

TABLE 65

Statistical profile of postgraduation plans of doctorate recipients in engineering fields, by sex and field of study: 2018

(Number and percent)

Characteristic	All engineering fields	Aerospace, aeronautical, and astronautical engineering	Bioengineering and biomedical engineering	Chemical engineering	Civil engineering	Electrical, electronics, and communications engineering	Industrial and manufacturing engineering	Materials science engineering	Mechanical engineering	Other engineering
All doctorate recipients (number) ^a	10,183	383	1,134	981	677	1,951	272	995	1,504	2,286
Postgraduation status (number) ^b										
Definite postgraduation study	2,088	72	355	202	157	285	30	235	314	438
Definite employment	4,021	173	279	349	239	1,004	136	326	548	967
Seeking employment or study	3,015	91	378	333	191	470	79	343	474	656
Other ^c	205	6	62	16	13	26	1	9	26	46
Definite postgraduation study (%) ^d										
Postdoc fellowship or research associateship	95.4	100.0	95.8	97.5	91.7	91.9	100.0	97.4	97.1	94.1
Other or unknown ^e	4.6	0.0	4.2	2.5	8.3	8.1	0.0	2.6	2.9	5.9
Definite employment (%) ^f										
Academe	16.0	13.3	19.4	7.7	27.6	10.5	35.3	9.2	21.0	18.1
Government	8.0	26.0	3.9	3.4	D	5.4	7.4	D	7.3	10.5
Industry or business ^g	70.7	52.6	70.6	84.8	56.9	79.0	50.7	79.4	65.7	66.3
Nonprofit organization	3.3	6.4	2.9	1.7	D	3.8	4.4	D	4.0	2.9
Other or unknown ^h	2.1	1.7	3.2	2.3	2.5	1.4	2.2	3.1	2.0	2.2
Primary activity ⁱ										
R&D	74.2	82.4	65.2	82.2	41.3	86.8	51.5	83.0	74.2	67.8
Teaching	9.0	4.2	7.6	4.9	17.4	5.6	23.9	4.2	13.3	10.1
Management or administration	3.9	D	6.8	D	7.4	1.7	9.7	2.3	2.5	6.0

TABLE 65

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Professional services	12.4	D	20.1	D	33.5	5.0	14.9	9.2	9.4	16.0
Other	0.5	0.6	0.4	0.0	0.4	0.9	0.0	1.3	0.6	0.1
Secondary activity ^j										
R&D	12.3	8.5	12.1	4.3	27.0	7.4	20.9	5.6	13.8	17.4
Teaching	6.6	5.5	6.1	1.8	12.6	5.1	11.9	3.6	7.7	8.3
Management or administration	13.2	11.5	17.0	17.2	7.4	10.4	14.2	19.3	12.3	13.8
Professional services	4.8	4.8	3.4	3.7	7.4	3.8	7.5	4.2	4.6	5.9
Other	0.2	1.2	0.0	0.6	0.4	0.1	0.0	0.3	0.0	0.1
No secondary activity	62.9	68.5	61.4	72.4	45.2	73.2	45.5	67.0	61.5	54.5
Activity unknown	4.8	4.6	5.4	6.6	3.8	4.1	1.5	6.1	5.1	5.0
Postgraduation location (%) ^k										
United States ^l	90.1	93.1	91.0	93.1	84.8	91.5	84.9	91.4	91.0	87.9
New England	8.6	9.0	14.8	11.6	4.8	7.1	3.6	7.8	8.7	7.6
Middle Atlantic	10.1	5.7	13.6	13.2	7.6	8.0	10.2	9.4	12.2	9.8
East North Central	10.9	14.7	11.4	12.5	9.8	7.8	13.9	10.0	14.3	10.4
West North Central	3.4	4.1	3.8	3.1	7.1	2.5	6.6	3.0	3.7	2.6
South Atlantic	12.4	17.1	14.2	10.0	15.2	10.7	14.5	10.3	11.8	13.2
East South Central	2.5	2.9	0.9	1.3	5.3	1.2	4.8	2.1	3.4	3.2
West South Central	7.2	4.1	4.6	9.4	9.8	6.2	12.0	5.0	7.2	8.3
Mountain	6.2	10.2	3.8	4.5	6.6	6.0	4.8	6.6	7.2	6.9
Pacific and insular	28.4	24.9	23.7	26.7	18.2	41.2	13.9	36.5	21.5	25.5
Not in United States	9.8	6.5	9.0	6.7	14.9	8.5	15.1	8.6	9.0	12.0
Location unknown	0.1	0.4	0.0	0.2	0.3	0.0	0.0	0.0	0.0	0.1

TABLE 65

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Characteristic	All engineering fields	Aerospace, aeronautical, and astronautical engineering	Bioengineering and biomedical engineering	Chemical engineering	Civil engineering	Electrical, electronics, and communications engineering	Industrial and manufacturing engineering	Materials science engineering	Mechanical engineering	Other engineering
Male doctorate recipients (number)	7,726	337	688	688	507	1,606	204	720	1,286	1,690
Postgraduation status (number) ^b										
Definite postgraduation study	1,587	D	221	150	125	232	D	181	266	324
Definite employment	3,126	D	170	237	186	837	D	236	473	734
Seeking employment or study	2,237	80	219	233	140	385	60	238	417	465
Other ^c	147	6	40	12	10	19	1	6	22	31
Definite postgraduation study (%) ^d										
Postdoc fellowship or research associateship	95.7	D	95.5	97.3	91.2	92.2	D	99.4	97.4	94.4
Other or unknown ^e	4.3	0.0	4.5	2.7	8.8	7.8	0.0	0.6	2.6	5.6
Definite employment (%) ^f										
Academe	15.7	11.4	22.4	9.3	26.9	10.2	36.5	8.9	19.7	17.3
Government	7.9	D	2.9	D	D	5.7	D	5.1	D	10.6
Industry or business ^g	71.2	53.0	67.6	82.3	59.7	79.3	51.9	80.5	67.4	67.8
Nonprofit organization	3.0	7.4	D	D	D	3.3	D	2.1	D	2.0
Other or unknown ^h	2.2	2.0	D	D	2.7	1.4	2.9	3.4	2.1	2.2
Primary activity ⁱ										
R&D	76.2	83.1	70.1	84.2	41.8	88.0	49.0	85.8	74.7	70.6

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Teaching	8.7	D	8.3	D	D	5.5	D	3.7	12.5	9.0
Management or administration	3.8	D	6.4	D	D	D	D	D	D	5.9
Professional services	10.8	9.9	14.6	8.6	32.8	D	12.7	D	D	14.3
Other	0.5	0.7	0.6	0.0	0.6	0.9	0.0	1.4	0.2	0.1
Secondary activity ^j										
R&D	11.9	D	14.0	D	26.6	6.8	D	D	13.2	15.6
Teaching	6.3	D	5.7	D	D	5.0	9.8	D	6.9	7.7
Management or administration	13.4	D	15.9	17.6	D	10.5	D	21.5	12.3	14.5
Professional services	4.8	5.6	5.7	D	6.8	3.8	D	3.7	4.0	5.9
Other	0.2	1.4	0.0	0.5	0.0	0.1	0.0	0.5	0.0	0.1
No secondary activity	63.3	68.3	58.6	70.3	46.3	73.7	42.2	64.4	63.5	56.1
Activity unknown	5.0	4.7	7.6	6.3	4.8	3.6	1.9	7.2	5.5	5.0
Postgraduation location (%) ^k										
United States ^l	89.3	92.2	90.0	91.5	D	90.7	D	89.9	91.1	87.6
New England	7.9	7.8	D	9.6	3.9	6.9	D	8.2	9.2	6.6
Middle Atlantic	10.1	D	13.0	12.9	D	7.7	D	10.3	11.8	10.4
East North Central	10.7	D	11.3	12.9	9.0	8.0	8.1	D	14.1	10.8
West North Central	3.3	D	3.1	3.1	D	2.3	D	2.9	D	2.6
South Atlantic	12.4	D	13.8	10.9	14.1	D	D	10.3	12.2	12.7
East South Central	2.5	3.2	D	1.8	D	D	D	D	3.2	2.6
West South Central	7.4	D	5.1	10.3	10.0	6.2	D	4.8	D	8.6
Mountain	6.5	D	4.3	4.1	D	6.4	D	7.2	7.0	7.1

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Pacific and insular	28.1	25.8	24.6	25.3	17.0	40.4	12.9	34.5	20.7	25.9
Not in United States	10.6	7.4	10.0	8.3	D	9.3	D	10.1	8.9	12.3
Location unknown	0.1	0.5	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.1
Female doctorate recipients (number)	2,453	46	445	293	170	345	68	275	216	595
Postgraduation status (number) ^b										
Definite postgraduation study	501	D	134	52	32	53	D	54	48	114
Definite employment	895	D	109	112	53	167	D	90	75	233
Seeking employment or study	778	11	159	100	51	85	19	105	57	191
Other ^c	58	0	22	4	3	7	0	3	4	15
Definite postgraduation study (%) ^d										
Postdoc fellowship or research associateship	94.4	D	96.3	98.1	93.8	90.6	D	90.7	95.8	93.0
Other or unknown ^e	5.6	0.0	3.7	1.9	6.3	9.4	0.0	9.3	4.2	7.0
Definite employment (%) ^f										
Academe	17.0	25.0	14.7	4.5	30.2	12.0	31.3	10.0	29.3	20.6
Government	8.2	D	5.5	D	D	3.6	D	D	D	10.3
Industry or business ^g	68.9	50.0	75.2	90.2	47.2	77.2	46.9	76.7	54.7	61.4

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Nonprofit organization	4.0	0.0	D	D	D	6.0	D	D	D	5.6
Other or unknown ^h	1.9	0.0	D	D	1.9	1.2	0.0	2.2	1.3	2.1
Primary activity ⁱ										
R&D	67.2	78.3	57.9	77.9	39.6	80.8	59.4	75.9	71.2	59.0
Teaching	9.9	D	6.5	D	D	6.4	D	5.7	17.8	13.5
Management or administration	4.1	0.0	7.5	D	D	D	D	D	D	6.3
Professional services	18.2	D	28.0	D	35.8	D	21.9	D	D	21.2
Other	0.6	0.0	0.0	0.0	0.0	1.3	0.0	1.1	2.7	0.0
Secondary activity ^j										
R&D	13.5	D	9.3	D	28.3	10.3	D	D	17.8	23.0
Teaching	7.6	D	6.5	D	D	5.8	18.8	D	12.3	9.9
Management or administration	12.5	D	18.7	16.3	D	9.6	D	13.8	12.3	11.7
Professional services	4.8	0.0	0.0	D	9.4	3.8	D	5.7	8.2	5.9
Other	0.2	0.0	0.0	1.0	1.9	0.0	0.0	0.0	0.0	0.0
No secondary activity	61.4	69.6	65.4	76.9	41.5	70.5	56.3	73.6	49.3	49.5
Activity unknown	4.2	4.2	1.8	7.1	0.0	6.6	0.0	3.3	2.7	4.7
Postgraduation location (%) ^k										
United States ^l	92.8	100.0	92.6	97.0	D	95.5	D	95.8	90.2	88.8
New England	10.9	17.9	D	16.5	8.2	8.2	D	6.9	5.7	10.7
Middle Atlantic	10.4	D	14.4	14.0	D	9.5	D	6.9	14.6	8.1
East North Central	11.5	D	11.5	11.6	12.9	7.3	31.0	D	15.4	9.2
West North Central	3.8	D	4.9	3.0	D	3.2	D	3.5	D	2.9
South Atlantic	12.1	D	14.8	7.9	18.8	D	D	10.4	9.8	15.0

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East South Central	2.4	0.0	D	0.0	D	D	D	D	4.1	4.9
West South Central	6.2	D	3.7	7.3	9.4	6.4	D	5.6	D	7.5
Mountain	5.4	D	2.9	5.5	D	4.1	D	4.9	8.1	6.3
Pacific and insular	29.4	17.9	22.2	29.9	22.4	45.0	16.7	42.4	26.0	24.2
Not in United States	7.1	0.0	7.4	3.0	D	4.5	D	4.2	9.8	11.2
Location unknown	0.1	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0

D = suppressed to avoid disclosure of confidential information.

^a Includes respondents who did not report sex.^b Includes only respondents who reported postgraduation status.^c Includes respondents who indicated that they did not plan to work or study, respondents who indicated some other type of postgraduation plans, and respondents who indicated definite plans for other full-time degree program.^d Excludes respondents who indicated plans for other full-time degree program. Percentages based on number of doctorate recipients reporting definite postgraduation plans for study.^e "Other" includes respondents who indicated definite postgraduation study plans for traineeship, internship or clinical residency, or other study.^f Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment.^g Includes doctorate recipients who indicated self-employment.^h "Other" is mainly composed of elementary and secondary schools.ⁱ Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment and primary work activity.^j Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment and secondary work activity.^k Percentages based on number of doctorate recipients reporting definite postgraduation plans and type of plans.^l Includes cases with an unknown U.S. region of employment after doctorate; see technical notes for states or territories included in regions.**Note(s)**

Due to rounding, percentages may not sum to 100. See table A-6 in the technical notes for a listing of major fields and their constituent subfields.

Source(s)

National Center for Science and Engineering Statistics, Survey of Earned Doctorates.