

Appendix table 5-57

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

(Number of articles)

Field and sector	All sectors	Academic	Industry	Federal government	Nonprofit institutions	FFRDCs	State/local government
All fields							
All sectors	30,370	na	na	na	na	na	na
Academic	28,062	na	6,286	10,616	10,506	2,812	2,218
Industry	7,228	6,286	na	1,325	862	475	179
Federal government	11,175	10,616	1,325	na	1,263	385	398
Nonprofit institutions	10,653	10,506	862	1,263	na	134	435
FFRDCs	2,813	2,812	475	385	134	na	10
State/local government	2,429	2,218	179	398	435	10	na
Clinical medicine							
All sectors	14,326	na	na	na	na	na	na
Academic	13,556	na	1,637	5,492	6,878	148	1,440
Industry	1,894	1,637	na	392	454	27	88
Federal government	5,580	5,492	392	na	784	69	253
Nonprofit institutions	6,923	6,878	454	784	na	26	334
FFRDCs	191	148	27	69	26	na	4
State/local government	1,554	1,440	88	253	334	4	na
Biomedical research							
All sectors	4,478	na	na	na	na	na	na
Academic	4,142	na	913	1,707	1,921	233	243
Industry	1,028	913	na	201	190	45	22
Federal government	1,759	1,707	201	na	240	72	39
Nonprofit institutions	1,872	1,921	190	240	na	31	52
FFRDCs	265	233	45	72	31	na	1
State/local government	244	243	22	39	52	1	na
Biology							
All sectors	1,569	na	na	na	na	na	na
Academic	1,469	na	257	927	260	64	138
Industry	285	257	na	74	13	6	12
Federal government	948	927	74	na	40	9	44
Nonprofit institutions	261	260	13	40	na	1	7
FFRDCs	66	64	6	9	1	na	1
State/local government	161	138	12	44	7	1	na
Chemistry							
All sectors	1,123	na	na	na	na	na	na
Academic	1,002	na	514	280	71	267	12
Industry	573	514	na	87	22	40	1
Federal government	332	280	87	na	14	15	3
Nonprofit institutions	93	71	22	14	na	3	1
FFRDCs	268	267	40	15	3	na	0
State/local government	12	12	1	3	1	0	na
Physics							
All sectors	2,752	na	na	na	na	na	na
Academic	2,455	na	1,078	548	103	1,362	3
Industry	1,224	1,078	na	176	20	223	1
Federal government	643	548	176	na	22	93	1
Nonprofit institutions	117	103	20	22	na	13	0
FFRDCs	1,227	1,362	223	93	13	na	1
State/local government	4	3	1	1	0	1	na
Earth/space sciences							
All sectors	1,634	na	na	na	na	na	na
Academic	1,381	na	373	690	234	382	77
Industry	485	373	na	202	34	42	23
Federal government	780	690	202	na	74	100	17
Nonprofit institutions	246	234	34	74	na	41	6
FFRDCs	381	382	42	100	41	na	3
State/local government	99	77	23	17	6	3	na

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(Number of articles)

Field and sector	All sectors	Academic	Industry	Federal government	Nonprofit institutions	FFRDCs	State/local government
Engineering/technology							
All sectors	1,667	na	na	na	na	na	na
Academic	1,428	na	862	335	108	283	21
Industry	1,012	862	na	139	60	85	10
Federal government	439	335	139	na	16	22	2
Nonprofit institutions	146	108	60	16	na	16	1
FFRDCs	341	283	85	22	16	na	0
State/local government	29	21	10	2	1	0	na
Mathematics							
All sectors	198	na	na	na	na	na	na
Academic	187	na	90	55	23	42	3
Industry	91	90	na	5	9	4	0
Federal government	55	55	5	na	2	1	1
Nonprofit institutions	26	23	9	2	na	1	0
FFRDCs	40	42	4	1	1	na	0
State/local government	3	3	0	1	0	0	na
Psychology							
All sectors	834	na	na	na	na	na	na
Academic	798	na	119	215	302	3	107
Industry	134	119	na	11	12	0	5
Federal government	216	215	11	na	11	0	9
Nonprofit institutions	305	302	12	11	na	0	12
FFRDCs	3	3	0	0	0	na	0
State/local government	113	107	5	9	12	0	na
Social sciences							
All sectors	645	na	na	na	na	na	na
Academic	605	na	127	178	258	20	36
Industry	142	127	na	16	14	1	4
Federal government	195	178	16	na	23	3	6
Nonprofit institutions	266	258	14	23	na	2	3
FFRDCs	21	20	1	3	2	na	0
State/local government	42	36	4	6	3	0	na
Health sciences							
All sectors	552	na	na	na	na	na	na
Academic	491	na	69	116	221	2	82
Industry	88	69	na	8	24	0	8
Federal government	145	116	8	na	29	0	22
Nonprofit institutions	252	221	24	29	na	0	18
FFRDCs	2	2	0	0	0	na	0
State and local government	104	82	8	22	18	0	na
Professional fields							
All sectors	592	na	na	na	na	na	na
Academic	548	na	247	73	127	6	56
Industry	272	247	na	14	10	2	5
Federal government	83	73	14	na	8	1	1
Nonprofit institutions	146	127	10	8	na	0	1
FFRDCs	8	6	2	1	0	na	0
State/local government	64	56	5	1	1	0	na

na = not applicable

FFRDC = federally funded research and development center

NOTES: Articles on whole-count basis, i.e., for articles with collaborating institutions from multiple sectors, each sector receives one count for participation by its institution(s). Sum of sector counts exceeds total because multiple sectors are credited one count for collaboration on an article.

SOURCES: Thomson ISI, *Science Citation Index* and *Social Sciences Citation Index*, <http://www.isinet.com/products/citation/>; iplQ, Inc.; and National Science Foundation, Division of Science Resources Statistics, special tabulations.