TABLE 28-1

U.S. residing employed doctoral scientists and engineers, by selected demographic and employment-related characteristics and primary or secondary work activity: 2021

(Number and SE)

Characteristic	All employed		Research and development								Computer applications		Design		Management, sales, or administration[a]		Professional services		Teaching		Other[b]	
			Any R&D		Basic research		Applied research		Experimental 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	872,100	2,425	523,500	2,725	184,350	2,075	307,900	2,750	135,750	1,925	92,500	1,525	68,450	1,425	369,000	2,700	124,600	1,575	241,550	2,375	62,100	1,350
Sex																						
Male	543,550	2,350	347,350	2,500	123,700	1,750	198,900	2,400	98,100	1,650	74,650	1,425	52,350	1,300	216,150	2,200	57,850	1,300	140,600	1,850	35,900	1,075
Female	328,500	1,250	176,150	1,575	60,650	1,175	109,000	1,425	37,650	775	17,800	650	16,100	600	152,900	1,425	66,700	1,175	100,950	1,300	26,250	825
Ethnicity																						
Hispanic or Latino[c]	40,100	475	24,500	525	9,600	375	14,650	475	5,200	300	3,150	200	2,500	175	16,900	450	5,850	275	12,650	400	3,050	250
Not Hispanic or Latino[d]																						
American Indian or Alaska Native	1,400	125	800	100	400	75	400	75	200	75	50	25	50	25	550	75	300	75	550	100	50	25
Asian	219,800	1,600	151,200	1,525	50,100	1,250	86,600	1,500	53,550	1,175	37,350	1,025	25,600	1,050	76,300	1,400	18,500	825	40,500	1,050	14,100	775
Black or African American	31,800	475	16,900	450	5,800	325	10,450	400	3,500	200	1,400	125	1,900	200	13,500	375	5,600	350	11,500	375	2,550	225
White	562,950	2,075	320,850	2,400	114,700	1,650	190,400	2,200	70,900	1,475	49,250	1,000	37,050	975	254,450	1,975	91,750	1,300	172,600	2,025	40,950	1,200
Other race[e]	16,000	575	9,200	475	3,700	300	5,400	400	2,400	250	1,300	200	1,350	175	7,300	450	2,550	200	3,850	275	1,400	225
Age																						
Under 35	99,200	925	73,000	925	27,150	800	45,900	825	20,650	700	19,650	600	10,300	550	29,100	750	9,350	475	17,300	575	6,900	375
35–39	130,150	1,225	88,300	1,325	30,600	850	54,250	1,050	23,050	775	19,050	700	12,500	550	51,300	1,150	13,700	600	30,850	825	8,200	425
40–44	127,550	1,400	80,400	1,250	28,400	950	46,550	1,150	20,350	725	13,550	625	10,400	500	56,300	1,225	15,600	675	35,800	1,025	8,200	500
45–49	111,200	1,250	65,800	1,175	23,400	700	37,100	875	16,750	775	10,950	575	7,500	475	51,400	1,025	14,800	625	32,950	775	8,800	550
50–54	104,550	1,225	58,250	1,150	19,200	625	32,700	1,075	16,600	775	7,800	450	7,500	450	51,600	1,000	14,250	650	30,900	900	7,700	500
55–59	98,950	1,375	53,200	1,100	16,950	625	30,750	875	14,400	675	8,650	525	7,450	500	46,850	950	14,500	725	28,750	850	7,700	525
60–64	86,450	1,375	46,500	1,050	16,250	750	26,650	825	11,450	525	6,400	425	7,000	425	38,800	1,050	13,750	675	27,900	900	6,000	475
65–75	114,100	1,575	58,050	1,325	22,350	850	34,000	1,075	12,450	625	6,500	475	5,850	475	43,600	1,150	28,600	950	37,150	1,100	8,550	625
Years since doctorate																						
≤ 5	141,750	600	100,650	950	37,500	850	64,150	1,025	25,900	725	25,300	725	14,150	600	42,350	775	15,200	575	30,050	725	10,000	450
6–10	159,000	975	103,100	1,250	33,400	1,000	62,950	1,125	27,950	800	20,900	725	14,400	575	62,850	1,000	18,600	700	43,650	925	10,300	475
11–15	137,450	875	82,250	1,075	28,850	875	46,750	950	21,400	775	13,950	625	10,900	600	62,650	1,125	17,250	600	39,950	850	9,900	550
16–20	108,850	825	62,750	975	21,000	650	36,200	900	16,300	675	7,600	425	7,250	475	53,100	1,050	15,500	700	32,800	950	8,500	525
21–25	104,600	950	57,000	875	18,700	700	32,600	850	16,200	675	9,150	550	7,000	450	51,100	1,100	15,950	675	30,450	900	6,850	475
> 25	220,400	1,675	117,750	1,625	44,900	1,125	65,250	1,375	28,000	850	15,600	700	14,800	675	97,050	1,450	42,050	1,125	64,650	1,400	16,600	800
Citizenship																						
U.S. citizen	746,850	2,200	429,950	2,525	149,600	1,800	252,900	2,425	106,000	1,775	66,050	1,200	52,750	1,225	336,300	2,350	118,050	1,550	216,550	2,200	54,450	1,325
Native-born	554,050	1,850	307,300	2,200	109,900	1,475	183,550	2,100	66,600	1,300	42,500	900	34,300	925	256,500	1,900	97,600	1,375	170,000	1,900	42,100	1,125
Naturalized	192,800	1,675	122,650	1,500	39,700	1,075	69,350	1,350	39,450	1,075	23,550	825	18,450	850	79,800	1,375	20,450	850	46,550	1,100	12,350	625
Non-U.S. citizen	125,250	1,425	93,550	1,400	34,750	1,125	54,950	1,150	29,700	825	26,450	925	15,700	650	32,700	975	6,550	450	25,000	900	7,700	500

TABLE 28-1

U.S. residing employed doctoral scientists and engineers, by selected demographic and employment-related characteristics and primary or secondary work activity: 2021

(Number and SE)

Characteristic	All employed		Research and development								Computer applications		Design		Management, sales, or administration[a]		Professional services		Teaching		Other[b]	
			Any R&D		Basic research		Applied research		Experimental development													
	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE	Number	SE
Permanent resident	84,250	1,300	59,650	1,125	20,800	875	34,400	925	20,100	675	16,300	725	9,900	550	25,700	925	4,900	400	19,000	800	5,350	450
Temporary resident	40,950	825	33,900	825	13,950	625	20,550	675	9,600	525	10,100	625	5,750	400	7,050	450	1,650	200	6,000	450	2,350	275
Sector of employment																						
4-year educational institution[f]	340,950	2,450	233,350	1,900	133,900	1,950	120,100	1,625	13,150	675	14,400	625	6,700	425	112,500	1,575	20,700	775	198,750	2,225	16,750	725
Other educational institution[g]	27,800	825	5,500	450	2,300	300	2,550	325	1,050	175	900	175	700	150	9,250	475	3,350	300	20,950	700	2,600	225
Private, for profit[h]	320,850	2,625	187,750	2,100	18,150	725	115,150	1,725	101,400	1,650	61,700	1,250	47,700	1,250	157,550	2,100	47,800	1,250	8,400	525	24,750	800
Private, nonprofit	60,200	1,300	35,550	850	13,100	525	24,950	800	5,850	350	5,600	400	4,350	325	30,400	1,000	14,400	625	5,250	450	4,800	425
Federal government	52,700	1,250	32,600	975	10,950	625	24,900	875	5,600	350	4,450	325	3,650	325	28,650	875	8,050	500	2,300	300	6,150	400
State or local government	19,650	750	10,250	500	2,700	250	8,000	450	2,050	275	2,100	225	1,700	250	10,800	500	4,450	450	550	125	2,400	275
Self-employed[i]	42,650	1,075	14,000	625	2,200	275	9,300	500	4,750	425	2,400	325	2,650	325	16,800	725	24,800	825	4,950	425	4,050	425
Other sector[j]	7,300	425	4,550	350	1,050	175	3,000	275	1,850	250	900	175	1,000	175	3,100	300	1,050	150	400	100	700	150
Employer location																						
New England	81,350	1,750	51,700	1,350	17,800	700	30,500	975	13,650	675	8,900	525	5,800	425	35,750	1,050	12,100	700	19,800	725	4,800	375
Middle Atlantic	117,150	1,750	69,550	1,375	27,300	975	39,950	1,200	15,750	700	11,300	575	7,200	525	49,250	1,125	19,050	900	35,800	925	7,050	575
East North Central	101,700	1,550	61,000	1,325	23,800	850	33,950	975	15,100	700	8,100	525	6,850	475	41,750	1,100	14,300	625	35,050	1,050	6,550	450
West North Central	48,800	1,175	29,400	800	11,800	600	16,650	650	6,400	425	3,500	375	2,950	300	20,550	700	7,200	500	17,300	675	3,300	325
South Atlantic	167,250	1,950	99,000	1,650	34,400	1,075	63,150	1,250	20,700	725	14,250	650	11,300	600	74,450	1,350	24,800	850	45,150	1,200	13,900	625
East South Central	30,000	900	18,050	650	7,750	550	10,700	525	3,250	325	1,900	225	1,500	200	11,150	575	4,250	350	12,150	550	2,100	200
West South Central	66,900	1,325	38,400	1,050	14,750	625	21,700	825	9,400	625	6,200	425	5,300	475	26,900	725	9,150	550	21,800	800	4,900	450
Mountain	59,300	1,150	35,650	975	12,350	625	22,100	800	8,700	525	6,100	450	4,750	375	24,050	750	8,250	500	17,450	725	4,550	400
Pacific	193,000	2,200	116,750	1,700	32,650	900	67,150	1,350	41,900	1,100	31,800	1,025	22,400	875	82,550	1,450	24,800	950	34,650	1,025	14,400	750
U.S. territories and other areas	6,650	425	3,950	350	1,750	250	2,050	275	900	200	450	125	400	125	2,650	275	700	125	2,400	275	550	175

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 2021.

Source(s):
National Center for Science and Engineering Statistics, Survey of Doctorate Recipients, 2021.