

# Faculty Profile

The Departmental Profile, sent in fall 2008 to mathematical sciences departments at four-year colleges and universities as part of the Annual Survey, gathered information about faculties at these schools in fall 2008; this section presents some of that data. The 2008 First Report presented data collected earlier about faculty salaries (pages 388–94 of the March 2009 issue of the Notices of the AMS).

Table 1A gives the number of faculty for different categories of faculty broken down by survey group, Table 1B gives the same information for females only, and Table 1C gives some percentages based on the information in Tables 1A and 1B. The estimated total number of full-time faculty in the mathematics groups (Groups I, II, III, Va, M, and B combined) is 22,166, with a standard error of 367, up 696 from last year. The doctoral mathematics departments (Groups I, II, III, and Va) full-time faculty has remained relatively stable at 8,055, Group M is up 87 faculty members, and Group B is up 608. The total faculty size in the statistics and biostatistics group (Group IV) is up to 1,749 this year from 1,691 last year.

This year the estimated number of part-time faculty in Groups I, II, III, Va, B, and M combined is 6,700, down 5% from last year's 7,065. The number of non-tenure-track doctoral faculty (including postdoctoral positions) is estimated at 2,364 this year, up 9% from 2,170 last year. The number of nondoctoral full-time faculty is estimated at 3,977 in Groups I, II, III, Va, M, and B combined, up from 3,839 last year, a 4% increase. In Group IV the number of part-time faculty decreased from 149 last year to 143 this year, and the number of non-tenure-track doctoral faculty increased from

378 last year to 386 this year due to the increased number of postdoctoral appointments.

Table 1D gives an eight-year history of tenured/tenure-track, and non-tenure-track doctorate-holding faculty, and all part-time faculty for Groups I, II, III, and Va combined, for Group M, and for Group B. Also shown for each number in this table is the percentage of females. Comparing the 2008 values to the 2001 values, we see that for Groups I, II, III, and Va combined the number of tenured/tenure-track faculty is up 2%, the number of non-tenure-track faculty is up 30%, and the number of part-time faculty is down 20%. For Group M, the number of tenured/tenure-track faculty is up 7%, the number of non-tenure-track faculty is up 26%, and the number of part-time faculty is down 21%. Finally in Group B, the number of tenured/tenure-track faculty is up 19%, the number of non-tenure-track faculty is up 6%, and the number of part-time faculty is down 12%.

Table 1E gives a summary of the various types of faculty found in departments of mathematical sciences by gender and group.

Tables 1F and 1G give more information about two types of faculty: full-time faculty without a doctorate and part-time faculty. The Table 1F shows the information for the 3,977 full-time faculty in the mathematics departments who do not have doctoral degrees. The majority of these faculty, 3,211 (81%), are found in Groups M and B departments. Table 1G shows the part-time faculty broken down by gender and whether they have a doctoral degree. Comparing Table 1G to last year's table, we see an overall decrease in part-time faculty with the largest decrease (13%) in Group M and B part-time male faculty from 3,467 last year to 3,078 this year; a reflection of the decline in Group B (from 2,319 to 1,692).

**Table 1A: Total Faculty, Fall 2008**

	GROUP									
	I Public	I Private	II	III	Va	I, II, III, & Va	M	B	I, II, III, Va, M, & B	IV
<b>Total full-time faculty</b> <i>(Standard error)<sup>1</sup></i>	1793	1045	2622	2270*	293	8024 (52)	4578 (69)	9533 (361)	22135 (365)	1749 (35)
Doctoral full-time faculty	1708	1041	2346	1887	282	7264	3635	7265	18163	1659
Tenured	1060	583	1550	1252	168	4613	2535	4820	11968	856
Untenured, tenure-track	208	81	328	389	47	1053	868	1913	3834	417
Postdoctoral appointments	251	259	243	58	39	850	22	18	890	112
Other non-tenure-track	189	118	224	188	28	747	209	514	1471	274
Nondoctoral full-time faculty <i>(Standard error)<sup>1</sup></i>	85	4	277	384	11	760 (18)	943 (34)	2268 (158)	3972 (161)	89 (6)
<b>Total part-time faculty</b> <i>(Standard error)</i>	193	29	403	514	26	1165 (26)	1824 (75)	3703 (303)	6693 (308)	143 (13)

<sup>1</sup> See 'Remarks on Statistical Procedures' page 1300.

\* All figures in red have been adjusted since the original report.

Table 1B: Female Faculty, Fall 2008

	GROUP									
	I Public	I Private	II	III	Va	I, II, III, & Va	M	B	I, II, III, Va, M, & B	IV
<b>Female full-time faculty</b> <i>(Standard error)</i>	253	142	565	578*	50	1588 (18)	1455 (28)	3067 (179)	6110 (181)	525 (14)
Doctoral full-time faculty	202	140	388	368	43	1141	961	1825	3927	480
Tenured	72	43	154	181	16	466	577	1137	2180	170
Untenured, tenure-track	55	18	81	109	8	271	311	552	1133	153
Postdoctoral appointments	34	44	51	14	11	154	9	9	172	38
Other non-tenure-track	41	36	102	64	8	251	64	127	441	119
Nondoctoral full-time faculty	51	2	178	210	7	448	494	1242	2184	45
<b>Female part-time faculty</b>	64	4	154	207	7	436	759	1692	2886	54

Table 1C: Full-Time Faculty, Fall 2008

	GROUP									TOTAL
	I Public	I Private	II	III	Va	M	B	IV		
<b>Full-time faculty</b> <i>Percentage of total full-time faculty</i>	1793 8%	1045 4%	2622 11%	2270 10%	293 1%	4578 19%	9533 40%	1749 7%	23883 100%	
<b>Female full-time faculty</b> <i>Percentage of total female full-time faculty</i>	253 4%	142 2%	565 9%	578 9%	50 1%	1455 22%	3067 46%	525 8%	6635 100%	
<i>Percentage of total female faculty within group</i>	14%	14%	22%	25%	17%	32%	32%	30%	28%	

Table 1D: Mathematics Faculty Counts and Percentage Female, Fall 2001-2008

	2001	2002	2003	2004	2005	2006	2007	2008
<b>Groups I, II, III, &amp; Va</b>								
Doctoral full-time faculty								
Tenured/tenure-track	5598	5616	5559	5604	5686	5668	5709	5666
<i>Percentage female</i>	10%	10%	10%	11%	11%	12%	12%	13%
Non-tenure-track	1233	1274	1343	1314	1401	1461	1576	1598
<i>Percentage female</i>	21%	23%	25%	25%	24%	25%	25%	25%
Part-time faculty	1467	1504	1389	1355	1054	1128	1143	1165
<i>Percentage female</i>	38%	35%	35%	37%	37%	40%	37%	37%
<b>Group M</b>								
Doctoral full-time faculty								
Tenured/tenure-track	3191	3188	3005	3113	3351	3400	3325	3403
<i>Percentage female</i>	23%	22%	22%	23%	24%	25%	25%	26%
Non-tenure-track	183	276	230	277	263	283	232	231
<i>Percentage female</i>	24%	39%	33%	48%	36%	28%	38%	32%
Part-time faculty	2323	2393	1952	1888	1842	1493	1868	1824
<i>Percentage female</i>	36%	37%	37%	37%	37%	41%	39%	42%
<b>Group B</b>								
Doctoral full-time faculty								
Tenured/tenure-track	5665	5569	6172	5770	6875	6623	6427	6733
<i>Percentage female</i>	24%	23%	26%	25%	25%	27%	27%	25%
Non-tenure-track	504	507	460	472	516	545	363	532
<i>Percentage female</i>	29%	36%	20%	29%	32%	25%	33%	26%
Part-time faculty	4197	4117	3997	4846	3630	3922	4053	3703
<i>Percentage female</i>	43%	45%	42%	44%	41%	40%	43%	46%

\* All figures adjusted since the original report are in red.

**Table 1E: Summary of Full-Time and Part-Time Faculty, Fall 2008**

	GROUP					
	I, II, III, & Va		M & B		IV	
	Male	Female	Male	Female	Male	Female
<b>Full-time faculty</b>	<b>6436*</b>	<b>1588</b>	<b>9589</b>	<b>4522</b>	<b>1224</b>	<b>525</b>
<i>Percentage</i>	<i>80%</i>	<i>20%</i>	<i>68%</i>	<i>32%</i>	<i>70%</i>	<i>30%</i>
Doctoral full-time faculty	6123	1141	8113	2786	1179	480
<i>Percentage</i>	<i>84%</i>	<i>16%</i>	<i>74%</i>	<i>26%</i>	<i>71%</i>	<i>29%</i>
Tenured	4148	466	5641	1714	686	170
<i>Percentage</i>	<i>90%</i>	<i>10%</i>	<i>77%</i>	<i>23%</i>	<i>80%</i>	<i>20%</i>
Untenured, tenure-track	782	271	1918	863	264	153
<i>Percentage</i>	<i>74%</i>	<i>26%</i>	<i>69%</i>	<i>31%</i>	<i>63%</i>	<i>37%</i>
Postdoctoral appointments	696	154	22	18	74	38
<i>Percentage</i>	<i>82%</i>	<i>18%</i>	<i>54%</i>	<i>46%</i>	<i>66%</i>	<i>34%</i>
Other non-tenure-track	497	251	533	191	155	119
<i>Percentage</i>	<i>66%</i>	<i>34%</i>	<i>74%</i>	<i>26%</i>	<i>57%</i>	<i>43%</i>
Nondoctoral full-time faculty	313	450	1475	1736	45	45
<i>Percentage</i>	<i>41%</i>	<i>59%</i>	<i>46%</i>	<i>54%</i>	<i>50%</i>	<i>50%</i>
<b>Part-time faculty</b>	<b>729</b>	<b>436</b>	<b>3077</b>	<b>2450</b>	<b>89</b>	<b>54</b>
<i>Percentage</i>	<i>63%</i>	<i>37%</i>	<i>56%</i>	<i>44%</i>	<i>62%</i>	<i>38%</i>

\* All figures adjusted since the original report are in red.

**Female Faculty**

Table 1B gives a complete breakdown of all categories of female faculty by group. For 2008–2009 the estimated total number of full-time faculty in Groups I, II, III, Va, M, and B combined is 22,166 of which 6,118 are females. Females comprise 28% of the full-time faculty up from 27% (5,891) in 2007–2008. In Group B the estimated number of doctoral female faculty decreased from 1,863 last year to 1,825 this year, tenured female faculty increased from 1,123 to 1,137, untenured but tenure-track female faculty decreased from 620 to 552, and non-tenure-track doctoral female faculty (including postdoctoral appointments) increased from 119 to 136. In Group M the doctoral full-time female faculty increased from 925 last year to 961 this year.

Table 1C compares the number of full-time and female full-time faculty that fall into each reporting group for fall 2008. The percentage who are female in each group is given in the bottom row of Table 1C. These percentages vary considerably among the groups, from a low of 14% for Groups I Public and I Private to a high of 32% for Groups M and B.

Table 1D contains information about the percentage of female faculty among the tenured/tenure-track and non-tenure-track doctoral full-time faculty and among the part-time faculty for the years 2001 to 2008.

Table 1E gives the male/female breakdown by count and percentage for Groups I, II, III, and Va combined, Groups M and B combined, and Group IV for various categories of faculty. It shows that the percentage of women is generally higher in statistics (Group IV) than in the doctoral mathematics groups (Groups I, II, III, and Va combined) and that the percentage of tenured faculty who are women is highest in Groups M and B combined.

Table 1F shows that of the 3,977 nondoctoral full-time faculty in Groups I, II, III, Va, M, and B combined, 2,186 (55%) are females. From Table 1G we see that in these same groups there are 6,700 part-time faculty, of which 2,889 (43%) are females.

**Table 1F: Nondoctoral Full-Time Faculty, Fall 2008**

Full-time Faculty	GROUP							
	I, II, III, & Va		M		B		IV	
	Male	Female	Male	Female	Male	Female	Male	Female
<b>Without a Doctorate</b>	<b>313</b>	<b>448</b>	<b>449</b>	<b>494</b>	<b>1026</b>	<b>1242</b>	<b>45</b>	<b>45</b>
Tenured	14	10	67	37	393	242	2	0
Untenured, tenure-track	3	1	13	6	54	179	1	0
Postdoctoral appointments	1	0	0	0	0	0	0	0
Other non-tenure-track	294	436	369	451	579	821	41	45

**Table 1G: Part-Time Faculty, Fall 2008**

Part-time Faculty	GROUP							
	I, II, III, & Va		M		B		IV	
	Male	Female	Male	Female	Male	Female	Male	Female
Doctoral	315	100	227	110	553	219	71	33
Nondoctoral	414	335	839	648	1459	1473	18	21
<b>Total</b>	<b>729</b>	<b>436</b>	<b>1066</b>	<b>759</b>	<b>2012</b>	<b>1692</b>	<b>89</b>	<b>54</b>

**Faculty Recruitment**

Table 2A contains detailed information on the number of full-time doctoral faculty positions under recruitment during 2007–2008 for employment beginning in the academic year 2008–2009. Among mathematics departments (Groups I, II, III, Va, M, and B), 2,012 positions were under recruitment, up 13% compared to those under recruitment during 2006–2007. Of those 2,012 positions, 1,776 (88%) were available to new doctoral recipients, and of those 1,776 positions, 1,081 (61%) were tenured/tenure-track positions. The 1,081 tenured/tenure-

**Table 2A: Recruitment of Faculty with a Doctorate, Fall 2008**

	GROUP									
	I Public	I Private	II	III	Va	I, II, III, & Va	M	B	I, II, III, Va, M, & B	IV
<b>Posted Doctoral Positions</b>										
<b>Total number<sup>1</sup></b> (Standard error)	170	143	238	147	24	723 (21)	327 (27)	961* (114)	2012 (118)	185 (20)
Tenured/tenure-track	71	43	126	112	14	367	252	594	1213	152
Open to new doctoral recipients	126	106	186	136	21	575	307	894	1776	129
Tenured/tenure-track	43	9	88	98	11	249	241	591	1081	98
Open at assoc/full level	25	19	25	23	3	96	39	60	195	71
<b>Reported Hires for Above</b>										
<b>Total number</b>	149	129	215	135	18	646	275	895	1816	123
Male doctoral hires	112	101	167	93	14	486	168	589	1243	86
Tenured/tenure-track	35	18	66	62	7	187	131	330	648	64
Female doctoral hires	35	26	46	38	5	148	70	226	444	35
Tenured/tenure-track	14	6	15	29	1	66	57	207	330	26
Male temporary hires	1	1	0	3	0	5	26	71	102	2
Female temporary hires	1	1	3	1	0	6	11	9	26	0
<b>Total new doctoral hires</b>	56	75	90	49	9	280	106	371	758	47
Male new doctoral hires	42	63	67	33	6	210	68	237	515	36
Tenured/tenure-track	4	3	11	21	0	39	44	122	205	26
Female new doctoral hires	14	13	23	16	3	70	38	135	243	10
Tenured/tenure-track	4	0	3	13	0	19	28	126	173	9
<b>Unfilled positions</b>	21	14	23	13	6	77	52	66	196	62

\* All figures adjusted since the original report are in red.

track positions open to new doctoral recipients is up 16% from the 935 such positions under recruitment in 2006–2007 primarily reflecting increases in Groups I and II. The total number of tenured/tenure-track full-time doctoral positions under recruitment in Groups I, II, III, Va, M, and B combined is 1,213, up from last year's 1,131 (an increase of 7%). In Groups I, II, III, and Va combined, the total number of posted doctoral positions open at the associate/full level decreased from 126 last year to 96 this year.

Table 2B condenses the information in Table 2A. It also reorganizes the doctoral hires into one section for new doctoral hires and another for other doctoral hires (so excludes posted doctoral positions that were temporarily filled with a person without a doctorate). Table 2C is derived from Table 2B, with the percentage of the filled positions that were tenured/tenure-track included in the table.

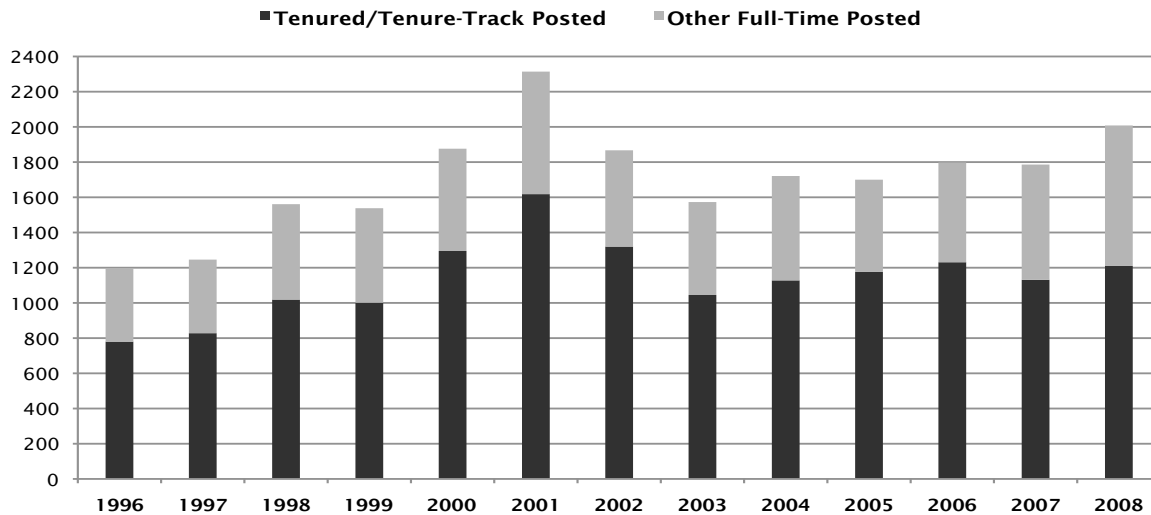
This year the estimated total number of new doctoral hires in mathematics departments is up 20% (to 758 from 634) from last year; it is down 6% (to 280 from 298) in Groups I, II, III, and Va combined, and up 43% (to 478 from 335) in Groups M and B combined. The number of new doctoral tenure-track hires in the math groups combined is down 14% as a result of a decrease in Groups M & B combined (down to 226 from 283). Among the new doctoral hires in Groups I, II, III, and Va combined, 19% of all males and 27% of all females took tenure-track positions. In contrast, for new doctoral hires in Groups M and B combined, 24% of all males and 89% of all females took tenure-track positions. From Table 2C we see that in

**Table 2B: A Summary of Recruitment of Faculty with a Doctorate, Fall 2008**

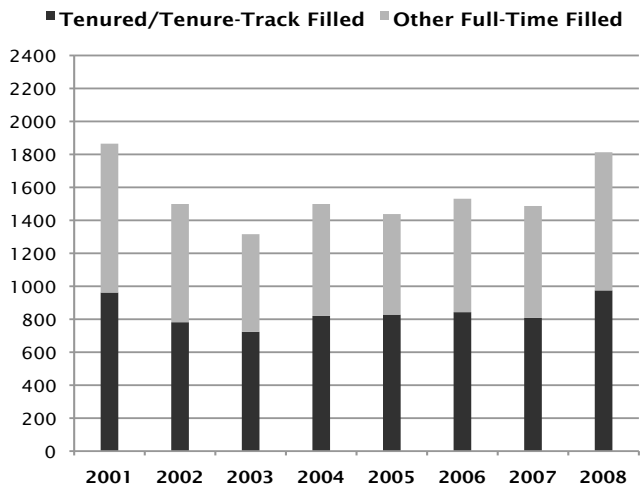
	GROUP		
	I, II, III, & Va	M & B	IV
<b>Posted Doctoral Positions</b>			
<b>Total number</b>	723	1289	185
Tenured/tenure-track	367	846	152
Open to new doctoral recipients	575	1201	129
Tenured/tenure-track	249	832	98
<b>Reported Hires for Above, excluding temporary hires</b>			
<b>Total doctoral hires</b>	635	1053	121
Tenured/tenure-track	253	725	90
Previously in non-tenure-track	136	211	21
Previously in postdoc	86	45	16
<b>Total new doctoral hires<sup>1</sup></b>	280	478	47
Tenured/tenure-track	58	320	35
Male	210	305	36
Tenured/tenure-track	39	166	26
Female	70	173	10
Tenured/tenure-track	19	154	9
<b>Total not-new doctoral hires</b>	355	575	74
Tenured/tenure-track	195	499	55
Male	276	452	33
Tenured/tenure-track	148	388	38
Female	78	123	24
Tenured/tenure-track	47	110	17

<sup>1</sup> New doctoral hires are individuals who have held a doctorate for less than one year at the time of hiring.

**Figure 1: Number of Full-Time Doctoral Positions under Recruitment**  
Groups I, II, III, Va, M, & B Combined, Fall 1996 to Fall 2008



**Figure 1A: Number of Full-Time Doctoral Positions Filled**  
Groups I, II, III, Va, M, & B Combined, Fall 2001 to Fall 2008



Groups I, II, III, and Va 21% of the hires of new doctoral recipients are in tenured/tenure-track positions (up from 16% last year), while in Groups M and B 47% of the new doctoral hires are in tenured/tenure-track positions (down from 84% last year).

From Table 2B we find that the total number of full-time doctoral positions filled in mathematics departments (Groups I, II, III, Va, M, and B combined) is 1,688 up from 1,385 last year (a increase of 22%); it is down 4% in Groups I, II, III, and Va combined and up 46% in Groups M and B combined. This year Groups I, II, III, and Va combined filled 635 doctoral positions, of which 253 (40%) were tenured/tenure-track positions. Last year these same groups filled 663 doctoral positions, of which 268 (40%) were tenured/tenure-track. Groups M and B combined

filled 1,053 doctoral positions this year, and 725 (69%) of these were tenured/tenure-track positions. Last year these two groups filled 722 doctoral positions, of which 543 (75%) were tenured/tenure-track.

Departments were asked to report the number of doctoral hires into tenured/tenure-track positions filled by individuals who held a non-tenure-track position the previous year and of those, how many were in postdoctoral appointments. For Groups I, II, III, and Va combined, 136 individuals reported having held a non-tenure-track position the previous year (54% of the 253 tenure-track hires), with 86 (34%) having held a postdoctoral appointment the previous year. This compares with last year's figure of 115 (43%) positions filled by individuals who held a postdoctoral appointment the previous year. For Groups M and B combined, 211 individuals (29% of the 723 tenure-track hires) reported having held a non-tenure-track position the previous year, with 44 (6%) having held a postdoctoral appointment the previous year. This compares with last year's figure of 67 (12%) positions

**Table 2C: Positions Posted and Filled, Fall 2008**

Positions	GROUP		
	I, II, III, & Va	M & B	IV
Posted positions opened to new doctoral recipients	575	1201	129
% tenured/tenure-track	43%	69%	76%
Positions filled by new doctoral recipients	280	478	47
% tenured/tenure-track	21%	47%	74%
Positions filled by not-new doctoral recipients <sup>1</sup>	355	575	74*
% tenured/tenure-track	55%	87%	96%

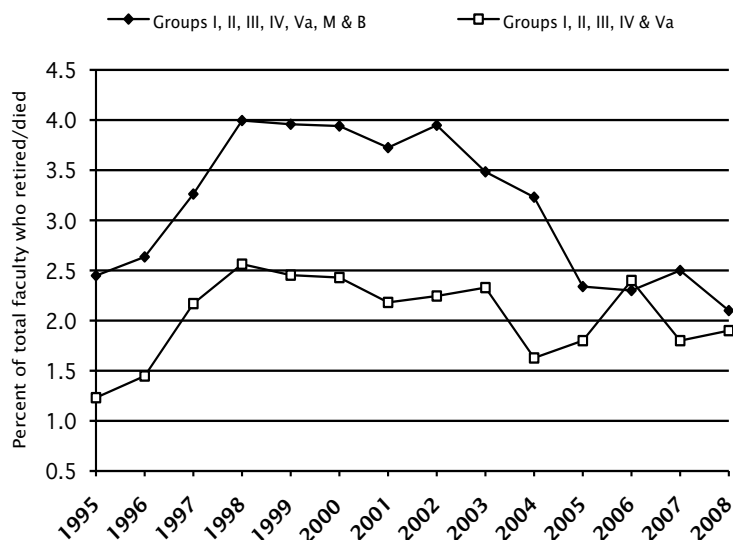
<sup>1</sup> Not-new doctoral recipients are individuals who have held their doctorate for more than one year.

\* All figures adjusted since the original report are in red.

**Table 3: Faculty Deaths & Retirements,<sup>1</sup> Fall 2008**

	GROUP									
	I Public	I Private	II	III	Va	I, II, III, & Va	M	B	I, II, III, Va, M, & B	IV
<b>Full-time faculty who retired or died</b>										
Total number (Standard error)	50	9	51	53	6	169 (7)	120 (11)	196 (31)	484 (33)	22 (4)
Percentage	2.8%	0.9%	1.9%	2.3%	2.0%	2.1%	2.6%	2.1%	2.2%	1.3%

<sup>1</sup> Number and percentage of full-time faculty who were in the department in fall 2006 but were reported to have retired or died by fall 2008.

**Figure 2: Faculty Retired/Died**

filled by individuals who held a postdoctoral appointment the previous year.

The estimated number of not-new doctoral hires in mathematics departments is 930, up from 750 last year. The total of not-new doctoral hires into tenured/tenure-track positions in all the mathematics groups combined is 694, up 45% from last year. It is down 11% in Groups I, II, III, and Va combined (to 195 from 220 last year), and up 93% in Groups M and B combined (499 from 259).

Figure 1 shows the number of full-time doctoral positions posted for all groups combined except Group IV, as well as the number of those that were tenured/tenure-track for the years 1996 to 2008. The number of positions posted and the number of available tenured/tenure-track positions steadily increased, reaching a maximum in 2001. Over the last eight years these numbers have shown some variability with this year's total number of posted positions being the highest reported since 2001.

Figure 1A shows the number of full-time doctoral positions filled for all groups combined, except Group IV, as well as the number of tenured/tenure-track for the years 2001 to 2008. This year the number of tenured/tenure-track positions has

reached a seven-year high, just slightly higher than the number reported for fall 2001.

### Faculty Attrition

Table 3 displays losses of full-time mathematical sciences faculty due to retirements and deaths between 1 September 2007 and 31 August 2008 for each departmental grouping. The fall 2008 faculty attrition rate for Groups I, II, III, Va, M, and B combined is 2.2%, and it is 1.3% for Group IV. For fall 2008, Group I (Pr) had the lowest attrition rate at 0.9%, while Group I (Pu) had the highest at 2.8%.

Figure 2 shows the trends in these attrition rates between 1995 and 2008. While the rates vary from group to group and from year to year within each group, for most of the 1990s the dominant trend was one of increasing attrition for all groups combined. In the late 1990s attrition leveled off then began dropping in 2003, reaching the smallest rate of attrition this year.