

## NINETEENTH ANNUAL AMS SURVEY

The following pages contain a first report on the 1975 AMS Survey. Included in this issue are data on faculty salaries, salaries of new recipients of doctorates in the mathematical sciences, a report on nonacademic salaries, an analysis, by sex, race, and citizenship, of the 1974-1975 Ph.D. class, and a list of the names and thesis titles of the members of that class.

The November issue of the *Notices* will contain a report, prepared by Richard D. Anderson

based on other data collected in the 1975 Survey, including information on employment of the new doctorates, and on enrollments, teaching loads, and class size, as well as an expanded study of faculty mobility.

This Survey is the nineteenth in an annual series begun in 1957 by the Society's Committee on the Economic Status of Teachers. The present Survey is under the direction of the Committee on Employment and Educational Policy.

### Faculty Salaries

As has been the practice for several years, questionnaires were sent to departments in the mathematical sciences, asking for information on salaries. Departments submitted a minimum, median, and maximum salary figure for each of four academic ranks, both for staff members with and without doctorates. The two-year colleges were sent a form on which they reported salaries without regard to academic rank, because many of the junior colleges do not rank their teaching staffs. Annual salaries of full-time faculty members, for the academic year of 9-10 months, were requested.

For the reports on salaries, the departments are divided into groups according to the highest degree offered in the mathematical sciences. The Doctorate granting departments are in six groups as follows:

Group I and Group II include the leading departments of mathematics in the U.S.A. according to the findings of the American Council of Education in 1969\* in which departments were ranked according to the quality of their graduate faculty. Group I is composed of the 27 departments ranked highest; Group II is made up of the other 38 leading departments listed in that report.

Group III contains all other U.S.A. departments of mathematics.

Group IV includes U.S.A. departments of statistics, biostatistics and biometrics.

Group V includes all other U.S.A. departments in the mathematical sciences.

Group VI consists of all departments in the mathematical sciences from Canadian universities.

Canadian doctorate granting departments are grouped separately but the two-year colleges and those granting bachelor and master degrees are included with U.S.A. departments.

The 1975 survey is based on usable returns from 912 departments in the mathematical sciences. All of the returns were used in compiling figures on the size of the faculty; this year, for the first time, number of faculty were reported for categories in which salary information was not usable (this resulted in the reporting of 105 additional faculty positions). In prior years the "number of usable returns" reflected only the number of returns from which some salary figures were used and so is not comparable to the number of usable returns in 1975.

Following past practice, the 1975 questionnaire requested information for both the years 1974-1975 and 1975-1976. The sample in this survey is thus the same for both years and is different from the sample used in the 18th Salary Survey in 1974.

In the following three pages the data in the parentheses give the range of the middle fifty percent of salaries reported. The figures outside the parentheses represent the minimum and maximum salary listed by any reporting institution. In some categories, relatively few departments reported, and inasmuch as there were no significant figures available, salaries are not listed.

### NUMBER OF FACULTY REPORTING

The table at the top of page 307 gives the total number of faculty reported from usable questionnaires.

In doctoral granting institutions, 74% of the departments in Group I were covered in this survey and they reported 79% of the total 1974 faculty in that group. Similarly in Group II, 71% of the departments reported 67% of the total 1974 faculty and, in Group III, 63% of the departments reported 76% of the total 1974 faculty. These percentages are given only for Groups I, II and III because these are the only groups for which we have reliable figures available for the total number of faculty members, based on an independent count.

\*The findings were published in "A Rating of Graduate Programs" by Kenneth D. Roose and Charles J. Andersen, American Council of Education, Washington, D. C., 1969, 115 pp. The information on mathematics was reprinted by the Society and can be found on pages 338-340 of the February 1971 issue of these *Notices*.

**SALARIES**  
(in hundreds of dollars)

**SIZE OF FACULTY**  
1974—1975      1975—1976

	1974—1975		1975—1976		1974—1975		1975—1976	
	FACULTY Total	WOMEN With Tenure	FACULTY Total	WOMEN With Tenure	Minimum	Median	Minimum	Median

**DOCTORATE GRANTING DEPARTMENTS. Group I**

	1974—1975	1975—1976	1974—1975	1975—1976	Minimum	Median	Minimum	Median	Maximum
<b>WITHOUT DOCTORATE</b>									
Instructor	2	1	1	0					
Asso. Prof.	1	1	1	1					
	3	2	2	1					
<b>WITH DOCTORATE</b>									
Instructor	64	0	51	0	110(110-123)	(110-124)	115(116-130)	(116-130)	(116-130)149
Asst. Prof.	194	3	194	3	105(118-128)	(129-141)	115(120-135)	(131-151)	(150-170)175
Asso. Prof.	192	5	197	181	135(148-162)	(161-185)	148(158-172)	(173-190)	(192-220)246
Professor	477	7	490	488	170(182-210)	(241-294)	176(200-215)	(260-310)	(358-395)428
	927	24	932	672					

**DOCTORATE GRANTING DEPARTMENTS. Group II**

	1974—1975	1975—1976	1974—1975	1975—1976	Minimum	Median	Minimum	Median	Maximum
<b>WITHOUT DOCTORATE</b>									
Instructor	29	5	26	5	64( 90-130)	( 90-130)	95(100-125)	(108-138)	(108-150)165
Asst. Prof.	4	3	7	3					
Asso. Prof.	1	0	1	0					
	34	9	34	9					
<b>WITH DOCTORATE</b>									
Instructor	23	0	32	0					
Asst. Prof.	237	11	218	11	90(115-128)	(125-144)	90(120-137)	(135-150)	(149-174)196
Asso. Prof.	339	316	333	305	111(139-155)	(162-177)	124(153-165)	(171-187)	(193-218)249
Professor	358	355	392	391	140(177-205)	(227-260)	147(185-213)	(234-265)	(322-378)466
	957	682	975	707					

**DOCTORATE GRANTING DEPARTMENTS. Group III**

	1974—1975	1975—1976	1974—1975	1975—1976	Minimum	Median	Minimum	Median	Maximum
<b>WITHOUT DOCTORATE</b>									
Instructor	18	24	57	11	80( 93-120)	( 94-120)	85( 90-115)	( 97-115)	(103-128)135
Asst. Prof.	93	31	83	77	93(115-138)	(122-141)	103(124-156)	(131-156)	(133-157)186
Asso. Prof.	62	5	64	63	133(142-165)	(149-173)	135(150-173)	(157-182)	(164-191)220
Professor	16	1	15	14					
	239	61	219	165					
<b>WITH DOCTORATE</b>									
Instructor	11	0	11	0					
Asst. Prof.	513	34	474	74	100(116-130)	(129-142)	100(125-139)	(137-153)	(150-165)194
Asso. Prof.	606	27	628	579	129(146-162)	(164-180)	135(154-171)	(172-189)	(183-225)283
Professor	472	11	517	506	154(180-212)	(213-252)	170(192-223)	(224-265)	(273-327)438
	1602	74	1630	1159					

Number of Usable Returns: 20 (out of 27)

Number of Usable Returns: 27 (out of 38)

Number of Usable Returns: 57 (out of 91)

Notice of the American Mathematical Society  
Volume 22, Issue 6, October 1975



**SALARIES**

(in hundreds of dollars)

**SIZE OF FACULTY**

1974—1975      1975—1976

	1974—1975		1975—1976		1974—1975			1975—1976		
	Total	With Tenure	Total	With Tenure	Minimum	Median	Maximum	Minimum	Median	Maximum

**MASTER DEGREE GRANTING DEPARTMENTS**

Number of Usable Returns: 145 (out of 333)

	1974—1975	1975—1976	1974—1975	1975—1976	1974—1975	1975—1976	1974—1975	1975—1976		
<b>WITHOUT DOCTORATE</b>										
Instructor	23	86	12	173	72 (91-116)	(96-121)	(100-121)176	72 (90-120)	(100-125)	(103-134)171
Asst. Prof.	300	72	62	291	86 (112-129)	(117-138)	(134-146)181	98 (119-141)	(126-149)	(131-160)211
Asso. Prof.	187	24	24	188	109 (130-156)	(138-164)	(143-174)202	119 (140-169)	(143-179)	(153-185)211
Professor	46	2	2	38	132 (170-203)	(171-210)	(171-213)260	166 (185-225)	(190-225)	(190-232)273
	<u>706</u>	<u>184</u>	<u>100</u>	<u>680</u>	<u>500</u>	<u>172</u>	<u>96</u>			
<b>WITH DOCTORATE</b>										
Instructor	17	5	1	21	---	---	---	---	---	---
Asst. Prof.	624	59	13	587	87 (115-136)	(127-143)	(136-254)230	85 (120-142)	(134-152)	(140-163)330
Asso. Prof.	624	55	53	678	95 (143-160)	(150-176)	(160-194)277	106 (150-169)	(161-186)	(172-203)274
Professor	469	27	27	488	100 (176-210)	(185-224)	(197-253)376	112 (183-220)	(197-232)	(209-260)355
	<u>1734</u>	<u>1151</u>	<u>94</u>	<u>1774</u>	<u>1231</u>	<u>150</u>	<u>92</u>			

**BACHELOR DEGREE GRANTING DEPARTMENTS**

Number of Usable Returns: 329 (out of 1012)

	1974—1975	1975—1976	1974—1975	1975—1976	1974—1975	1975—1976	1974—1975	1975—1976		
<b>WITHOUT DOCTORATE</b>										
Instructor	118	9	52	0	60 (90-112)	(93-114)	(95-116)190	60 (100-115)	(100-120)	(100-123)207
Asst. Prof.	325	190	36	279	85 (103-130)	(108-133)	(110-137)190	83 (110-137)	(115-142)	(116-148)185
Asso. Prof.	218	199	28	218	80 (120-149)	(121-152)	(123-158)256	95 (135-163)	(129-166)	(132-170)265
Professor	53	8	8	55	107 (139-194)	(139-199)	(142-199)299	115 (150-207)	(150-207)	(153-207)298
	<u>714</u>	<u>441</u>	<u>70</u>	<u>664</u>	<u>429</u>	<u>144</u>	<u>67</u>			
<b>WITH DOCTORATE</b>										
Instructor	9	4	1	7	---	---	---	---	---	---
Asst. Prof.	416	59	8	426	80 (110-129)	(115-132)	(116-139)200	80 (117-135)	(120-140)	(120-145)205
Asso. Prof.	323	241	29	363	90 (132-152)	(137-159)	(140-166)240	95 (135-163)	(141-170)	(142-175)245
Professor	298	280	33	308	99 (162-201)	(165-211)	(166-225)334	110 (165-207)	(172-221)	(175-232)344
	<u>1046</u>	<u>581</u>	<u>60</u>	<u>1104</u>	<u>640</u>	<u>108</u>	<u>57</u>			

**TWO-YEAR COLLEGES**

Number of Usable Returns: 258 (out of 860)

	1974—1975	1975—1976	1974—1975	1975—1976	1974—1975	1975—1976	1974—1975	1975—1976		
<b>WITHOUT DOCTORATE</b>										
Instructor	1523	980	266	1462	69 (98-130)	(113-157)	(124-187)310	72 (100-140)	(120-162)	(132-200)330
<b>WITH DOCTORATE</b>										
Instructor	165	89	20	168	87 (132-176)	(130-196)	(136-203)335	103 (133-176)	(139-200)	(151-210)340

Notices of the American Mathematical Society  
 Volume 22, Issue 1, October 1975

Notices of the American Mathematical Society  
 Volume 22, Issue 6, October 1975

	FACULTY		WOMEN		FACULTY		WOMEN	
	Total	With Tenure	Total	With Tenure	Total	With Tenure	Total	With Tenure
<b>WITHOUT DOCTORATES</b>								
Instructor	421	57	182	22	382	45	167	19
Assistant Professor	748	534	179	133	683	532	171	133
Associate Professor	488	461	61	59	492	463	58	54
Professor	136	124	12	12	128	115	12	10
	1,793	1,176	434	226	1,685	1,155	408	216
<b>WITH DOCTORATES</b>								
Instructor	123	2	18	2	136	0	19	0
Assistant Professor	2,378	345	184	30	2,279	340	200	34
Associate Professor	2,470	2,158	137	124	2,613	2,317	136	119
Professor	2,503	2,447	95	89	2,643	2,583	97	92
	7,474	4,952	434	245	7,671	5,240	452	245

Starting Salary Survey  
 for New Recipients of the Doctorate

The latest figures in this Survey were compiled from questionnaires sent to individuals who received a doctorate in the mathematical sciences during the 1974-1975 academic year from universities in the United States and Canada. This year no attempt was made to obtain information from individuals who were reported to have left the U.S.A. or Canada.

Of 371 questionnaires which were returned between late June and early September, 311 (279 men and 34 women) were used in the tables below. Of the unused returns 26 did not have sufficient information for use in the compilation, 20 persons (17 men and 3 women) reported that they were not yet employed, 2 men were not seeking employment and 12 persons (11 men and 1 woman) had accepted part-time employment.

Of the doctorates included in this report 83% accepted academic positions, 11% positions in business or industry and 6% in government, including federal, state and provincial governments. Of those reporting academic positions, 50% held positions in doctorate granting departments, 21% in departments granting master's as the high-

est degree, 22% in bachelor granting departments, 2% in nondegree granting departments, 3% in junior colleges and 2% in high schools.

Of all those reporting, including those for whom no statistics were used in the salary compilations, 88% accepted jobs in the United States, 6% in Canada and 6% were not employed at the time of reporting.

KEY TO TABLE

Salaries are listed in hundreds of dollars. Dashes indicate that not enough returns were received to warrant including the figures. Years listed refer to the academic year ending in the listed year. M and F are Male and Female respectively. One year experience means that the persons had experience limited to one year or less in the same or a similar position to the one reported; some persons receiving a doctorate had been employed in their present position for several years. (X + Y) means there are X men and Y women in the 1975 sample. Quartile figures are given only in cases where the number of responses is large enough to make them meaningful.

NINE-MONTH SALARIES

Year	Min.	Q <sub>1</sub>	Median	Q <sub>3</sub>	Max.
<b>TEACHING OR TEACHING AND RESEARCH* (178 + 23)</b>					
1974	85	115	121	135	200
1975	90	120	128	135	173
1974M	85	115	124	137	200
1974F	90	108	115	120	145
1975M	90	120	130	137	173
1975F	95	120	126	135	160
One year experience (146 + 19)					
1975M	90	118	125	135	167
1975F	95	122	127	140	160
<b>RESEARCH (2 + 0)</b>					
1972	60		111		155
1973	30		110		120
1974	50		80		130
1975	100		-		110
1973M	30		110		120
1973F	-		-		-
1974M	50		81		130
1974F	-		70		-
1975M	100		-		110
1975F	-		-		-
One year experience (2 + 0)					
1975M	100		-		110
1975F	-		-		-

TWELVE-MONTH SALARIES

Year	Min.	Median	Max.
<b>TEACHING OR TEACHING AND RESEARCH* (40 + 3)</b>			
1974	90	138	185
1975	87	145	204
1974M	90	146	185
1974F	106	126	145
1975M	87	145	204
1975F	145	-	185
One year experience (30 + 2)			
1975M	87	145	190
1975F	145	-	185
<b>RESEARCH (9 + 0)</b>			
1972	50	125	180
1973	90	150	176
1974	72	95	265
1975	90	119	180
1972M	50	126	180
1972F	100	-	125
1973M	90	150	176
1973F	120	-	172
1974M	72	95	265
1974F	90	-	180
1975M	90	119	180
1975F	-	-	-
One year experience (9 + 0)			
1975M	90	119	180
1975F	-	-	-

TWELVE-MONTH SALARIES

Year	Min.	Median	Max.
<b>GOVERNMENT* (17 + 3)</b>			
1974	120	197	287
1975	78	182	247
1972M	70	155	315
1972F	110	156	160
1973M	95	169	250
1973F	120	140	173
1974M	120	199	287
1974F	-	177	-
1975M	150	185	247
1975F	78	100	145
One year experience (11 + 2)			
1975M	150	154	228
1975F	78	-	100
<b>BUSINESS AND INDUSTRY* (31 + 5)</b>			
1974	140	190	251
1975	114	187	240
1972M	118	181	296
1972F	-	-	-
1973M	119	180	250
1973F	168	170	171
1974M	140	190	251
1974F	150	156	190
1975M	114	189	240
1975F	120	175	224
One year experience (21 + 3)			
1975M	114	185	210
1975F	120	150	175

\*For information prior to 1974, see page 259 of the October 1974 issue of these Notices.

# SALARIES IN NONACADEMIC ORGANIZATIONS

Notices of the American Mathematical Society  
 Volume 22, Issue 6, October 1975

The Committee on Employment and Educational Policy has attempted to make a survey of nonacademic organizations which employ mathematical scientists with a Ph.D. Questionnaires were sent to a sample of 455 employers in nonacademic and nongovernment organizations. The results are very incomplete, not only because the response was very low (about 10 percent), but also because some of the biggest employers of Ph.D. mathematicians were unable to comply with the request for information. These figures may not give a reasonable overall picture of nonacademic pay scales because of the lack of completeness of the data and the lack of information on the number of organizations which are in the population being sampled. They do represent salaries paid by cer-

tain employers to certain individuals.

The questionnaires which were returned gave, for each individual, annual salary as of July 1, 1975 and the number of years of professional experience. In the figures reported below the Ph.D.'s have been grouped according to the number of years of experience and in each category minimum, median, and maximum salaries were reported.

The first table gives the summary of results; the succeeding tables give figures for three subsets. Salaries are listed in hundreds of dollars. Quartile figures are given only for the summary; minimum, median and maximum salaries are in all tables.

SUMMARY: ALL EMPLOYERS (39 employers, 141 employees)	Years of Experience	Number of Employees	ANNUAL SALARIES				
			Minimum	Q <sub>1</sub>	Median	Q <sub>3</sub>	Maximum
	0-4	43	115	170	198	220	270
	5-8	27	155	233	250	270	315
	9-12	20	190	255	285	322	500
	13+	51	220	279	320	365	510

ELECTRONICS & AEROSPACE (8 employers, 43 employees)	Years of Experience	Number of Employees	ANNUAL SALARIES		
			Minimum	Median	Maximum
	0-4	10	170	208	220
	5-8	6	200	242	285
	9-12	4	190	230	250
	13+	23	250	320	480

  

SMALL CONSULTING FIRMS (11 employers, 43 employees)	Years of Experience	Number of Employees	ANNUAL SALARIES		
			Minimum	Median	Maximum
	0-4	12	147	198	255
	5-8	9	187	260	315
	9-12	10	260	312	500
	13+	12	220	380	510

  

OTHER EMPLOYERS (20 employers, 55 employees)	Years of Experience	Number of Employees	ANNUAL SALARIES		
			Minimum	Median	Maximum
	0-4	21	115	175	270
	5-8	12	155	248	300
	9-12	6	243	267	330
	13+	16	228	290	460

## SEX, RACE AND CITIZENSHIP OF NEW DOCTORATES, 1974 - 1975

The list on the following pages contains the names and thesis title of 1,022 recipients of doctoral degrees in the mathematical sciences from universities in the United States. The table below represents an analysis of this group, according to sex, race and citizenship. The racial categories used are those of the U. S. Department of

Labor. The information summarized here was obtained from department chairmen and in some cases from the recipients themselves.

Similar information was solicited for graduates of Canadian universities, but the returns were too sketchy to be significant.

RACIAL GROUP	MEN					WOMEN					TOTAL
	CITIZENSHIP				Total Men	CITIZENSHIP				Total Women	
	U. S.	Canada	Other	Unknown		U. S.	Canada	Other	Unknown		
Negro/Black	5		7		12	4				4	16
Spanish Surname	3		27		30	2		3		5	35
American Indian	1				1						1
Oriental	14		96	6	116	1		10	1	12	128
None of those above	576	18	89	1	684	67		5		72	756
Unknown	59		2	15	76	9		1		10	86
<b>Total Number</b>	<b>658</b>	<b>18</b>	<b>221</b>	<b>22</b>	<b>919</b>	<b>83</b>		<b>19</b>	<b>1</b>	<b>103</b>	<b>1,022</b>