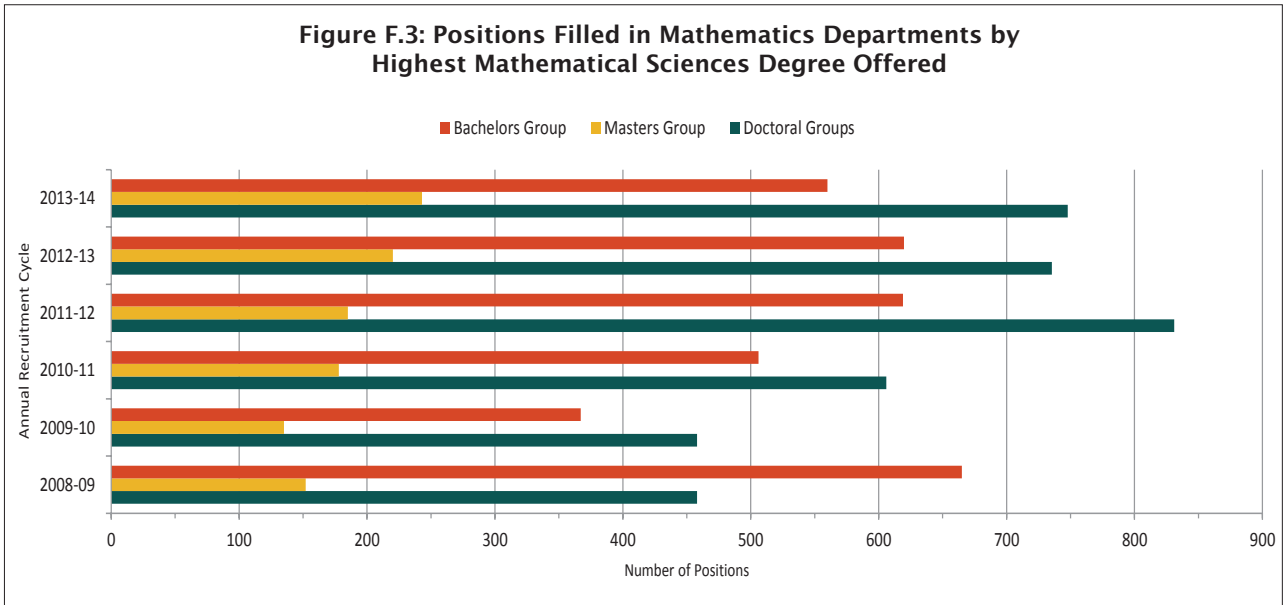


Among the doctoral statistics and biostatistics departments combined the total of filled positions is down 8% from 2012-13, up 31% from the 2008-09 total, and up 55% from the 2003-04 total. This year 81% of the positions under recruitment were filled in these departments.

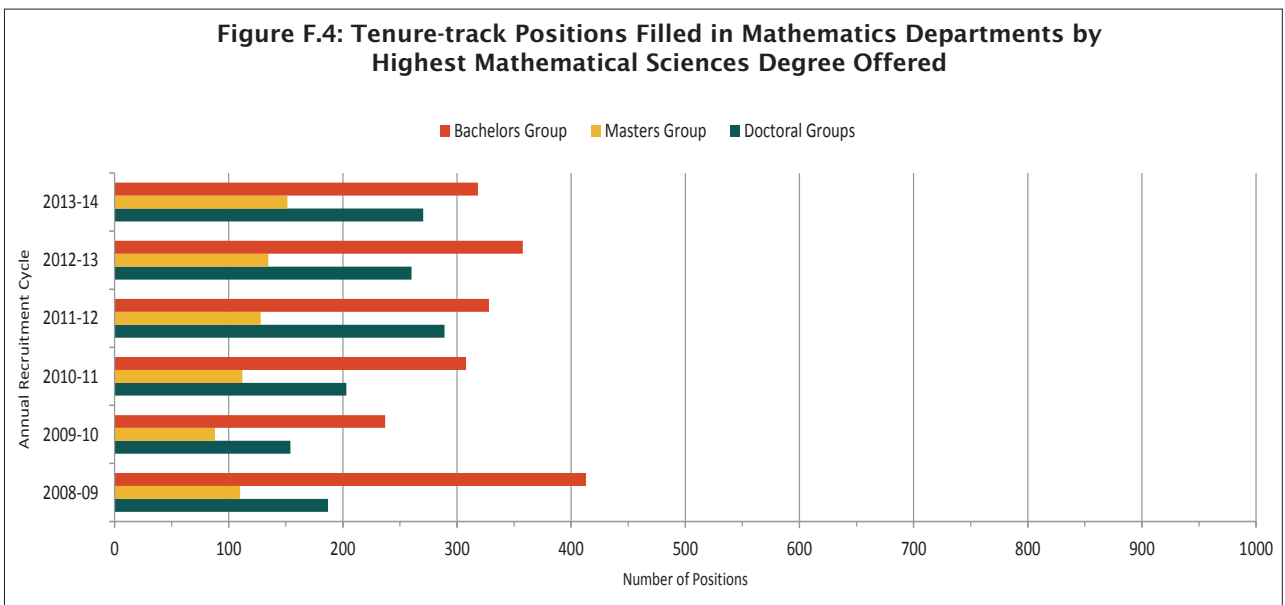


## Positions Filled

The number of full-time positions filled for fall 2014 from 2013-14 recruitment varied widely among the various reporting groups. For the doctoral mathematics groups combined, the number of positions filled was 748, an increase of 2% from fall 2013, a 63% increase from the fall 2009, and a 35% increase from the fall 2004 counts. For the masters group the count was 243, up 10% from the fall 2013, up 60% from the fall 2009, and down 13% from the fall 2004 counts. For the bachelors group the count was 560, a decrease of 10% from fall 2013, and down 16% from both the fall 2009 and the fall 2004 counts.

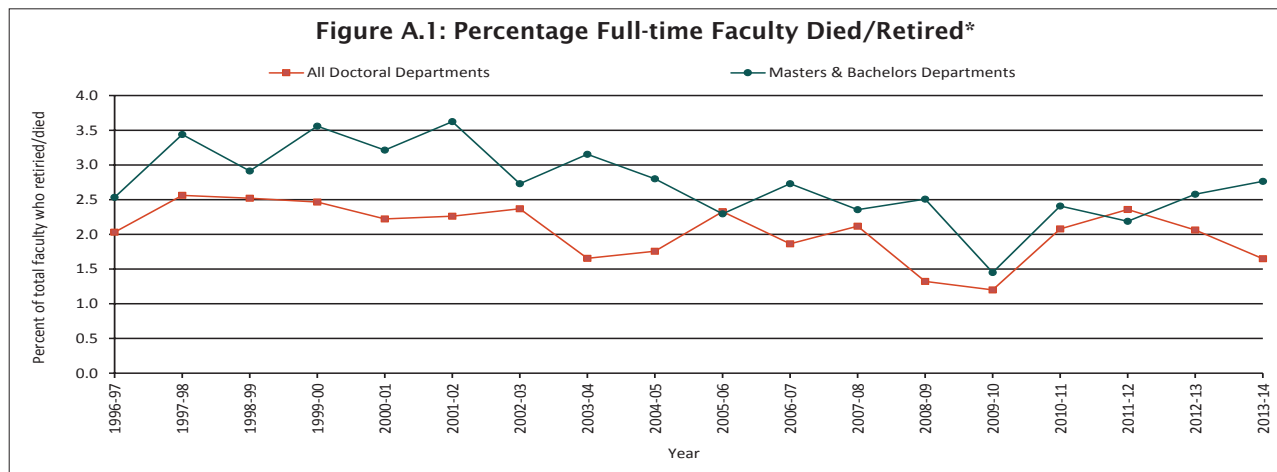


The total tenure-track positions filled for fall 2014 from 2013-14 recruitment by all mathematics groups combined is 740. This total is down 2% from the fall 2013 figure of 752, up 4% from the fall 2009 total of 710, and down 10% from the fall 2004 total of 820.



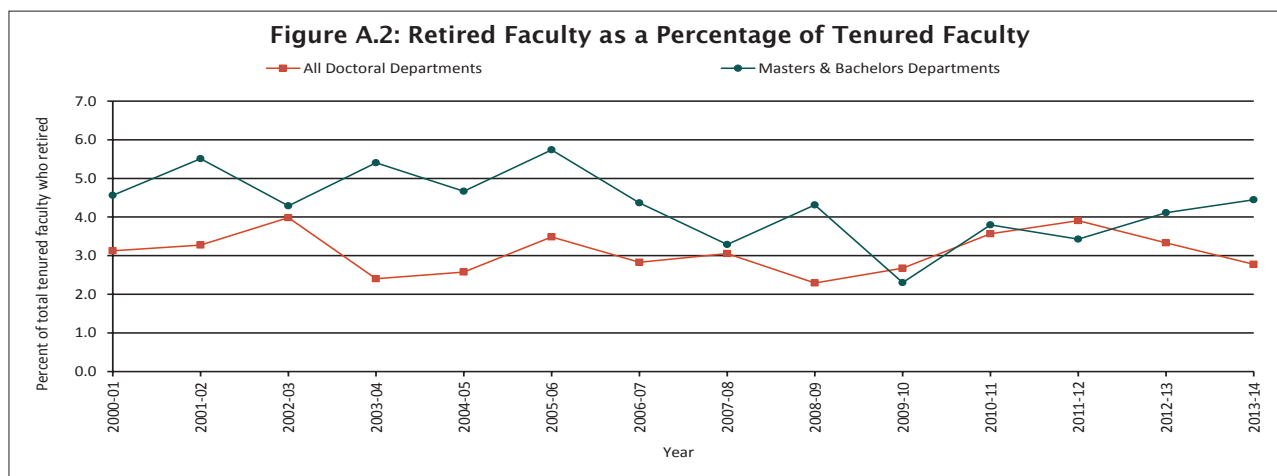
## Faculty Attrition

Figure A.1 shows the trends in attrition from deaths and retirements among the full-time faculty for the academic years 1996-97 through 2013-14. Attrition reached its lowest rate in 2009-10. Since 2011-12 attrition has been increasing among the masters & bachelors departments and decreasing among doctoral departments.



\* 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.

Figure A.2 shows an alternative way of looking at the trends in annual faculty retirements compared to that offered in Figure A.1. 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 this year show that approximately 87% of those retiring were tenured.



\* 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.

## Survey Groups and Response Rates

Starting with reports on the 2012 AMS-ASA-IMS-MAA-SIAM Annual Survey of the Mathematical Sciences, the Joint Data Committee has implemented a new method for grouping the doctorate-granting mathematics departments. These departments are first grouped into those at public institutions and those at private institutions. These groups are further subdivided based on the size of their doctoral program as reflected in the average annual number of PhD's awarded between 2000 and 2010, based on their reports to the Annual Survey during this period. Furthermore, doctorate-granting departments which self-classify their PhD program as being in applied mathematics will join with the other applied mathematics departments previously in Group Va to form their own group. The former Group IV was divided into two groups, one for departments in statistics and one for departments in biostatistics.

For further details on the change in the doctoral department groupings see the article in the October 2012 issue of *Notices of the AMS* at [www.ams.org/notices/201209/rtx120901262p.pdf](http://www.ams.org/notices/201209/rtx120901262p.pdf).

### Survey Groups:

**Math. Public Large** consists of departments with the highest annual rate of production of PhD's, ranging between 7.0 and 24.2 per year.

**Math. Public Medium** consists of departments with an annual rate of production of PhD's, ranging between 3.9 and 6.9 per year.

**Math. Public Small** consists of departments with an annual rate of production of PhD's of 3.8 or less per year.

**Math. Private Large** consists of departments with an annual rate of production of PhD's, ranging between 3.9 and 19.8 per year.

**Math. Private Small** consists of departments with an annual rate of production of PhD's of 3.8 or less per year.

**Applied Mathematics** consists of doctoral-degree-granting applied mathematics departments.

**Statistics** consists of doctoral-degree-granting statistics departments.

**Biostatistics** consists of doctoral-degree-granting biostatistics departments.

**Masters** contains US departments granting a master's degree as the highest graduate degree.

**Bachelors** contains US departments granting a baccalaureate degree only.

Listings of the actual departments that compose these groups are available on the AMS website at [ams.org/annual-survey/groups](http://ams.org/annual-survey/groups).

### Response Rates by Survey Groups

#### Faculty Recruitment & Hiring Response Rates

Group*	Received (%)
<b>Math. Public Large</b>	20 of 26 with 20 recruiting (77%)
<b>Math. Public Medium</b>	36 of 40 with 30 recruiting (90%)
<b>Math. Public Small</b>	49 of 64 with 37 recruiting (77%)
<b>Math. Private Large</b>	16 of 24 with 15 recruiting (67%)
<b>Math. Private Small</b>	23 of 28 with 21 recruiting (82%)
<b>Applied Math.</b>	17 of 24 with 14 recruiting (71%)
<b>Statistics</b>	42 of 58 with 33 recruiting (72%)
<b>Biostatistics</b>	18 of 43 with 15 recruiting (42%)
<b>Masters</b>	110 of 177 with 69 recruiting (62%)
<b>Bachelors</b>	450 of 1007 with 196 recruiting (45%)
<b>Total</b>	781 of 1499 with 450 recruiting (52%)

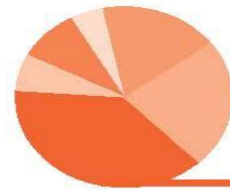
\* Doctoral programs that do not formally "house" faculty and their salaries are excluded from this survey.

### 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/annual-survey](http://www.ams.org/annual-survey). Survey results for the doctoral departments in statistics and biostatistics are available there.

### Acknowledgements

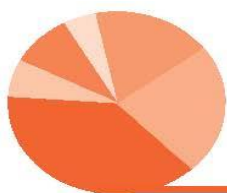
The Annual Survey attempts to provide an accurate appraisal and analysis of various aspects of the academic mathematical sciences scene for the use and benefit of the community and for filling the information needs of the professional organizations. Every year, college and university departments in the United States are invited to respond. The Annual Survey relies heavily on the conscientious efforts of the dedicated staff members of these departments for the quality of its information. On behalf of the Data Committee and the Annual Survey Staff, we thank the many secretarial and administrative staff members in the mathematical sciences departments for their cooperation and assistance in responding to the survey questionnaires.



Supplemental Table(s) for the Academic Recruitment & Hiring Report

Supplemental Table R.1: Recruitment of Faculty with a Doctorate, Fall 2014

	Math. Public Large Group	Math. Public Medium Group	Math. Public Small Group	Math. Private Large Group	Math. Private Small Group	Applied Math. Group	Total Doctoral Groups Combined	Master's	Bachelor's	Total Math. Groups Combined	Statistics Group	Biostatistics Group	Statistics & Biostatistics Groups Combined	Total All Groups Combined
<b>Posted Doctoral Positions</b>														
<b>Total Number</b>	<b>203</b>	<b>183</b>	<b>170</b>	<b>119</b>	<b>77</b>	<b>49</b>	<b>801</b>	<b>271</b>	<b>670</b>	<b>1741</b>	<b>125</b>	<b>103</b>	<b>228</b>	<b>1970</b>
<i>Standard Error</i>	14	9	11	13	13	4	25	23	33	47	9	17	19	51
Tenured/tenure-track	59	74	86	47	22	28	316	173	396	885	70	77	147	1032
Open to new doctoral recipients	36	54	74	30	17	27	239	166	375	780	54	50	104	884
Open to assoc/full level	18	11	25	18	3	6	81	13	83	176	26	31	57	233
Non-tenure-track	144	109	84	72	55	21	485	97	274	856	55	26	82	937
Open to new doctoral recipients	133	101	81	72	54	18	459	93	268	819	50	22	71	890
Temporary 1-year appointments	34	26	35	17	19	3	133	72	162	367	21	12	33	400
<b>Reported Hires for Above</b>														
<b>Total number</b>	<b>203</b>	<b>168</b>	<b>148</b>	<b>113</b>	<b>74</b>	<b>42</b>	<b>748</b>	<b>243</b>	<b>560</b>	<b>1551</b>	<b>103</b>	<b>81</b>	<b>184</b>	<b>1735</b>
<b>Male doctoral hires</b>	<b>153</b>	<b>114</b>	<b>101</b>	<b>95</b>	<b>57</b>	<b>32</b>	<b>553</b>	<b>124</b>	<b>350</b>	<b>1027</b>	<b>68</b>	<b>48</b>	<b>116</b>	<b>1143</b>
Tenured/tenure-track	42	46	56	35	15	20	212	93	197	502	36	36	72	573
Non-tenure-track	112	69	45	60	43	13	341	31	153	526	32	12	44	570
Postdoc appointments	92	47	25	45	29	7	245	9	6	261	10	5	15	276
1-year appointments	18	11	14	6	10	0	59	33	60	152	11	3	14	166
<b>Female doctoral hires</b>	<b>43</b>	<b>46</b>	<b>32</b>	<b>18</b>	<b>17</b>	<b>9</b>	<b>165</b>	<b>76</b>	<b>181</b>	<b>422</b>	<b>35</b>	<b>34</b>	<b>68</b>	<b>490</b>
Tenured/tenure-track	13	15	15	6	5	4	59	59	121	238	14	19	26	264
Non-tenure-track	30	31	17	12	12	4	106	18	60	183	21	15	36	219
Postdoc appointments	27	20	10	9	5	0	71	3	9	84	1	9	11	94
1-year appointments	3	8	10	1	3	1	26	27	20	74	6	0	6	79
<b>Nondoctoral hires</b>	<b>7</b>	<b>7</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>30</b>	<b>43</b>	<b>29</b>	<b>102</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>102</b>
Male	3	1	4	0	0	1	9	24	22	55	0	0	0	55
Female	4	6	12	0	0	0	21	19	7	47	0	0	6	47
<b>Total new doctoral hires</b>	<b>95</b>	<b>76</b>	<b>53</b>	<b>64</b>	<b>25</b>	<b>12</b>	<b>326</b>	<b>72</b>	<b>182</b>	<b>579</b>	<b>52</b>	<b>36</b>	<b>53</b>	<b>632</b>
Male new doctoral hires	75	49	42	55	21	7	249	38	111	398	35	19	19	417
Tenured/tenure-track	0	3	12	6	3	1	25	22	60	107	21	14	35	142
Female new doctoral hires	20	28	12	9	5	4	77	34	71	181	17	17	34	215
Tenured/tenure-track	0	8	3	0	1	1	13	26	41	80	7	5	12	92
<b>Unfilled positions</b>	<b>4</b>	<b>16</b>	<b>22</b>	<b>6</b>	<b>3</b>	<b>8</b>	<b>58</b>	<b>71</b>	<b>139</b>	<b>268</b>	<b>23</b>	<b>22</b>	<b>45</b>	<b>313</b>

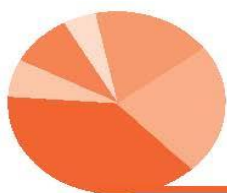


Supplemental Table(s) for the Academic Recruitment & Hiring Report

Supplemental Table R.2: Summary of Recruitment of Faculty with a Doctorate,  
Fall 2014

	Doctoral Math. Groups	Master's and Bachelor's	Statistics & Biostatistics Groups	Total
<b>Posted Doctoral Positions</b>				
<b>Total Number</b>	<b>801</b>	<b>941</b>	<b>228</b>	<b>1970</b>
Tenure/tenure-track	316	569	147	1032
Open to new doctoral recipients	239	541	104	884
Open to assoc/full level	81	95	57	233
Non-tenure-track	485	371	82	937
Open to new doctoral recipients	459	361	71	890
<b>Reported Hires for Above, excluding temporary hires</b>				
<b>Total doctoral hires</b>	<b>718</b>	<b>731</b>	<b>184</b>	<b>1633</b>
Tenure/tenure-track	270	470	98	837
Previously in non-tenure-track	29	105	9	143
Previously in postdoc	150	126	25	301
Non-tenure-track	400	261	79	741
1-year appointments	85	141	19	245
Postdoc appointments	316	28	25	370
<b>Total new doctoral hires</b>	<b>326</b>	<b>254</b>	<b>87</b>	<b>667</b>
Tenured/tenure-track	37	149	47	234
Male	249	149	54	452
Tenured/tenure-track	25	82	35	142
Female	77	105	34	215
Tenured/tenure-track	13	67	12	92
<b>Total not-new doctoral hires</b>	<b>392</b>	<b>477</b>	<b>97</b>	<b>966</b>
Tenured/tenure-track	233	320	51	604
Male	304	325	97	726
Tenured/tenure-track	187	208	37	431
Female	88	152	35	275
Tenured/tenure-track	46	112	14	173
<b>Total Non-doctoral hires</b>	<b>30</b>	<b>72</b>	<b>0</b>	<b>102</b>
Male	9	46	0	55
Female	21	26	0	47

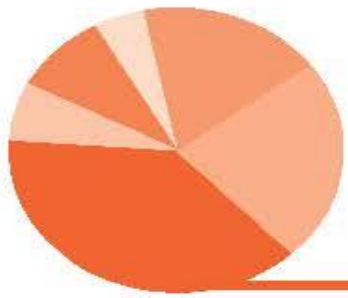




Supplemental Table(s) for the Academic Recruitment & Hiring Report

Supplemental Table R.3: Positions Posted and Filled, Fall 2014

<b>Positions</b>	<b>Doctoral Math. Groups</b>	<b>Master's and Bachelor's</b>	<b>Statistics &amp; Biostatistics Groups</b>	<b>Total</b>
Posted positions open to new doctoral recipients	239	541	104	884
% tenured/tenure-track	76%	95%	71%	86%
Positions filled by new doctoral recipients	326	254	87	667
% tenured/tenure-track	11%	59%	54%	35%
Positions filled by not-new doctoral recipients	392	477	97	966
% tenured/tenure-track	59%	67%	53%	63%



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

### Section on Faculty Attrition

Supplemental Table A.1: Faculty Deaths & Retirements, Fall 2014

	Math. Public Large Group	Math. Public Medium Group	Math. Public Small Group	Math. Private Large Group	Math. Private Small Group	Applied Math. Group	Total Doctoral Groups Combined	Master's	Bachelor's	Total Math. Groups Combined	Statistics Group	Biostatistics Group	Total Statistics & Biostatistics Combined	Total All Groups
Full-time faculty who retired or died	35	37	54	6	12	13	157	114	258	529	12	9	22	551
<i>Standard Error</i>	4	2	5	2	2	3	7	10	18	22	2	4	5	34
% of Full-time faculty	1.7%	1.9%	2.5%	0.6%	1.5%	2.3%	1.5%	2.5%	2.9%	2.4%	0.1%	0.9%	1.0%	2.3%
Died	4	0	9	1	0	0	14	6	16	37	0	0	0	37
Retired	31	37	45	5	12	13	143	108	241	492	12	9	22	514
Tenured Faculty	30	31	43	5	11	13	132	98	201	431	12	5	17	448

Supplemental Table A.2: Tenured Faculty Retirements, Fall 2014

	Math. Public Large Group	Math. Public Medium Group	Math. Public Small Group	Math. Private Large Group	Math. Private Small Group	Applied Math. Group	Total Doctoral Math. Groups	Master's	Bachelor's	Total Math. Groups Combined	Statistics Group	Biostatistics Group	Total Statistics & Biostatistics Combined	Total All Groups
Full-time Tenured faculty who retired	30	31	43	5	11	13	132	98	201	431	12	5	17	431
<i>Standard Error</i>	3	2	4	1	2	3	7	10	16	20	2	3	3	30
% of Full-time tenured faculty	2.5%	2.8%	3.5%	0.8%	2.3%	3.9%	2.7%	3.7%	3.8%	3.4%	1.8%	1.2%	1.6%	1.8%