

Report on 2016–2017 Academic Recruitment, Hiring, and Attrition

Amanda L. Golbeck, Thomas H. Barr, and Colleen A. Rose

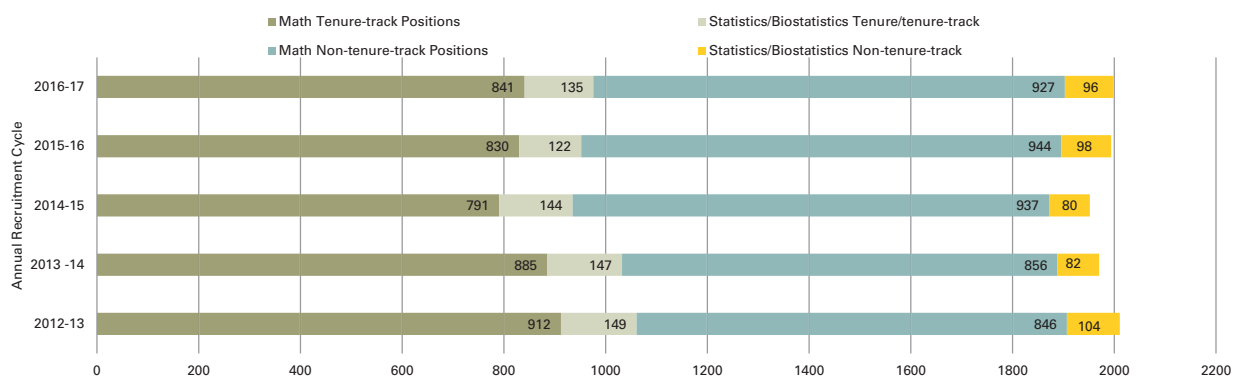
Each year in academic mathematical sciences departments around the United States, new full-time faculty are recruited, and a subset of those positions are filled. The hiring infuses a new cohort of mathematical scientists actively engaged in research and teaching. At the same time, others retire, take jobs elsewhere, or die, and this process removes a segment of the population of mathematical scientists. This report provides a snapshot of that process to aid in understanding the current status of such variables as: hiring rates, gender distribution, position type, and prior experience. Along with current data the report provides historical context to aid the reader in discerning trends and patterns. For further details, including all tables generated to prepare this report, please see www.ams.org/annual-survey.

A total of 955 mathematical sciences departments participated in this survey. This report is based on the completed questionnaires received from the 500 departments that reported recruiting to fill doctoral tenure-track and non-tenure-track positions during the academic year 2016-2017 for employment beginning in the fall of 2017. An additional 7 departments (2 Stats, 2 Masters, and 3 Bachelors) reported conducting recruitment and hiring during this time but did not return a completed questionnaire. Those departments are not included in the analysis.

Overview of Recruitment

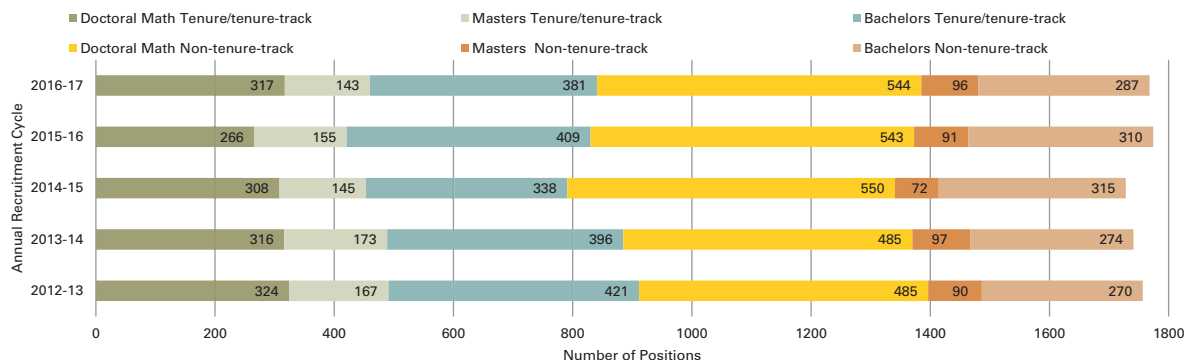
The 2016-17 data shows that 1,999 positions were under recruitment (in 2015-16 this figure was 1,994). Most groups reported increases in recruitment, though Math Private Large ($\downarrow 25\%$), Applied Math ($\downarrow 15\%$), and Masters and Bachelors ($\downarrow 6\%$), reported decreases.

Figure R.1: Positions Under Recruitment in Mathematical Sciences by Tenure Eligibility



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Figure R.2: Positions Under Recruitment in Mathematics Departments by Highest Mathematical Sciences Degree Offered



During the 2016–17 academic year, the estimated number of full-time positions under recruitment in mathematical sciences departments was 1,999. This figure breaks down as follows: 841 tenure-track mathematics positions, 927 non-tenure-track mathematics positions, 135 tenure-track statistics or biostatistics positions, and 96 non-tenure-track statistics or biostatistics positions. See Figure R.1 for comparisons. In the period from 2012 to 2017, the overall percentage of positions under recruitment that were tenure-track ranged from 48% to 53%, with the highest percentages in 2012–2013 and 2013–2014 of this range of time.

- Overall features in the 2016–2017 cycle:
 - The estimated number of positions under recruitment was 1,999; this figure represents a slight increase from last year’s estimate of 1,994 positions.
 - Women account for 31% of those hired; down from 32% in 2015–16.
 - Since 2010 recruitment has increased 65% in all Mathematical Sciences, increased 63% in Math, and increased 75% in Stats.
- Tenure-track positions under recruitment:
 - Open tenure-track positions increased 3% overall from 2015–16.
 - 49% (976) of all positions under recruitment were tenure-track. Of these 976 positions, 85% (831) were open to new PhDs, and 21% (201) were at the rank of associate/full professor.
- Non-tenure-track positions under recruitment:
 - Non-tenure-track positions decreased 2% overall, to 1,023 from 1,042 the previous year.
 - 51% (1,023) of all positions under recruitment were non-tenure-track.

In Math the number of positions under recruitment (1,768) in 2016–2017 is comparable with the previous year (1,774). See Figure R.2. Over the period since 2006–07 recruitment in Doctoral departments has increased by 13%, in Masters departments decreased by 14%, and in Bachelors departments decreased by 10%. In the same ten-year period, the net number of mathematics positions under recruitment has decreased by 1%.

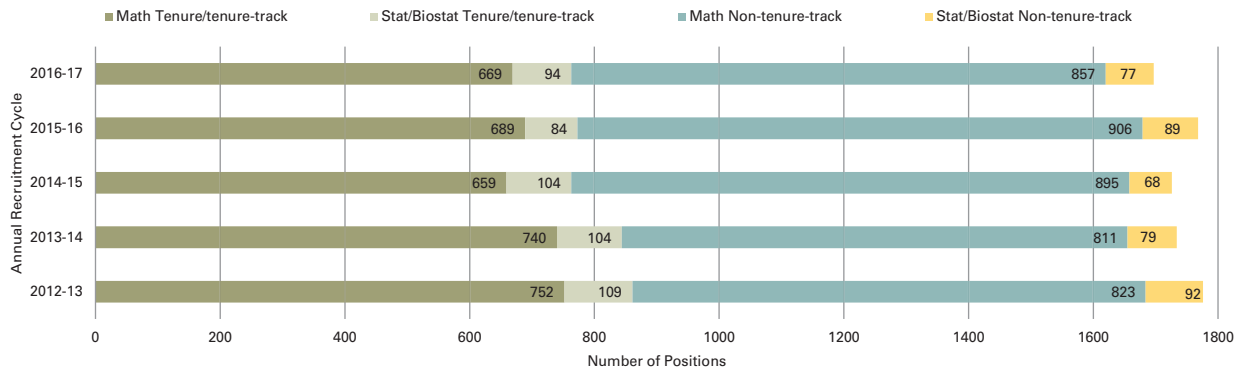
In Stats, the number of positions under recruitment in 2016–2017 was 231 a 5% increase over 2015–16. Since 2012–13 positions under recruitment has fluctuated between 220 and 253.

Positions Filled

A total of 1,697 full-time positions in Mathematical Sciences were filled during the 2016–17 academic cycle, 1,526 from Mathematics Departments and 171 from Statistics or Biostatistics. Figure F.1 gives a breakdown. The total for Math is up 59% from the 2009–10 cycle. For Stats, the number of filled positions is up 30% from 2009–10. One interesting feature implicit in these data is that the success rate for filling mathematical sciences tenure-track positions over the period 2012–17 is about 81%, whereas the success rate for non-tenure-track is about 95%.

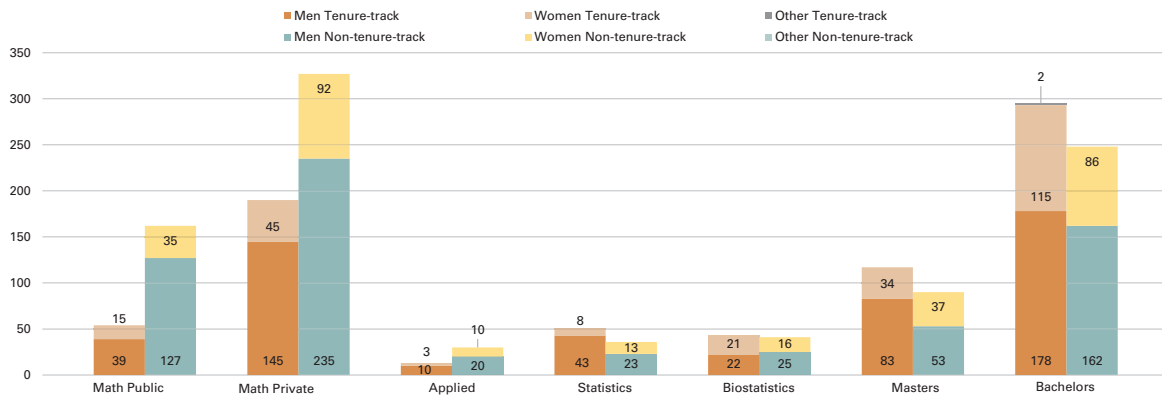
Figure F.2 gives a breakdown on hiring by gender and department grouping. Percentages generally are obtained by comparison with Figure R.1. Here are further highlights and comparisons from the data:

Figure F.1: Positions Filled in Mathematical Sciences



- Overall features of hires in mathematical sciences:
 - Women hold 31% (530) of positions filled.
 - Of all hires, 45% (763) were tenure-track; women constitute 32% (241) of these.
 - Of all hires, 55% (934) were non-tenure track; women constitute 31% (289) of these.
- Math and Stats breakdown:
 - In Math overall, 1,526 of 1,768 positions (86%) were filled; 31% of Math positions were filled by women.
 - In Stats, 171 of 231 positions (74%) were filled; 34% of Stats positions were filled by women.
- Tenure-track hires in mathematical sciences:
 - Of the tenure-track positions under recruitment, 78% (763) were filled.
 - Of tenure-track positions filled, 70% (531) were filled by doctoral faculty (i.e., not new PhDs). Of these positions filled by doctoral faculty, 27% went to women. In comparison with last year, all groups reported increases in tenure-track hires of doctoral faculty except Applied Math (↓24%), Statistics (↓4%), Masters (↓9%), and Bachelors (↓13%).
 - Of the 30% of tenure-track hires who were new PhDs, 43% were women.
 - Of tenure-track hires, 15% (114) had a non-tenure-track position last year; of these individuals, 23% were women.
 - Of tenure-track hires, 35% (267) held a postdoc last year, and 25% of these postdocs were women.
- Non-tenure-track hires
 - Of the 1,023 non-tenure-track positions under recruitment, 91% were filled. In comparison to last year, all groups reported decreased hiring of non-tenure-track faculty except Math Public Small (↑26%), Math Private Large (↑9%), and Masters (↑22%).
 - Of non-tenure-track hires, 39% (360) were filled by doctoral faculty (excluding new PhDs); 29% of these doctoral faculty hires were women.
 - Of non-tenure-track hires, 49% (461) were filled by new PhDs; 25% of these new PhD hires were women.

Figure F.2: Gender of Tenure-track and Non-tenure-track Hires by Department Grouping



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- Non-tenure-track hires (continued)
 - Of non-tenure-track hires, 12% (113) were filled by non-doctoral faculty; 61% of these non-doctoral hires were women. Forty-two percent of these non-doctoral, non-tenure-track hires were in Masters departments.
 - Of non-tenure-track hires, 24% (224) are temporary (one-year); 32% of these temporary hires are women. About half of all temporary hires were in Bachelors departments.
 - Of non-tenure-track hires, 41% (382) were in postdoctoral positions; 23% of these postdocs were women.
- Women hires (see Figure F.2):
 - Of all hires, 31% (530) were women; of these women, Bachelors departments hired 38%, and Doctoral Math departments hired 38%.
 - In the Doctoral Math Group, women hires increased by 6% to 200.
 - All groups reported increases in the number of women hires over last year except Math Private Small (↓40%), Applied Math (↓30%), Statistics (↓34%), and Bachelors (↓14%).
 - The number of women hired into tenure-track positions increased slightly to 241 from 238; the number hired into non-tenure-track positions increased by 12% to 289.
 - Women accounted for 32% of all tenure-track and 31% of all non-tenure track hires; in 2015–2016 these percentages were, respectively, 31% and 26%.

Faculty Attrition

Figure A.1 shows the variation in attrition from deaths and retirements among full-time faculty for the academic years 2012–13 through 2016–17. On average over the period shown, the percentage of faculty in doctoral departments retiring or dying each year is about 1.9%, and in Masters and Bachelors departments that percentage is about 2.7%.

Figure A.1: Percentage Full-time Faculty Died/Retired*

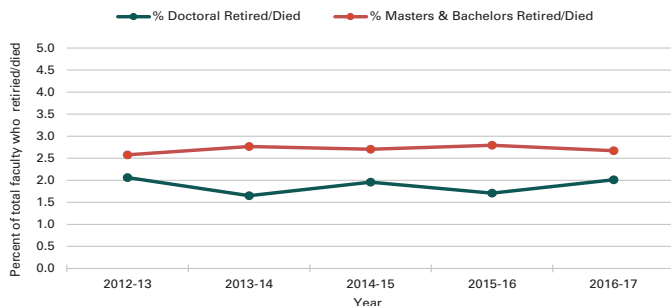
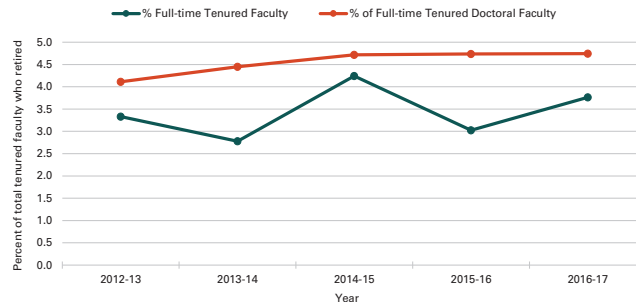


Figure A.2: Percentage Full-time Tenured Doctoral Faculty Died/Retired*



* 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.

During the same period, in the respective groups, the percentages of tenured faculty who retired averaged 3.3% for Doctoral Math departments, 4.7% for Bachelors and Masters, and 5.8% for Stats. As reported in previous years, departments continue to report the majority of those retiring as members of the tenured faculty. For instance, for 2015–2017 approximately, 82%, 83%, and 82% of these faculty have retired.

Here are a few other highlights from the attrition data from the 2016–2017 cycle:

- Overall retirements by tenured faculty increased by 9% to 469
- Deaths and retirements increased by 6% to 599
- Overall deaths and retirements break down by departmental grouping as follows:
 - 44% (263) were from Bachelor
 - 29% (175) were from Doctoral Math
 - 16% (97) were from Masters
 - 11% (64) were from Stats

Department Grouping Response Rates

In this report, *Mathematical Sciences* departments are those in four-year institutions in the US that refer to themselves with a name that incorporates (with a few exceptions) “Mathematics” or “Statistics” in some form. For instance, the term includes, but is not limited to, departments of “Mathematics,” “Mathematical Sciences,” “Mathematics and Statistics,” “Mathematics and Computer Science,” “Applied Mathematics,” “Statistics,” and “Biostatistics.” Also, *Mathematics (Math)* refers to departments that (with exceptions) have “mathematics” in the name; *Stats* refers to departments that incorporate (again, with exceptions) “statistics” or “biostatistics” in the name but do not use “mathematics.” The streamlining of language here militates against the possible objection to foreshortening the full subject names.

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

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

Math Public Small consists of departments with an annual rate of production of PhDs of 3.8 or less per year.

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

Math Private Small consists of departments with an annual rate of production of PhDs of 3.8 or less per year.

Applied Math 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.

Doctoral Math contains all US math public, math private, and applied math mathematics departments granting a PhD as the highest graduate degree.

Mathematics (Math) contains all Math Public, Math Private, Applied Math, Masters, and Bachelors Groups above.

Stats consists of all doctoral-degree-granting statistics and biostatistics departments.

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

Response Rates by Survey Groups

Faculty Recruitment & Hiring Response Rates*

Group	Received (%)
Math Public Large	24 of 26 with 23 recruiting (92%)
Math Public Medium	36 of 40 with 35 recruiting (90%)
Math Public Small	61 of 68 with 43 recruiting (90%)
Math Private Large	21 of 24 with 19 recruiting (88%)
Math Private Small	23 of 28 with 17 recruiting (82%)
Applied Math	18 of 23 with 14 recruiting (78%)
Statistics	45 of 59 with 32 recruiting (76%)
Biostatistics	34 of 45 with 24 recruiting (76%)
Masters	119 of 174 with 65 recruiting (68%)
Bachelors	574 of 1020 with 228 recruiting (56%)
Total	955 of 1507 with 500 recruiting (63%)

* 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.

Acknowledgments

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 Joint 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. Comments or suggestions regarding this Survey Report may be emailed to the committee at ams-survey@ams.org.

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www.ams.org/annual-survey

Table R.1: Recruitment and Hiring of Faculty in the Mathematical Sciences, Fall 2017 by Department Grouping

	Math Public Large Group	Math Public Medium Group	Math Public Small Group	Math Private Large Group	Math Private Small Group	Applied Math Group	Statistics Group	Biostatistics Group	Total Doctoral Math	Total Stats	Total Doctoral	Masters	Bachelors	Total Math	Grand Total
Recruited Doctoral Positions Total Number (% of Total)	198	193	184	175	60	51	126	105	861	231	1092	239	668	1768	1999
<i>Standard Error</i>	7	8	8	12	12	6	10	10	20	19	24	18	35	44	46
Tenured or tenure-track	52	81	90	45	26	23	75	60	317	135	452	143	381	841	976
Open to new doctoral recipients	38	62	76	19	18	15	59	52	228	111	339	136	356	1281	1392
Open to assoc/full level	16	16	14	19	4	12	37	15	81	52	133	9	59	386	438
Non-tenure-track	146	112	94	130	34	28	51	45	544	96	640	96	287	1759	1855
Open to new doctoral recipients	143	107	91	129	34	28	49	38	532	87	619	84	259	1668	1755
Temporary 1-year appointments	35	28	56	2	5	10	24	-	136	24	160	50	143	537	561
Reported Hires for Above Total number (% of Total Recruited In Group)	180 (91%)	176 (91%)	161 (88%)	160 (91%)	56 (93%)	43 (84%)	87 (69%)	84 (80%)	776 (90%)	171 (74%)	947 (87%)	207 (87%)	543 (81%)	1526 (86%)	1697 (85%)
Tenured or tenure-track Hires	44	72	74	31	23	13	51	43	257	94	351	117	295	669	763
Doctoral hires															
Men	36	52	57	26	13	10	43	22	194	65	259	83	178	455	520
New doctoral hires	2	2	3	1	-	-	18	7	8	25	33	25	73	106	131
Not new doctoral hires	34	50	54	25	13	10	25	15	186	40	226	58	105	349	389
Previously in non-tenure-track	8	6	10	1	5	1	4	1	31	5	36	19	33	83	88
Previously in postdoc	23	32	38	15	6	4	3	11	118	14	132	27	38	183	197
Women	8	20	17	5	10	3	8	21	63	29	92	34	115	212	241
New doctoral hires	1	7	4	-	1	-	4	4	13	8	21	24	54	91	99
Not new doctoral hires	7	13	13	5	9	3	4	17	50	21	71	10	61	121	142
Previously in non-tenure-track	1	-	-	-	1	-	-	5	2	5	7	1	18	21	26
Previously in postdoc	5	9	7	3	6	3	-	9	33	9	42	7	19	59	68
Other	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2
New doctoral hires	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Not new doctoral hires	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2
Previously in non-tenure-track	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Previously in postdoc	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2
Non-tenure-track Hires	136	104	87	129	33	30	36	41	519	77	596	90	248	857	934
Doctoral hires	131	101	77	128	33	27	36	41	497	77	574	42	205	744	821
Men	97	75	54	98	28	20	23	25	372	48	420	35	146	553	601
New doctoral hires	66	44	32	75	18	12	12	12	247	24	271	10	64	321	345
Not new doctoral hires	31	31	22	23	10	8	11	13	125	24	149	25	82	232	256
Postdoc appointments	79	44	23	71	16	15	8	12	248	20	268	4	19	271	291
1-year appointments	16	9	23	3	4	3	4	-	58	4	62	29	61	148	152
Women	34	26	23	30	5	7	13	16	125	29	154	7	59	191	220
New doctoral hires	23	8	11	22	4	4	8	8	72	16	88	5	23	100	116
Not new doctoral hires	11	18	12	8	1	3	5	8	53	13	66	2	36	91	104
Postdoc appointments	28	11	3	23	4	4	7	7	73	14	87	-	4	77	91
1-year appointments	7	2	8	-	-	-	3	-	17	3	20	21	31	69	72
Nondoctoral hires	5	3	10	1	-	3	-	-	22	-	22	48	43	113	113
Men	4	1	4	1	-	-	-	-	10	-	10	18	16	44	44
Women	1	2	6	-	-	3	-	-	12	-	12	30	27	69	69
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unfilled positions	18	17	23	15	4	10	39	21	87	60	147	27	18	132	192

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Table R.2

Summary of Recruitment & Hiring of Doctoral Faculty by Position, and Gender, Fall 2017

	Doctoral Math	Masters and Bachelors	Statistics & Biostatistics	Total
Doctoral Positions under recruitment				
Total Number	861	907	231	1999
Tenure or tenure-track	317	524	135	976
Open to new doctoral recipients	228	492	111	831
Open to assoc/full level	81	68	52	201
Non-tenure-track	544	383	96	1023
Open to new doctoral recipients	532	343	87	962
1-year appointments	136	193	24	353
Reported Hires for Above, excluding temporary hires				
Total hires	776	750	171	1697
Tenure or tenure-track	257	412	94	763
Previously in non-tenure-track	33	71	10	114
Previously in postdoc	151	93	23	267
Non-tenure-track	519	338	77	934
1-year appointments	75	142	7	224
Postdoc appointments	321	27	34	382
Total doctoral hires	435	557	131	1584
New doctoral hires	340	278	73	691
Tenured or tenure-track	21	176	33	230
Men	255	172	49	476
Women	-	106	24	130
Tenured or tenure-track	13	78	8	99
Other	-	-	-	-
Tenured or tenure-track	-	-	-	-
Not-new doctoral hires	414	381	98	893
Tenured or tenure-track	236	234	61	531
Men	311	270	64	645
Women	186	163	40	389
Tenured or tenure-track	103	109	34	246
Other	50	71	21	142
Tenured or tenure-track	-	2	-	2
Other	-	-	-	-
Tenured or tenure-track	-	2	-	2
Total Non-doctoral hires	22	91	-	113
Men	10	34	-	44
Women	12	57	-	69
Other	-	-	-	-

Table R.2 provides a summary breakdown of Table R.1 that aggregates the results for Doctoral Math Groups, for Masters and Bachelors, and for Statistics and Biostatistics.

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Table R.4
Summary of Total Recruitment & Hiring of Faculty in the Mathematical Sciences by Department Grouping for Fall 2017

	Math Public Large Group	Math Public Medium Group	Math Public Small Group	Math Private Large Group	Math Private Small Group	Applied Math Group	Statistics Group	Biostatistics Group	Total Doctoral Math	Total Stats	Total Doctoral	Masters	Bachelors	Total Math	Grand Total
Total Doctoral Positions Under Recruitment	198	193	184	175	60	51	126	105	861	231	1092	239	668	1768	1999
<i>Standard Error</i>	7	8	8	12	12	6	10	10	20	19	24	18	35	44	46
Tenured or tenure-track Hires	52	81	90	45	26	23	75	60	317	135	452	143	381	841	976
Non-tenure-track Hires	146	112	94	130	34	28	51	45	544	96	640	96	287	927	1023
Total Hires	180	176	161	160	56	43	87	84	776	171	947	207	543	1526	1697
Tenured or tenure-track Hires	44	72	74	31	23	13	51	43	257	94	351	117	295	669	763
Non-tenure-track Hires	136	104	87	129	33	30	36	41	519	77	596	90	248	857	934
Total Hires by Gender	180	176	161	160	56	43	87	84	776	171	947	207	543	1526	1697
Men hires	137	128	115	125	41	30	66	47	576	113	689	136	340	1052	1165
Women hires	43	48	46	35	15	13	21	37	200	58	258	71	201	472	530
Other hires	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2
Unfilled positions	18	17	23	15	4	10	39	21	87	60	147	27	18	132	192

Table R.4 provides portion counts, total hires, and hires by gender, as well as counts of unfilled positions, all broken down by the complete set of departmental groupings.

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Table R.5
Percentage of Women Hired into Positions Requiring a Doctorate for Fall 2016 in the Mathematical Sciences

	Math Public Large Group	Math Public Medium Group	Math Public Small Group	Math Private Large Group	Math Private Small Group	Applied Math Group	Statistics Group	Biostatistics Group	Total Doctoral Math	Total Stats	Total Doctoral	Masters	Bachelors	Total Math	Grand Total
Total Hires	180	176	161	160	56	43	87	84	776	171	947	207	543	1526	1697
% Women	24%	27%	29%	22%	27%	30%	24%	44%	26%	34%	27%	34%	37%	31%	31%
Women as a percentage of hires															
Tenured or tenure-track	18%	28%	23%	16%	43%	23%	16%	49%	25%	31%	32%	29%	39%	32%	32%
New doctoral	33%	78%	57%	-	100%	-	18%	36%	62%	24%	43%	49%	43%	46%	43%
Not new doctoral	17%	21%	19%	17%	41%	23%	14%	53%	21%	34%	27%	15%	37%	26%	27%
Previously in non-tenure-track	11%	-	-	-	17%	-	-	83%	6%	50%	23%	5%	35%	20%	23%
Previously in postdoc	18%	22%	16%	17%	50%	43%	-	45%	22%	39%	26%	21%	33%	24%	26%
Non-tenured-track	26%	27%	33%	23%	15%	33%	36%	39%	26%	38%	31%	41%	35%	30%	31%
New doctoral hires	26%	15%	26%	23%	18%	25%	40%	40%	23%	40%	25%	33%	26%	24%	25%
Not new doctoral hires	26%	37%	35%	26%	9%	27%	31%	38%	30%	35%	29%	7%	31%	28%	29%
Nondoctoral hires	20%	67%	60%	-	-	100%	-	-	55%	-	61%	63%	63%	61%	61%
Postdoc appointments	26%	20%	12%	24%	20%	21%	47%	37%	23%	41%	24%	-	17%	22%	24%
1-year appointments	30%	18%	26%	-	-	-	43%	-	23%	43%	32%	42%	34%	32%	32%

Table R.5 looks only at the characteristics, by percentages of the whole group of hires, of the female hires.

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Table R.3

Summary of Doctoral Faculty Positions under Recruitment and Filled
with the Percentage of Tenured or tenure-track, Fall 2017

Positions	Doctoral Math	Masters and Bachelors	Statistics & Biostatistics	Total
Recruited tenured or tenure-track positions open to new doctoral recipients	228	492	111	831
% Tenured or tenure-track	72%	94%	82%	85%
Recruited positions filled by new doctoral recipients	340	278	73	691
% Tenured or tenure-track	6%	63%	45%	33%
Recruited positions filled by not-new doctoral recipients	414	381	98	893
% Tenured or tenure-track	57%	61%	62%	59%

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Table R.6
Recruitment & Hiring of Doctoral Faculty, Fall 2017

	Math Public Large Group	Math Public Medium Group	Math Public Small Group	Math Private Large Group	Math Private Small Group	Applied Math Group	Statistics Group	Biostatistics Group	Total Doctoral Math	Total Stats	Total Doctoral	Masters	Bachelors	Total Math	Grand Total
Posted Doctoral Positions															
Total Number	198	193	184	175	60	51	126	105	861	231	1092	239	668	1768	1999
<i>Standard Error</i>	7	8	8	12	12	6	10	10	20	19	24	18	35	44	46
Tenured or tenure-track	52	81	90	45	26	23	75	60	317	135	452	143	381	841	976
Open to new doctoral recipients	38	62	76	19	18	15	59	52	228	111	339	136	356	720	831
Open to assoc/full level	16	16	14	19	4	12	37	15	81	52	133	9	59	149	201
Non-tenure-track	146	112	94	130	34	28	51	45	544	96	640	96	287	927	1023
Open to new doctoral recipients	143	107	91	129	34	28	49	38	532	87	619	84	259	875	962
Temporary 1-year appointments	35	28	56	2	5	10	24	-	136	24	160	50	143	329	353
Reported Hires for Above by Gender															
Total number	180	176	161	160	56	43	87	84	776	171	947	207	543	1526	1697
Men doctoral hires	133	127	111	124	41	30	66	47	566	113	679	118	324	1008	1121
Tenured or tenure-track	36	52	57	26	13	10	43	22	194	65	259	83	178	455	520
Non-tenure-track	97	75	54	98	28	20	23	25	372	48	420	35	146	553	601
Postdoc appointments	79	44	23	71	16	15	8	12	248	20	268	4	19	271	291
1-year appointments	16	9	23	3	4	3	4	-	58	4	62	29	61	148	152
Women doctoral hires	42	46	40	35	15	10	21	37	188	58	246	41	174	403	461
Tenured or tenure-track	8	20	17	5	10	3	8	21	63	29	92	34	115	212	241
Non-tenure-track	34	26	23	30	5	7	13	16	125	29	154	7	59	191	220
Postdoc appointments	28	11	3	23	4	4	7	7	73	14	87	-	4	77	91
1-year appointments	7	2	8	-	-	-	3	-	17	3	20	21	31	69	72
Other doctoral hires	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2
Nondoctoral hires	5	3	10	1	-	3	-	-	22	-	22	48	43	113	113
Men	4	1	4	1	-	-	-	-	10	-	10	18	16	44	44
Women	1	2	6	-	-	3	-	-	-	-	-	30	27	57	-
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total new doctoral hires	92	61	50	98	23	16	42	31	340	73	413	64	214	618	691
Men new doctoral hires	68	46	35	76	18	12	30	19	255	49	304	35	137	427	476
Tenured or tenure-track	2	2	3	1	-	-	18	7	8	25	33	25	73	106	131
Women new doctoral hires	24	15	15	22	5	4	12	12	85	24	109	29	77	191	215
Tenured or tenure-track	1	7	4	-	1	-	4	4	13	8	21	24	54	91	99
Other new doctoral hires	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tenured or tenure-track	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unfilled positions	18	17	23	15	4	10	39	21	87	60	147	27	18	132	192

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Table R.7

Summary of Recruitment & Hiring of Faculty, Fall 2017

	Doctoral Math	Masters and Bachelors	Statistics & Biostatistics	Total
Doctoral Positions under recruitment				
Total Number	861	907	231	1999
Tenure or tenure-track	317	524	135	976
Non-tenure-track	544	383	96	1023
Reported Hires for Above, excluding temporary hires				
Hires by type of position	776	750	171	1697
Tenure or tenure-track	257	412	94	763
Previously in non-tenure-track	33	71	10	114
Previously in postdoc	151	93	23	267
Non-tenure-track	519	338	77	934
1-year appointments	75	142	7	224
Previously in postdoc	321	27	34	382
Gender of hires	776	750	171	1697
Men	576	476	113	1165
Women	200	272	58	530
Other	-	2	-	2
Hires by type of position & gender	776	750	171	1697
Tenure or tenure-track	257	412	94	763
Men	194	261	65	520
Women	63	149	29	241
Other	-	2	-	2
Non-tenure-track	519	338	77	934
Men	382	215	48	645
Women	137	123	29	289
Other	-	-	-	-
Total hires by doctoral degree	776	750	171	1697
Doctoral hires	754	659	171	1584
Men	566	442	113	1121
Women	188	215	58	461
Other	-	2	-	2
Non-doctoral hires	22	91	-	113
Men	10	34	-	44
Women	12	57	-	69
Other	-	-	-	-

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Table A.1
Faculty Deaths & Retirements, Fall 2017

	Math Public Large Group	Math Public Medium Group	Math Public Small Group	Math Private Large Group	Math Private Small Group	Applied Math Group	Statistics Group	Biostatistics Group	Total Doctoral Math	Total Stats	Total Doctoral	Masters	Bachelors	Total Math	Grand Total
Full-time faculty who retired or died	41	40	56	14	11	13	39	25	175	64	239	97	263	424	599
<i>Standard Error</i>	3	2	3	1	2	2	5	8	15	17	4	7	8	19	19
% of Full-time faculty	2%	2%	2%	1%	1%	2%	3%	2%	2%	3%	2%	2%	3%	2%	2%
Died	2	-	4	3	-	4	-	-	13	-	13	1	16	17	30
Retired	39	40	52	11	11	9	39	25	162	64	226	96	247	407	569
Tenured Faculty	37	37	51	10	11	9	31	12	155	43	198	74	197	314	469

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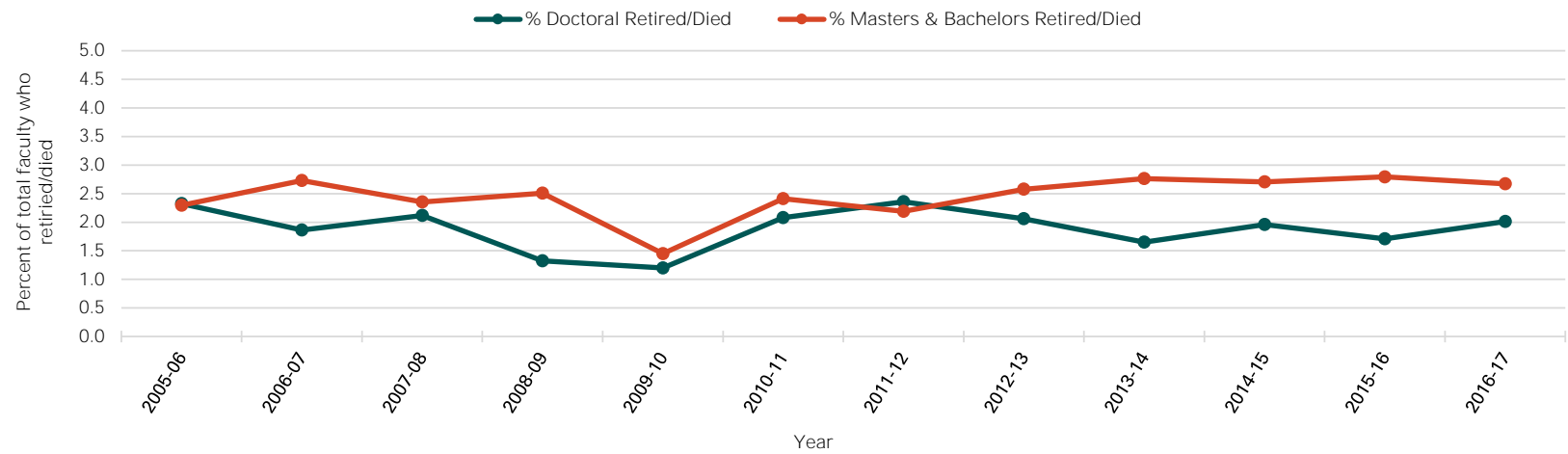
Table A.2
Tenured Faculty Retirements, Fall 2017

	Math Public Large Group	Math Public Medium Group	Math Public Small Group	Math Private Large Group	Math Private Small Group	Applied Math Group	Statistics Group	Biostatistics Group	Total Doctoral Math	Total Stats	Total Doctoral	Masters	Bachelors	Total Math	Grand Total
Full-time Tenured faculty who retired	37	37	51	10	11	9	31	12	155	43	198	74	197	426	581
<i>Standard Error</i>	2	2	3	2	2	2	3	2	5	4		6	13	15	
% of Full-time tenured faculty	3.1%	3.4%	3.9%	1.8%	2.3%	3.1%	4.2%	3.3%	3.2%	3.9%	14.3%	3.2%	4.0%	3.5%	2.3%

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Figure A.1: Percentage of Full-time Faculty who Died/Retired, Fall 2005-2017



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Figure A.2: Retired Faculty as a Percentage of Tenured Faculty, Fall 2005-2017

