

# 2018–2019 Faculty Salaries Report

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

This salary report is one part of the Annual Survey of Mathematical Sciences, a nation-wide survey administered by the AMS on behalf of the American Statistical Association (ASA), the Institute for Mathematical Statistics (IMS), the Mathematical Association of America (MAA), and the Society for Industrial and Applied Mathematics (SIAM). It provides a look at the salaries of faculty in the Mathematical Sciences in the US by rank in several different department groupings based on discipline, highest degree offered, and graduate counts. The graphs here are identified by those group names, and the group definitions are given at the end of the report.

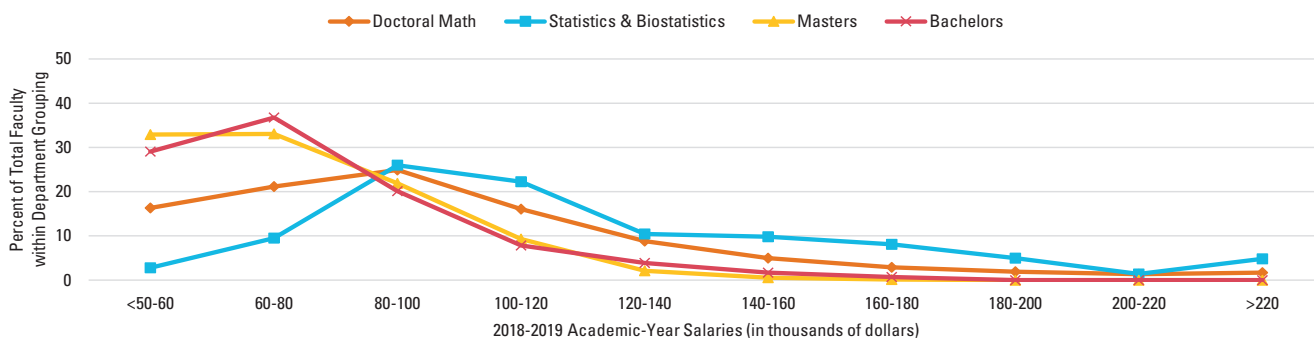
Departments were asked to report for each rank the number of tenured and tenure-track, non-tenure-track, and part-time faculty whose 2018–19 academic-year salaries fell within given salary intervals. Reporting salary data in this fashion ensures confidentiality of individual responses, though it does mean that the quartiles reported in the tables are approximations. The quartiles reported have been estimated assuming that the density over each interval is uniform.

Note: In the graph for all faculty salaries on this page, the percentage scale ranges from 0 to 50, while the scale for all other graphs is 0 to 100. Salaries for non-tenure-track, part-time faculty and pay by the course were gathered for the first time starting with the 2018–19 academic year and will be reported separately.

Faculty Salary Reports from prior years are at <https://www.ams.org/annual-survey/salaries>. Interpretation of historical trends should be made with care. For instance, one factor influencing year to year changes in the mean reported salaries may be differences in the set of responding departments within the groups. Response rates are noted on the tables.

The first graph below provides a coarse comparative view of faculty salaries among four broad groups: departments whose highest degree is a (1) PhD in mathematics (including applied mathematics departments), (2) PhD in statistics or biostatistics, (3) masters degree in mathematics, and (4) bachelors degree in mathematics. In the remainder of this report, salary distributions are broken down within finer departmental categories and by faculty rank.

**Figure 1.** Full-time Faculty Salaries by Department Grouping, Fall 2018 (Tenured, Tenure-track, and Non-tenured)



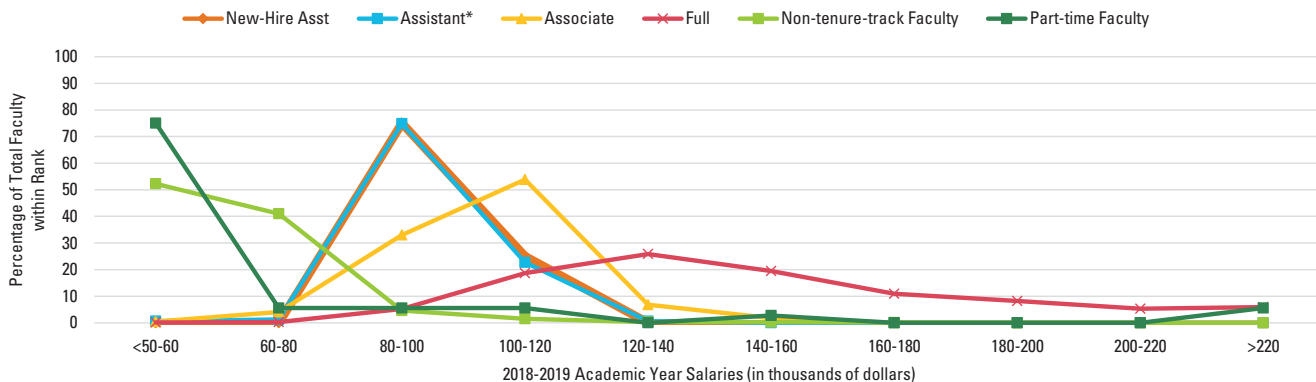
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Math Public Large Group Faculty Salaries <sup>1</sup>							
24 responses out of 26 departments (92%)							
Rank	2018-19						2017-18
	Gender	No. Reported	Q1	Median	Q3	Mean	Mean
New Asst Professors	All	40	87,500	92,500	97,500	95,340	93,358
	Men	27	87,500	92,500	97,500	95,720	93,096
	Women	13	87,500	87,500	92,500	94,560	94,257
Assistant Professor <sup>2</sup>	All	163	87,500	87,500	92,500	94,470	93,525
	Men	123	87,500	87,500	97,500	94,960	93,849
	Women	40	87,500	87,500	92,500	92,960	92,342
Associate Professor	All	221	87,500	97,500	105,000	102,910	102,487
	Men	167	87,500	97,500	97,500	102,540	102,297
	Women	54	92,500	97,500	105,000	104,030	103,144
Full Professor	All	805	115,000	125,000	155,000	149,280	150,030
	Men	714	115,000	135,000	165,000	150,130	150,617
	Women	91	105,000	125,000	145,000	142,620	144,846
Non-tenure-track faculty	All	739	-	40,000	62,500	61,160	-
	Men	505	-	42,500	62,500	61,260	-
	Women	234	-	42,500	62,500	60,930	-
Part-time Faculty	All	36	-	-	57,500	59,010	-
	Men	23	-	-	92,500	71,550	-
	Women	13	-	-	-	36,810	-

<sup>1</sup> Wherever a quartile is not reported, that value is less than the lowest left endpoint of the bin of \$55,000 for PhD-granting departments.

<sup>2</sup> Includes newly hired assistant professors.

**Figure 2. Math Public Large Group—Percentage of Faculty Salaries within each Salary Range by Category**



\* Includes newly hired assistant professors.

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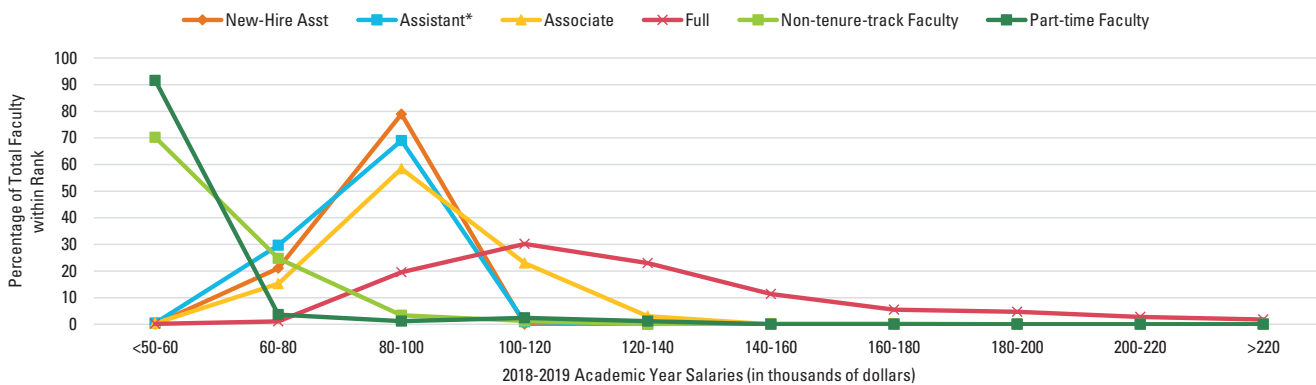
Math Public Medium Group Faculty Salaries <sup>1</sup>							
35 responses out of 40 departments (88%)							
Rank	2018-19						2017-18
	Gender	No. Reported	Q1	Median	Q3	Mean	Mean
New Asst Professors	All	38	77,500	82,500	82,500	82,780	81,591
	Men	29	77,500	82,500	82,500	83,250	82,501
	Women	9	77,500	77,500	82,500	81,280	79,143
Assistant Professor <sup>2</sup>	All	229	72,500	77,500	82,500	82,540	82,416
	Men	168	72,500	77,500	82,500	83,500	82,796
	Women	61	72,500	77,500	82,500	79,900	81,417
Associate Professor	All	296	77,500	87,500	97,500	92,380	90,222
	Men	234	77,500	87,500	92,500	92,100	89,684
	Women	62	82,500	87,500	97,500	93,450	92,280
Full Professor	All	623	97,500	105,000	135,000	126,450	124,180
	Men	556	97,500	115,000	135,000	126,860	124,737
	Women	67	92,500	105,000	125,000	123,070	119,669
Non-tenure-track faculty	All	557	-	-	57,500	54,940	-
	Men	316	-	-	57,500	54,850	-
	Women	241	-	-	57,500	55,060	-
Part-time Faculty	All	83	-	-	-	27,960	-
	Men	53	-	-	-	27,340	-
	Women	30	-	-	-	29,060	-

Full-time Faculty

<sup>1</sup> Wherever a quartile is not reported, that value is less than the lowest left endpoint of the bin of \$55,000 for PhD-granting departments.

<sup>2</sup> Includes newly hired assistant professors.

**Figure 3. Math Public Medium Group—Percentage of Faculty Salaries within each Salary Range by Category**



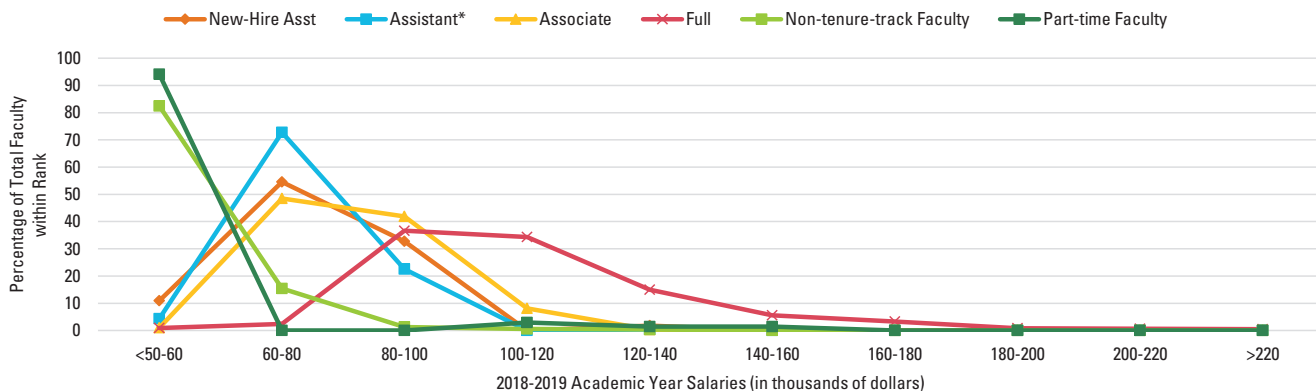
\* Includes newly hired assistant professors.

Math Public Small Group Faculty Salaries <sup>1</sup>							
55 responses out of 74 departments (74%)							
Rank	2018-19						2017-18
	Gender	No. Reported	Q1	Median	Q3	Mean	Mean
New Asst Professors	All	55	67,500	67,500	77,500	74,330	75,050
	Men	38	67,500	72,500	77,500	76,490	75,709
	Women	17	62,500	67,500	72,500	69,510	72,610
Assistant Professor <sup>2</sup>	All	275	67,500	67,500	72,500	74,170	73,518
	Men	193	67,500	67,500	72,500	74,720	73,580
	Women	82	62,500	67,500	72,500	72,870	73,380
Associate Professor	All	394	67,500	77,500	82,500	82,590	80,957
	Men	287	67,500	77,500	82,500	82,950	81,356
	Women	107	67,500	72,500	82,500	81,650	79,802
Full Professor	All	633	87,500	97,500	115,000	109,570	110,163
	Men	520	87,500	97,500	115,000	111,040	111,491
	Women	113	87,500	97,500	105,000	102,760	102,646
Non-tenure-track faculty	All	559	-	-	40,000	52,640	-
	Men	272	-	-	40,000	52,240	-
	Women	287	-	-	40,000	53,030	-
Part-time Faculty	All	68	-	-	-	25,930	-
	Men	42	-	-	-	30,460	-
	Women	26	-	-	-	18,620	-

<sup>1</sup> Wherever a quartile is not reported, that value is less than the lowest left endpoint of the bin of \$55,000 for PhD-granting departments.

<sup>2</sup> Includes newly hired assistant professors.

**Figure 4. Math Public Small Group—Percentage of Faculty Salaries within each Salary Range by Category**



\* Includes newly hired assistant professors.

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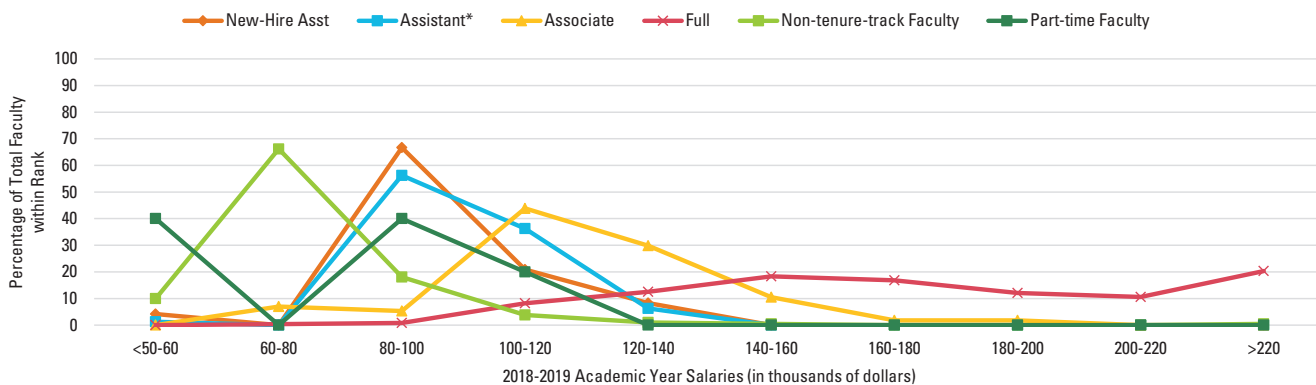
Math Private Large Group Faculty Salaries <sup>1</sup>							
14 responses out of 24 departments (58%)							
Rank	2018-19						2017-18
	Gender	No. Reported	Q1	Median	Q3	Mean	Mean
New Asst Professors	All	24	77,500	87,500	97,500	93,390	94,575
	Men	16	77,500	82,500	97,500	90,620	94,781
	Women	8	87,500	92,500	97,500	98,940	93,750
Assistant Professor <sup>2</sup>	All	80	82,500	92,500	97,500	93,770	100,837
	Men	61	82,500	92,500	97,500	92,000	101,436
	Women	19	87,500	97,500	97,500	99,460	98,881
Associate Professor	All	57	97,500	105,000	125,000	118,400	121,560
	Men	47	97,500	105,000	115,000	115,640	122,584
	Women	10	97,500	125,000	145,000	131,380	111,825
Full Professor	All	256	135,000	155,000	195,000	182,160	186,825
	Men	230	135,000	155,000	195,000	182,160	187,410
	Women	26	135,000	155,000	205,000	182,170	181,095
Non-tenure-track faculty	All	210	57,500	62,500	72,500	71,400	-
	Men	166	57,500	62,500	72,500	71,480	-
	Women	44	57,500	62,500	77,500	71,090	-
Part-time Faculty <sup>3</sup>	All	5	-	-	-	-	-
	Men	3	-	-	-	-	-
	Women	2	-	-	-	-	-

<sup>1</sup> Wherever a quartile is not reported, that value is less than the lowest left endpoint of the bin of \$55,000 for PhD-granting departments.

<sup>2</sup> Includes newly hired assistant professors.

<sup>3</sup> Too few to report.

**Figure 5. Math Private Large Group—Percentage of Faculty Salaries within each Salary Range by Category**



\* Includes newly hired assistant professors.

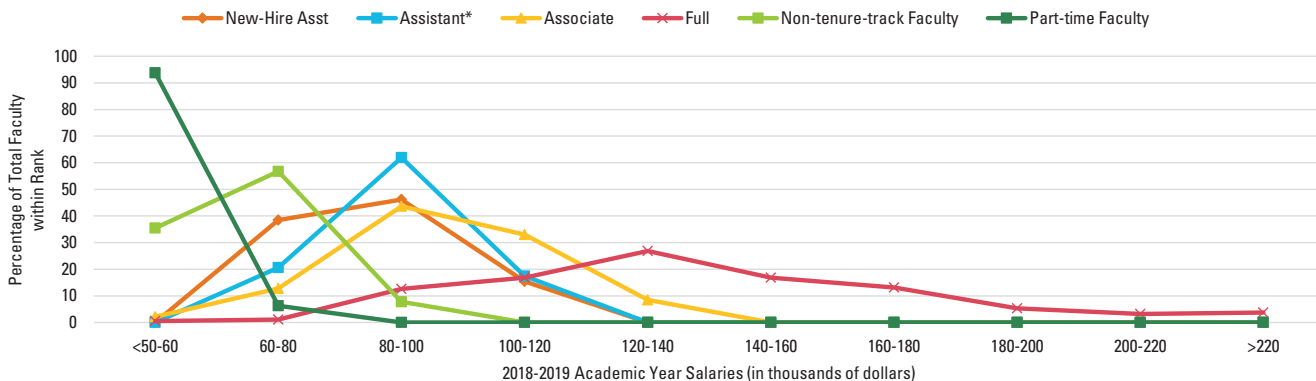
Math Private Small Group Faculty Salaries <sup>1</sup>							
17 responses out of 28 departments (61%)							
Rank	2018-19						2017-18
	Gender	No. Reported	Q1	Median	Q3	Mean	Mean
New Asst Professors	All	13	72,500	82,500	87,500	86,420	87,116
	Men	9	72,500	77,500	87,500	85,060	86,763
	Women <sup>2</sup>	4	-	-	-	-	87,621
Assistant Professor <sup>3</sup>	All	63	77,500	82,500	87,500	89,250	85,779
	Men	45	77,500	82,500	87,500	89,850	86,280
	Women	18	77,500	82,500	87,500	87,730	84,186
Associate Professor	All	94	82,500	92,500	97,500	97,690	92,447
	Men	78	82,500	92,500	97,500	97,530	92,788
	Women	16	82,500	97,500	97,500	98,440	91,161
Full Professor	All	190	105,000	125,000	155,000	141,240	137,727
	Men	173	105,000	125,000	155,000	141,800	138,517
	Women	17	105,000	125,000	145,000	135,540	130,407
Non-tenure-track faculty	All	141	40,000	57,500	62,500	63,860	-
	Men	85	40,000	62,500	62,500	64,950	-
	Women	56	40,000	57,500	62,500	62,190	-
Part-time Faculty	All	32	-	-	-	24,620	-
	Men	25	-	-	-	21,650	-
	Women	7	-	-	-	35,200	-

<sup>1</sup> Wherever a quartile is not reported, that value is less than the lowest left endpoint of the bin of \$55,000 for PhD-granting departments.

<sup>2</sup> Too few to report.

<sup>3</sup> Includes newly hired assistant professors

**Figure 6. Math Private Small Group—Percentage of Faculty Salaries within each Salary Range by Category**



\* Includes newly hired assistant professors.

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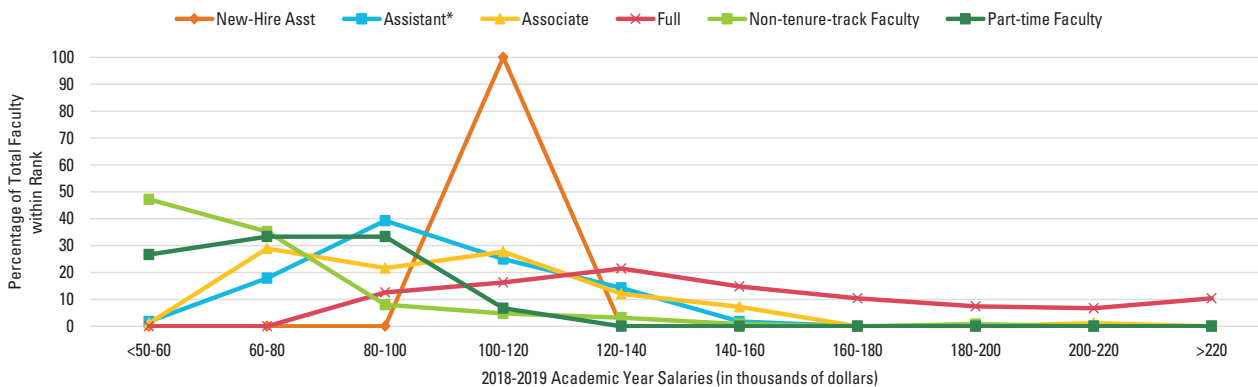
Applied Mathematics Group Faculty Salaries <sup>1</sup>							
18 responses out of 23 departments (78%)							
Rank	2018-19						2017-18
	Gender	No. Reported	Q1	Median	Q3	Mean	Mean
New Asst Professors <sup>2</sup>	All	2	-	-	-	-	75,500
	Men	1	-	-	-	-	75,500
	Women	1	-	-	-	-	-
Assistant Professor <sup>3</sup>	All	56	82,500	92,500	97,500	98,580	86,198
	Men	41	82,500	92,500	97,500	97,710	84,949
	Women	15	82,500	97,500	105,000	100,980	92,305
Associate Professor	All	83	72,500	125,000	165,000	153,080	98,925
	Men	68	72,500	92,500	105,000	99,670	100,802
	Women	15	77,500	97,500	115,000	102,490	85,220
Full Professor	All	135	105,000	125,000	165,000	153,080	147,856
	Men	120	105,000	135,000	175,000	154,030	148,153
	Women	15	105,000	125,000	165,000	145,450	145,476
Non-tenure-track faculty	All	125	-	57,500	67,500	66,720	-
	Men	76	-	57,500	67,500	70,310	-
	Women	49	-	40,000	62,500	61,150	-
Part-time Faculty	All	15	-	67,500	82,500	67,110	-
	Men	13	62,500	67,500	82,500	66,720	-
	Women <sup>2</sup>	2	-	-	-	-	-

<sup>1</sup> Wherever a quartile is not reported, that value is less than the lowest left endpoint of the bin of \$55,000 for PhD-granting departments.

<sup>2</sup> Too few to report.

<sup>3</sup> Includes newly hired assistant professors.

**Figure 7. Applied Math Group—Percentage of Faculty Salaries within each Salary Range by Category**



\* Includes newly hired assistant professors.

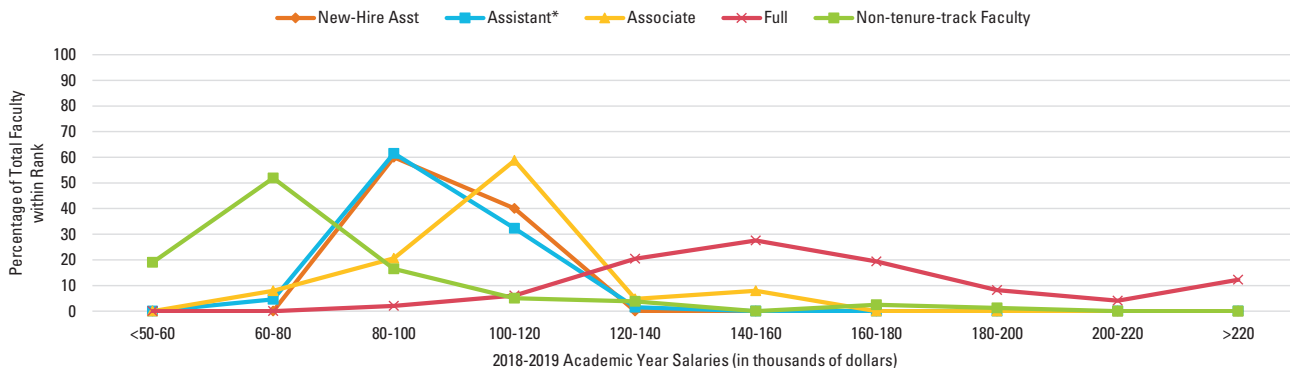
Statistics Group Faculty Salaries <sup>1</sup>							
15 responses out of 59 departments (25%)							
Rank	2018-19						2017-18
	Gender	No. Reported	Q1	Median	Q3	Mean	Mean
New Asst Professors	All	10	92,500	92,500	97,500	98,500	93,358
	Men	6	92,500	92,500	97,500	98,330	93,096
	Women <sup>2</sup>	4	-	-	-	-	94,257
Assistant Professor <sup>3</sup>	All	65	87,500	92,500	97,500	97,310	93,525
	Men	46	87,500	92,500	97,500	97,620	93,849
	Women	19	87,500	92,500	97,500	96,570	92,342
Associate Professor	All	63	92,500	97,500	105,000	105,860	102,487
	Men	41	97,500	97,500	105,000	107,820	102,297
	Women	22	92,500	97,500	97,500	102,210	103,144
Full Professor	All	98	125,000	145,000	165,000	164,340	150,030
	Men	78	135,000	145,000	165,000	164,130	150,617
	Women	20	115,000	145,000	205,000	165,150	144,846
Non-tenure-track Faculty	All	79	57,500	67,500	77,500	77,820	-
	Men	42	62,500	67,500	77,500	79,170	-
	Women	37	40,000	67,500	77,500	76,280	-
Part-time Faculty	All	0	-	-	-	-	-
	Men	0	-	-	-	-	-
	Women	0	-	-	-	-	-

<sup>1</sup> Wherever a quartile is not reported, that value is less than the lowest left endpoint of the bin of \$55,000 for PhD-granting departments.

<sup>2</sup> Too few to report.

<sup>3</sup> Includes newly hired assistant professors.

**Figure 8. Statistics Group—Percentage of Faculty Salaries within each Salary Range by Category**



\* Includes newly hired assistant professors.



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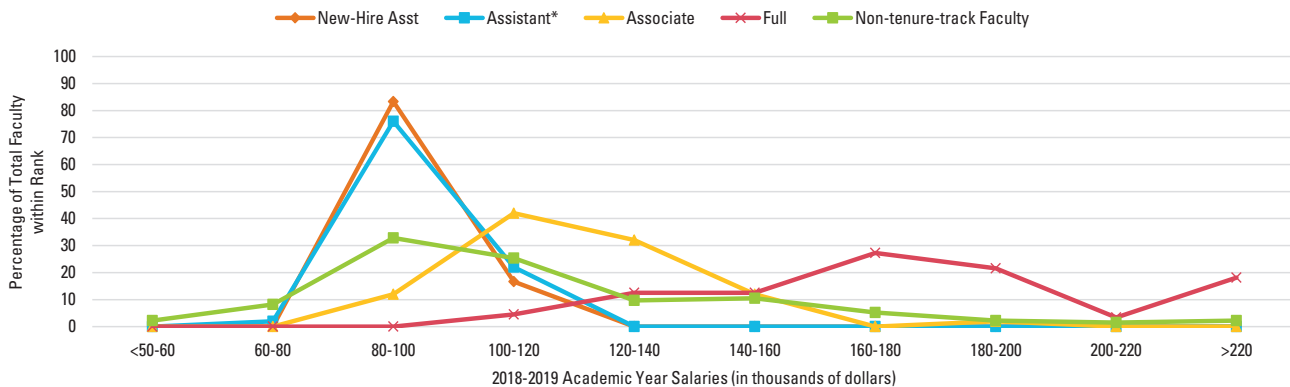
Biostatistics Group Faculty Salaries <sup>1</sup>							
17 responses out of 49 departments (35%)							
Rank	2018-19						2017-18
	Gender	No. Reported	Q1	Median	Q3	Mean	Mean
New Asst Professors	All	6	77,500	87,500	87,500	90,060	103,000
	Men <sup>2</sup>	4	-	-	-	-	102,500
	Women <sup>2</sup>	2	-	-	-	-	103,300
Assistant Professor <sup>3</sup>	All	50	82,500	82,500	92,500	92,060	104,500
	Men	33	82,500	82,500	87,500	90,480	104,500
	Women	17	82,500	87,500	97,500	95,120	119,000
Associate Professor	All	50	97,500	105,000	115,000	118,540	143,200
	Men	37	97,500	105,000	115,000	118,330	142,800
	Women	13	97,500	105,000	115,000	119,130	143,600
Full Professor	All	88	145,000	165,000	185,000	179,920	205,800
	Men	69	145,000	165,000	185,000	180,400	208,200
	Women	19	145,000	165,000	185,000	178,150	193,800
Non-tenure-track faculty	All	134	82,500	97,500	125,000	141,040	-
	Men	52	82,500	97,500	125,000	180,650	-
	Women	82	82,500	97,500	115,000	115,920	-
Part-time Faculty	All	0	-	-	-	-	-
	Men	0	-	-	-	-	-
	Women	0	-	-	-	-	-

<sup>1</sup> Wherever a quartile is not reported, that value is less than the lowest left endpoint of the bin of \$55,000 for PhD-granting departments.

<sup>2</sup> Too few to report.

<sup>3</sup> Includes newly hired assistant professors.

**Figure 9. Biostatistics Group—Percentage of Faculty Salaries within each Salary Range by Category**



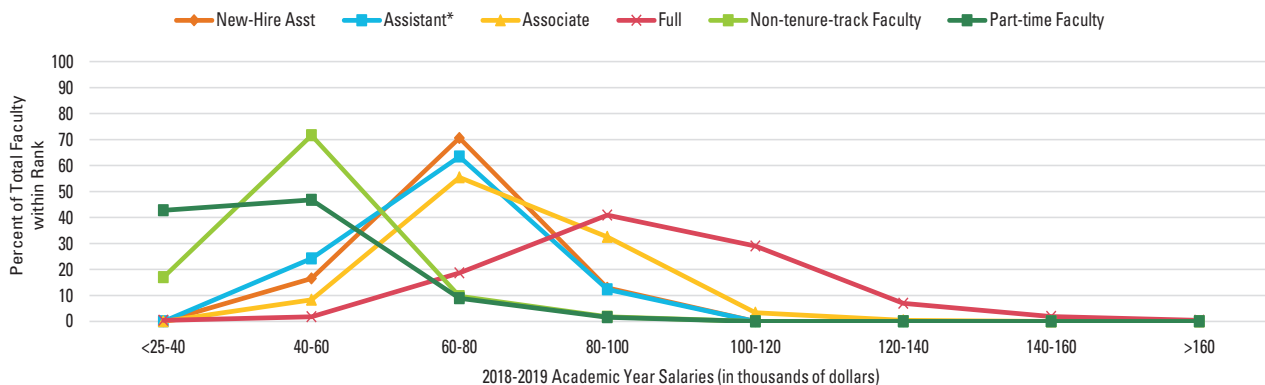
\* Includes newly hired assistant professors.

Masters Group Faculty Salaries <sup>1</sup>							
90 responses out of 163 departments (55%)							
Rank	2018-19						2017-18
	Gender	No. Reported	Q1	Median	Q3	Mean	Mean
New Asst Professors	All	85	57,500	67,500	72,500	68,990	68,698
	Men	58	57,500	67,500	72,500	69,450	69,026
	Women	27	57,500	67,500	67,500	67,990	68,002
Assistant Professor <sup>2</sup>	All	429	57,500	62,500	72,500	67,640	65,693
	Men	277	57,500	62,500	72,500	67,570	65,935
	Women	152	57,500	62,500	72,500	67,780	65,245
Associate Professor	All	507	62,500	72,500	77,500	75,850	74,909
	Men	342	62,500	72,500	77,500	76,210	74,868
	Women	165	62,500	67,500	77,500	75,130	75,007
Full Professor	All	738	77,500	87,500	97,500	95,410	96,123
	Men	561	77,500	87,500	97,500	150,130	97,010
	Women	177	72,500	87,500	97,500	92,930	92,804
Non-tenure-track faculty	All	725	37,500	42,500	47,500	47,380	-
	Men	348	37,500	42,500	47,500	47,790	-
	Women	377	37,500	42,500	47,500	47,000	-
Part-time Faculty	All	248	17,500	42,500	47,500	39,230	-
	Men	135	17,500	42,500	47,500	41,570	-
	Women	113	-	32,500	47,500	36,430	-

<sup>1</sup> Wherever a quartile is not reported, that value is less than the lowest left endpoint of the bin of \$25,000 for Masters-granting departments.

<sup>2</sup> Includes newly hired assistant professors.

**Figure 10. Masters Group—Percentage of Faculty Salaries within each Salary Range by Category**



\* Includes newly hired assistant professors.

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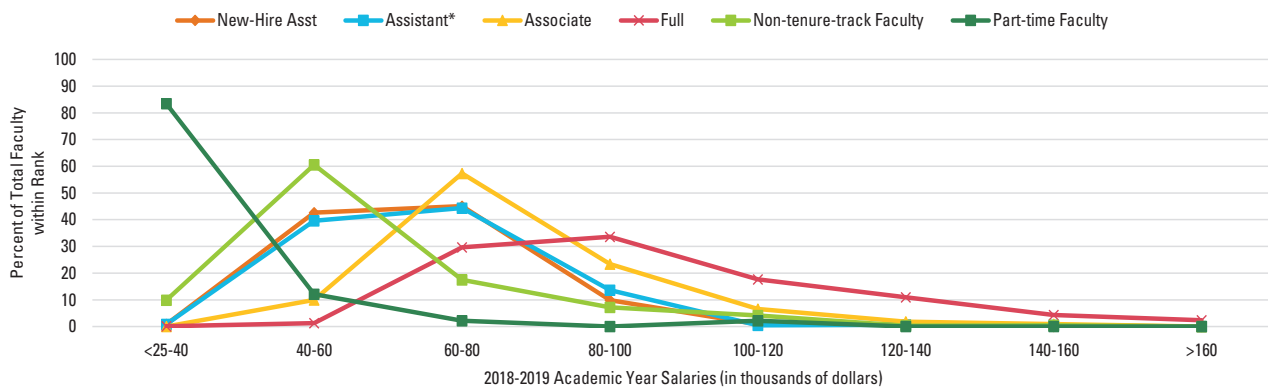
Bachelors Group Faculty Salaries <sup>1</sup>							
312 responses out of 1018 departments (31%)							
Rank	2018-19						2017-18
	Gender	No. Reported	Q1	Median	Q3	Mean	Mean
New Asst Professors	All	122	47,500	57,500	67,500	63,330	61,809
	Men	84	47,500	57,500	62,500	62,110	62,648
	Women	38	52,500	57,500	72,500	66,040	60,560
Assistant Professor <sup>2</sup>	All	622	52,500	57,500	67,500	65,170	62,679
	Men	394	52,500	57,500	67,500	64,540	63,236
	Women	228	52,500	57,500	67,500	66,270	61,860
Associate Professor	All	764	62,500	67,500	82,500	76,850	71,994
	Men	491	62,500	67,500	82,500	77,110	72,638
	Women	273	62,500	67,500	82,500	76,380	70,675
Full Professor	All	940	72,500	87,500	105,000	96,080	96,080
	Men	704	72,500	87,500	105,000	96,420	92,682
	Women	236	72,500	82,500	105,000	95,080	90,393
Non-tenure-track faculty	All	768	37,500	47,500	57,500	56,580	-
	Men	403	42,500	47,500	67,500	61,410	-
	Women	365	37,500	42,500	52,500	51,250	-
Part-time Faculty	All	181	-	-	27,500	22,900	-
	Men	96	-	-	27,500	19,500	-
	Women	85	-	-	32,500	26,730	-

Full-time Faculty

<sup>1</sup> Wherever a quartile is not reported, that value is less than the lowest left endpoint of the bin of \$25,000 for Bachelors-granting departments.

<sup>2</sup> Includes newly hired assistant professors.

**Figure 11. Bachelors Group—Percentage of Faculty Salaries within each Salary Range by Category**



\* Includes newly hired assistant professors.

## Departmental Groupings

In this report, *Mathematical and Statistical 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; *Stat/Biostat (Stats)* refers to departments that incorporate (again, with exceptions) “statistics” or “biostatistics” in the name but do not use “mathematics.”

Listings of the actual departments that comprise these groups are available on the AMS website at <https://www.ams.org/annual-survey/groupings>.

A department is in Group...	...when its subject area, highest degree offered, and PhD production rate* $p$
Math Public Large	Math PhD, $7.0 \leq p$
Math Public Medium	Math PhD, $3.9 \leq p < 7.0$
Math Public Small	Math PhD, $p < 3.9$
Math Private Large	Math PhD, $3.9 \leq p$
Math Private Small	Math PhD, $p < 3.9$
Applied Math	Applied mathematics, PhD
Statistics	Statistics, PhD
Biostatistics	Biostatistics, PhD
Masters	Math, master's
Bachelors	Math, bachelor's
Doctoral Math	Math Public, Math Private, & Applied Math
Stat/Biostat or Stats	Statistics & Biostatistics
Math	All groups except Statistics & Biostatistics

\*The doctorate-granting departments of mathematics PhD production rates are based on the size of the PhD program as reflected in the number of PhDs awarded (as reported by departments to the Annual Survey) during the ten years from July 1, 2000, through June 30, 2010. Since there are some departments that did not report their PhDs for every Annual Survey during this time, the average of their reported annual number of PhDs awarded was used to compare the departments.

## Obtain a Special Faculty Salaries Analysis

Each year the AMS provides a limited number of special faculty salary analyses to departments requesting them. These reports are based on data gathered through the Survey and provide more nuanced comparisons with similar institutions than is possible with the Faculty Salaries Report. In order to receive a special analysis, your department must have responded to the most recent Faculty Survey.

Send a list of your peer institutions (a minimum of 12 institutions is required) to [ams-survey@ams.org](mailto:ams-survey@ams.org) along with the date by which the analysis is needed. (If not enough of your peer group have responded to the salary survey, you will be asked to provide additional institutions.) A minimum of two weeks is needed to complete a special analysis.

The analysis produced includes a listing of your peer group institutions along with their salary survey response status; a summary table including the rank (assistant, associate, and full professor); the number reported in each rank; the 1st quartile, median, 3rd quartile, and mean salaries for each along with bar graphs.

## 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 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.