

TABLE 28-2

U.S. residing employed doctoral scientists and engineers, by selected demographic and employment-related characteristics and primary work activity: 2019

(Number and SE)

Characteristic	All employed		Research and development										Total		Computer applications		Management, sales, or administration ^a		Professional services		Teaching		Other ^b	
			Any R&D		Applied research		Basic research		Design		Development													
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE		
Doctorate recipient	857,200	1,975	351,000	1,975	168,650	1,775	92,700	1,700	24,050	975	65,600	1,400	506,250	2,300	44,450	950	165,400	2,025	97,050	1,625	161,000	1,700	38,300	975
Sex																								
Male	546,050	1,750	242,850	1,725	110,700	1,425	63,300	1,450	19,350	850	49,500	1,275	303,150	2,100	37,650	875	104,100	1,625	47,200	1,300	93,000	1,575	21,250	800
Female	311,200	1,200	108,100	1,125	57,950	925	29,400	675	4,700	375	16,050	575	203,050	1,350	6,800	400	61,300	1,075	49,850	925	68,050	1,075	17,050	550
Ethnicity																								
Hispanic or Latino ^c	37,250	550	14,200	400	7,250	300	3,800	225	900	125	2,250	150	23,050	500	1,100	125	6,900	325	4,900	250	8,200	350	1,900	150
Not Hispanic or Latino ^d																								
American Indian or Alaska Native	1,300	125	400	75	200	50	150	50	50	25	50	25	900	100	D	D	250	50	250	75	300	75	50	50
Asian	213,350	1,325	112,800	1,225	46,400	1,075	28,550	950	9,100	575	28,750	950	100,550	1,300	21,600	750	33,650	875	14,650	725	22,500	825	8,150	425
Black or African American	31,100	400	8,850	300	5,300	275	1,800	175	400	75	1,400	125	22,200	425	500	75	7,200	325	3,950	300	8,850	325	1,700	150
White	562,350	1,750	210,100	1,650	107,300	1,425	57,100	1,100	13,350	650	32,350	975	352,250	1,875	20,850	625	114,850	1,700	72,000	1,275	118,850	1,450	25,800	825
Other race ^e	11,950	400	4,600	275	2,200	175	1,400	150	200	75	800	150	7,300	325	400	100	2,600	225	1,300	175	2,300	175	750	125
Age																								
Under 35	99,050	1,050	57,250	925	26,500	750	15,900	525	3,750	300	11,150	550	41,800	850	8,250	400	10,550	475	7,500	400	11,400	475	4,150	300
35–39	128,800	1,375	63,900	1,175	32,000	800	15,950	600	4,050	350	11,850	550	64,900	1,050	8,350	450	20,450	625	10,850	575	20,600	650	4,600	300
40–44	117,500	1,325	51,300	1,175	25,250	800	13,550	575	3,050	300	9,400	600	66,200	1,125	7,100	550	21,750	675	11,000	500	21,450	700	4,850	350
45–49	108,400	1,450	40,550	925	18,400	650	11,600	575	2,400	250	8,100	425	67,850	1,250	4,900	350	24,450	800	11,500	650	22,300	775	4,700	350
50–54	100,900	1,375	36,650	1,000	16,900	750	9,400	550	2,600	300	7,750	425	64,250	1,125	5,000	450	24,750	775	11,450	575	19,050	700	3,950	300
55–59	101,950	1,400	35,700	875	17,200	750	8,600	475	3,150	375	6,750	400	66,250	1,275	4,500	350	24,750	825	10,950	625	21,200	675	4,800	325
60–64	88,300	1,400	31,550	850	15,700	500	7,750	500	2,650	300	5,450	400	56,750	1,175	3,300	300	18,150	700	11,250	500	19,500	650	4,550	400
65–75	112,350	1,625	34,150	900	16,700	625	9,950	550	2,350	300	5,150	400	78,250	1,475	2,950	275	20,600	750	22,500	850	25,500	775	6,700	450
Years since doctorate																								
≤ 5	142,500	625	75,600	975	37,250	900	19,650	575	4,900	400	13,800	600	66,850	900	10,850	475	15,650	500	12,550	500	22,250	650	5,600	375
6–10	154,750	1,025	71,500	1,075	35,550	800	17,450	625	4,350	400	14,150	600	83,250	1,100	9,200	475	25,600	725	13,100	475	29,000	775	6,350	375
11–15	127,000	1,150	51,100	1,025	24,700	750	13,550	650	3,500	325	9,300	500	75,900	1,150	6,450	450	26,200	750	12,900	625	25,100	750	5,250	350
16–20	108,700	825	39,750	900	18,800	675	10,800	550	2,550	275	7,650	450	68,950	1,125	5,100	375	24,750	725	11,950	625	21,700	625	5,450	350
21–25	104,250	825	35,750	925	15,650	525	9,200	625	3,100	325	7,750	475	68,500	1,000	5,550	425	25,700	725	12,700	650	20,050	675	4,500	350
> 25	220,000	1,575	77,300	1,225	36,700	950	22,050	800	5,650	525	12,900	525	142,750	1,575	7,250	400	47,500	1,225	33,850	975	42,950	825	11,150	575
Citizenship																								
U.S. citizen	732,750	2,000	277,600	2,025	138,450	1,525	72,400	1,375	18,500	825	48,250	1,275	455,150	2,050	31,050	750	152,800	1,950	91,100	1,550	145,750	1,650	34,500	925
Native-born	555,150	1,575	199,050	1,625	105,050	1,300	52,700	1,150	11,550	575	29,650	925	356,150	1,750	17,700	525	116,700	1,675	76,050	1,300	119,350	1,550	26,350	825
Naturalized	177,600	1,675	78,600	1,250	33,400	950	19,700	875	6,950	525	18,600	800	99,000	1,350	13,350	575	36,100	975	15,000	750	26,400	875	8,150	475
Non-U.S. citizen	124,450	1,600	73,350	1,250	30,200	900	20,300	750	5,550	450	17,350	700	51,100	1,025	13,400	650	12,650	575	6,000	425	15,300	625	3,800	375
Permanent resident	87,200	1,475	48,400	1,050	19,350	750	12,900	625	3,750	375	12,450	575	38,750	1,025	9,100	600	10,600	550	4,600	350	11,650	600	2,800	325

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			Any R&D		Applied research		Basic research		Design		Development													
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE		
Temporary resident	37,300	900	24,950	775	10,850	550	7,400	450	1,800	250	4,900	375	12,300	550	4,300	325	2,000	250	1,400	225	3,650	325	1,000	175
Sector of employment																								
4-year educational institution ^f	344,350	2,325	140,200	1,550	61,700	1,250	74,100	1,475	1,400	200	3,050	275	204,150	1,725	3,450	275	45,900	850	12,600	650	132,800	1,575	9,350	500
Other educational institution ^g	30,900	900	1,750	225	950	175	400	125	100	50	250	75	29,150	875	200	50	3,450	300	2,700	250	21,550	775	1,300	175
Private, for profit ^h	306,300	2,500	139,500	1,625	63,450	1,200	4,650	425	18,050	875	53,350	1,225	166,750	2,075	34,250	925	76,300	1,475	38,150	1,125	2,750	250	15,350	525
Private, nonprofit	55,900	1,125	25,300	700	15,150	575	6,350	350	1,300	200	2,500	250	30,600	900	2,050	300	13,200	600	11,200	600	1,350	200	2,850	250
Federal government	50,150	1,025	24,300	750	16,600	600	4,750	325	850	150	2,100	225	25,850	725	1,700	225	13,250	475	6,150	425	350	75	4,350	325
State or local government	18,850	750	6,650	400	4,350	325	1,100	200	700	175	550	125	12,200	650	1,100	200	5,600	375	3,600	325	350	125	1,600	200
Self-employed ⁱ	40,750	1,100	8,750	500	4,200	300	800	150	1,150	200	2,600	275	32,000	975	1,000	150	5,400	400	21,250	750	1,750	250	2,600	275
Other sector ^j	10,050	550	4,500	325	2,200	225	600	150	500	125	1,200	200	5,550	400	650	150	2,300	250	1,450	250	150	75	1,000	225
Employer location																								
New England	77,100	1,375	34,250	975	16,150	575	10,200	525	1,950	275	5,950	425	42,850	1,075	3,600	325	14,500	675	9,100	525	12,800	525	2,900	275
Middle Atlantic	117,450	1,875	44,500	1,125	21,600	775	13,150	675	2,050	250	7,750	450	72,900	1,450	5,850	400	21,950	850	15,650	675	24,750	775	4,750	375
East North Central	100,900	1,550	40,050	975	19,250	725	11,800	550	2,350	250	6,700	450	60,850	1,050	4,350	350	19,150	700	10,400	550	22,750	750	4,150	325
West North Central	48,750	1,175	18,950	725	9,150	475	5,800	500	1,000	225	3,000	300	29,800	850	1,400	200	8,750	525	5,400	400	11,800	525	2,450	275
South Atlantic	163,650	1,900	66,450	1,300	36,050	900	17,150	700	3,900	400	9,300	550	97,200	1,325	6,500	425	34,250	875	17,800	650	30,000	750	8,650	475
East South Central	30,550	1,000	11,400	600	5,750	350	3,950	350	500	100	1,150	200	19,150	750	850	150	5,100	400	2,900	275	9,200	450	1,050	150
West South Central	68,800	1,325	27,100	825	12,000	475	7,650	500	2,400	275	5,050	425	41,700	1,075	2,750	300	13,400	625	8,300	450	14,250	575	3,000	300
Mountain	58,200	1,275	25,450	800	12,550	525	6,200	375	2,300	300	4,400	375	32,750	950	2,150	250	10,700	525	7,050	500	10,350	475	2,500	250
Pacific	185,950	2,075	81,100	1,400	35,250	825	16,400	650	7,600	500	21,850	925	104,850	1,525	16,750	675	36,450	950	19,750	800	23,350	700	8,550	500
U.S. territories and other areas	5,850	425	1,700	200	900	175	350	75	D	D	400	125	4,150	350	200	75	1,150	150	700	175	1,800	225	300	100

D = suppressed to avoid disclosure of confidential information.

SE = standard error.

^a Administration includes accounting, finance, contracts, and human resources.^b Includes production, operations, maintenance, and other activities not broken out separately.^c Hispanic or Latino may be of any race.^d American Indian or Alaska Native, Asian, Black or African American, and White are single race.^e Other race includes Native Hawaiian or Other Pacific Islander and persons reporting more than one race who are not of Hispanic or Latino ethnicity.

^f Includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university-affiliated research institutes.

^g Includes 2-year colleges, community colleges, or technical institutes, and other precollege institutions.

^h Includes those self-employed in an incorporated business.

ⁱ Self-employed or business owner in a nonincorporated business.

^j Includes employers not broken out separately.

Note(s):

Numbers are rounded to the nearest 50. Standard errors are rounded up to the nearest 25. Detail may exceed total due to multiple responses. Primary and secondary work activities were self-defined by the respondent in response to the question: "On which two activities...did you work the most hours during a typical week on this job?" Residence location is based on reported living location on 1 February 2019.

Source(s):

National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2019.