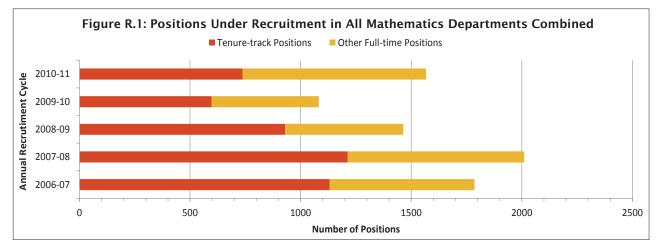


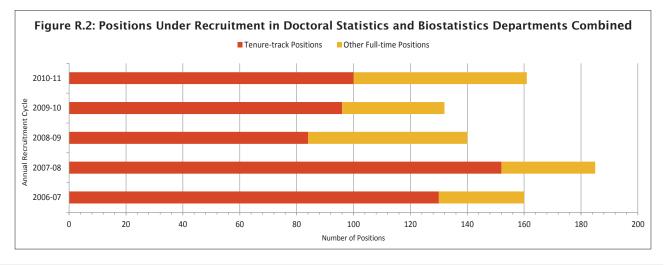
# Report on 2010–2011 Academic Recruitment and Hiring

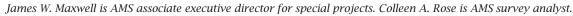
## James W. Maxwell and Colleen Rose

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.)



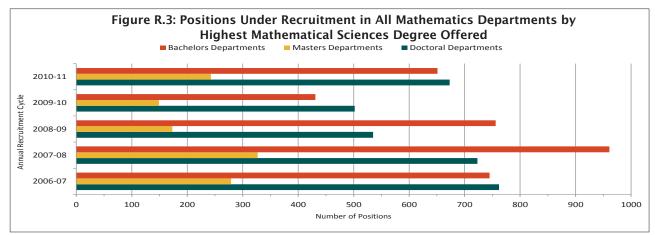
The doctoral statistics and biostatistics departments, Group IV, also saw an increase (22%) in the level of recruitment, though not as precipitous an increase as for the mathematics departments. Group IV consists of 93 departments and so constitutes a much smaller employment pool than the approximately 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.

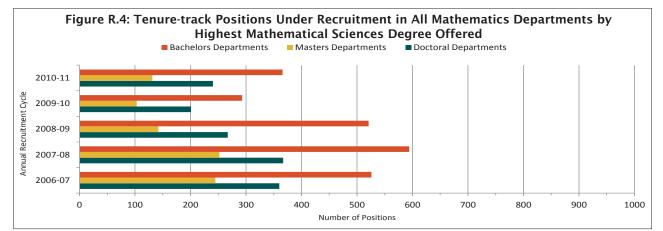




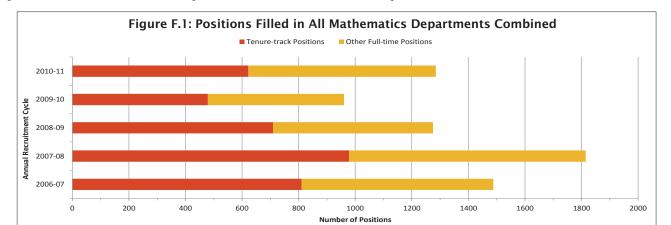
## **Positions Under Recruitment**

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**

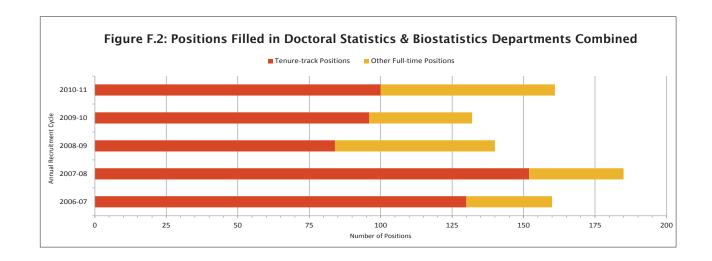


A total of 1,290 positions were filled during the 2010-2011 academic cycle for employment beginning in fall 2011 by all mathematics departments combined. This total is up 34% from the 2009-2010 total and up 1% from the 2008-2009 total.

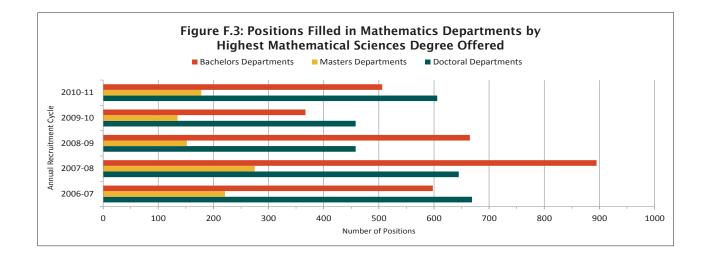
### 2011 Annual Survey of the Mathematical Sciences in the U.S.

## **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.

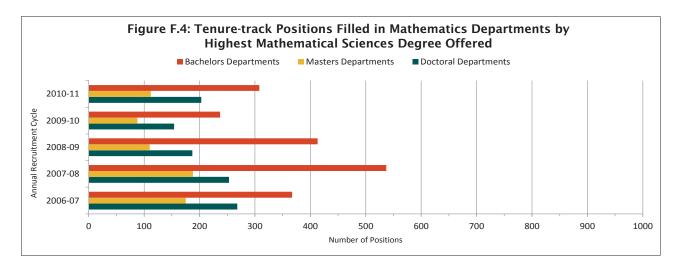


The increase in positions filled for fall 2011 also varied widely among the various reporting groups within all mathematics departments. For the doctoral mathematics departments combined, the number of positions filled was 606, an increase of 32% from the fall 2010 and fall 2009 counts. For Group M the 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.



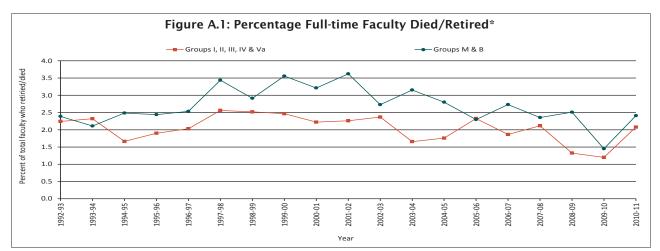
## **Positions Filled**

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.



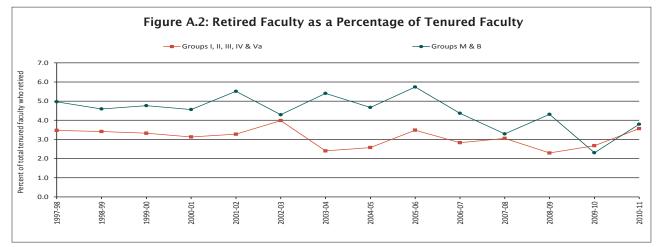
\* The percentage of full-time faculty who died or retired is the number of faculty who died or retired at some point during the academic year (September 1 through August 31) divided by the number of full-time faculty at the start of the academic year.

- 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.

#### 2011 Annual Survey of the Mathematical Sciences in the U.S.

## **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.



\* 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 <u>tenured</u> 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

<sup>\*</sup> 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.



	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
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

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



	Groups I - III & Va	Master's and Bachelor's	Group IV 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	73
Tenure/tenure-track	16	5 170	28	21
Non-tenure-track	432	397	61	890
Open to new doctoral recipients	392	. 368	54	81
Reported Hires for Above, excluding temp	orary hires			
Total doctoral hires	606	684	138	1428
Tenure/tenure-track	203	419	77	700
Previously in non-tenure-track	48	3 102	12	16
Previously in postdoc	123	79	20	22
Non-tenure-track	310	376	53	740
1-year appointments	128	243	26	39
Postdoc appointments	261	. 34	26	32
Total new doctoral hires	256	279	50	585
Tenured/tenure-track	16	5 157	28	20
Male	197	188	33	418
Tenured/tenure-track	13	100	25	13
Female	59	91	17	167
Tenured/tenure-track	3	57	4	6
Total not-new doctoral hires	350	404	88	842
Tenured/tenure-track	187	262	49	49
Male	266	252	55	57
Tenured/tenure-track	146	5 179	36	36
Female	84	152	33	269
Tenured/tenure-track	42	83	13	13
Total Non-doctoral hires	13	98	5	115
Male	5	5 58	2	6
Female	8	39	3	5

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

Fall 2011



Positions	Groups I - III & Va	Master's and Bachelor's	Group IV 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 R.3: Positions Posted and Filled, Fall 2011



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. Topurad Facult	Botiromonte Fall 2011
Supplemental Table	A.Z. Tenureu Facuit	y 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	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%

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