

Appendix table 5-41

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Cross-sectoral coauthorship of U.S. S&E articles, by field and sector: 1988

Field and sector	Cross-sectoral articles	Share of cross-sectoral articles					
		Academic	Industry	Federal Government	Nonprofit institutions	FFRDCs	State and local government
All fields	Number	Percent					
All sectors	33,062	na	na	na	na	na	na
Academic	30,510	na	20.6	34.8	34.4	9.5	7.3
Industry	7,790	80.5	na	17.0	10.8	6.4	2.2
Federal Government	12,103	87.6	11.0	na	10.4	3.4	3.3
Nonprofit institutions	11,541	91.0	7.3	10.9	na	1.3	3.8
FFRDCs	3,435	84.0	14.6	11.8	4.2	na	0.3
State/local government	2,563	86.3	6.7	15.6	17.0	0.4	na
Clinical medicine							
All sectors	15,233	na	na	na	na	na	na
Academic	14,395	na	11.3	38.2	47.6	1.2	9.8
Industry	2,029	80.3	na	19.3	21.6	1.6	4.3
Federal Government	5,957	92.2	6.6	na	13.1	1.2	4.3
Nonprofit institutions	7,353	93.2	6.0	10.6	na	0.4	4.5
FFRDCs	234	73.5	14.1	30.3	12.4	na	2.1
State/local government	1,609	88.0	5.5	15.8	20.6	0.3	na
Biomedical research							
All sectors	5,010	na	na	na	na	na	na
Academic	4,625	na	19.7	36.9	41.5	5.0	5.3
Industry	1,122	81.1	na	18.0	16.7	3.8	1.5
Federal Government	1,971	86.6	10.2	na	12.2	3.7	2.0
Nonprofit institutions	2,109	91.0	8.9	11.4	na	1.5	2.5
FFRDCs	311	74.9	13.8	23.2	10.0	na	0.3
State/local government	275	89.1	6.2	14.2	18.9	0.4	na
Biology							
All sectors	1,689	na	na	na	na	na	na
Academic	1,581	na	16.2	58.7	15.7	4.0	9.7
Industry	300	85.3	na	25.0	4.3	2.0	4.0
Federal Government	1,009	92.0	7.4	na	4.0	0.9	4.6
Nonprofit institutions	288	86.5	4.5	13.9	na	0.3	3.5
FFRDCs	71	90.1	8.5	12.7	1.4	na	1.4
State/local government	188	81.4	6.4	24.5	5.3	0.5	na
Chemistry							
All sectors	1,219	na	na	na	na	na	na
Academic	1,091	na	47.4	25.7	6.5	24.8	1.1
Industry	622	83.1	na	14.0	3.5	6.4	0.2
Federal Government	363	77.1	24.0	na	3.9	4.4	0.8
Nonprofit institutions	100	71.0	22.0	14.0	na	3.0	1.0
FFRDCs	300	90.3	13.3	5.3	1.0	na	0.0
State/local government	13	92.3	7.7	23.1	7.7	0.0	na
Physics							
All sectors	3,259	na	na	na	na	na	na
Academic	2,926	na	37.0	18.5	4.6	46.7	0.1
Industry	1,342	80.8	na	13.1	1.5	16.8	0.1
Federal Government	710	76.2	24.8	na	3.1	13.7	0.1
Nonprofit institutions	174	77.6	11.5	12.6	na	9.8	0.0
FFRDCs	1,555	87.8	14.5	6.2	1.1	na	0.1
State/local government	4	75.0	25.0	25.0	0.0	25.0	na
Earth/space sciences							
All sectors	1,908	na	na	na	na	na	na
Academic	1,609	na	22.7	42.6	15.3	24.8	4.8
Industry	540	67.6	na	37.6	6.3	10.6	4.3
Federal Government	912	75.1	22.3	na	8.2	12.3	1.9
Nonprofit institutions	318	77.4	10.7	23.6	na	13.8	1.9
FFRDCs	491	81.3	11.6	22.8	9.0	na	0.6
State/local government	106	73.6	21.7	16.0	5.7	2.8	na

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Field and sector	Cross-sectoral articles	Share of cross-sectoral articles					
		Academic	Industry	Federal Government	Nonprofit institutions	FFRDCs	State and local government
	Number	Percent					
Engineering/technology							
All sectors	1,793	na	na	na	na	na	na
Academic	1,533	na	56.4	21.9	6.8	18.8	1.4
Industry	1,087	79.5	na	12.6	5.6	7.7	0.7
Federal Government	457	73.3	30.0	na	3.9	4.8	0.4
Nonprofit institutions	167	62.9	36.5	10.8	na	9.6	0.6
FFRDCs	369	78.0	22.8	6.0	4.3	na	0.0
State/local government	33	63.6	24.2	6.1	3.0	0.0	na
Mathematics							
All sectors	237	na	na	na	na	na	na
Academic	223	na	40.8	24.7	16.1	19.7	1.8
Industry	104	87.5	na	4.8	7.7	4.8	0.0
Federal Government	59	93.2	8.5	na	3.4	1.7	1.7
Nonprofit institutions	42	85.7	19.0	4.8	na	2.4	0.0
FFRDCs	48	91.7	10.4	2.1	2.1	na	0.0
State/local government	4	100.0	0.0	25.0	0.0	0.0	na
Psychology							
All sectors	866	na	na	na	na	na	na
Academic	829	na	14.1	25.8	36.1	0.7	12.9
Industry	137	85.4	na	8.0	7.3	0.7	3.6
Federal Government	225	95.1	4.9	na	4.9	0.0	4.0
Nonprofit institutions	315	94.9	3.2	3.5	na	0.3	3.8
FFRDCs	7	85.7	14.3	0.0	14.3	na	0.0
State/local government	117	91.5	4.3	7.7	10.3	0.0	na
Social sciences							
All sectors	676	na	na	na	na	na	na
Academic	632	na	19.6	28.2	40.3	3.8	5.5
Industry	142	87.3	na	11.3	9.2	1.4	2.8
Federal Government	203	87.7	7.9	na	10.3	2.5	3.0
Nonprofit institutions	281	90.7	4.6	7.5	na	0.7	1.1
FFRDCs	27	88.9	7.4	18.5	7.4	na	0.0
State/local government	42	83.3	9.5	14.3	7.1	0.0	na
Health/professional							
All sectors	1,172	na	na	na	na	na	na
Academic	1,066	na	29.6	17.7	31.4	1.9	12.9
Industry	365	86.6	na	6.3	8.5	1.4	3.6
Federal Government	237	79.7	9.7	na	14.8	0.8	9.7
Nonprofit institutions	394	85.0	7.9	8.9	na	0.0	4.8
FFRDCs	22	90.9	22.7	9.1	0.0	na	0.0
State/local government	172	80.2	7.6	13.4	11.0	0.0	na

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na Not applicable

NOTES: Article counts are on a whole-count basis, where each institutional author is credited with a whole count. Sector shares may exceed 100 percent in cases of articles with multiple institutional authors. Sum of the institutional article counts exceeds the total number of cross sectoral articles because of whole counting of articles with multiple institutional authors.

SOURCES: Institute for Scientific Information, Science Citation Index and Social Sciences Citation Index; CHI Research, Inc.; and National Science Foundation, Division of Science Resources Statistics, special tabulations.