

Appendix table 5-59

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Coauthorship of S&E articles, by field and sector: 1988

Field and sector	All articles	Coauthored articles		
		Total	U.S. coauthored	Internationally coauthored
All fields				
All sectors	187,245	88,946	69,649	19,297
Academic	148,642	77,562	62,526	15,036
Industry.....	20,221	10,163	8,505	1,658
Federal government.....	22,044	14,889	12,700	2,189
Nonprofit institutions	19,473	13,944	12,179	1,765
FFRDCs	7,171	4,287	3,115	1,172
State/local government.....	3,670	2,783	2,586	197
Clinical medicine				
All sectors	57,388	34,925	30,117	4,808
Academic	46,385	30,407	26,828	3,579
Industry.....	3,890	2,570	2,196	374
Federal government	9,033	7,209	6,351	858
Nonprofit institutions	11,770	9,044	8,222	822
FFRDCs	367	262	219	43
State/local government	2,103	1,775	1,662	113
Biomedical research				
All sectors	29,201	15,094	11,523	3,571
Academic	23,938	13,336	10,569	2,767
Industry.....	2,306	1,429	1,166	263
Federal government	3,777	2,570	2,051	519
Nonprofit institutions	3,480	2,480	2,009	471
FFRDCs	627	380	298	82
State/local government	442	302	262	40
Biology				
All sectors	13,523	5,499	4,158	1,341
Academic	11,153	4,938	3,847	1,091
Industry.....	565	344	304	40
Federal government	2,434	1,296	1,111	185
Nonprofit institutions	651	393	272	121
FFRDCs	145	76	71	5
State/local government	286	192	174	18
Chemistry				
All sectors	13,898	4,339	2,933	1,406
Academic	10,433	3,702	2,581	1,121
Industry.....	2,690	883	713	170
Federal government	987	472	376	96
Nonprofit institutions	278	128	96	32
FFRDCs	702	396	308	88
State/local government	47	19	16	3
Physics				
All sectors	19,685	8,938	5,681	3,257
Academic	13,914	7,437	4,999	2,438
Industry.....	4,129	1,866	1,448	418
Federal government	1,439	847	691	156
Nonprofit institutions	252	158	118	40
FFRDCs	3,302	2,015	1,338	677
State/local government	8	4	4	0
Earth/space sciences				
All sectors	8,784	4,357	2,887	1,470
Academic	6,469	3,564	2,473	1,091
Industry.....	883	615	521	94
Federal government	1,770	1,113	872	241
Nonprofit institutions	575	384	253	131
FFRDCs	845	567	403	164
State/local government	179	110	102	8

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Coauthorship of S&E articles, by field and sector: 1988

Field and sector	All articles	Coauthored articles		
		Total	U.S. coauthored	Internationally coauthored
Engineering/technology				
All sectors	12,430	4,553	3,308	1,245
Academic	7,990	3,542	2,618	924
Industry	3,753	1,581	1,347	234
Federal government	1,034	548	484	64
Nonprofit institutions	352	192	156	36
FFRDCs	1,029	502	401	101
State/local government	53	34	29	5
Mathematics				
All sectors	4,302	1,710	871	839
Academic	4,025	1,648	849	799
Industry	229	131	99	32
Federal government	126	67	56	11
Nonprofit institutions	56	35	26	9
FFRDCs	79	50	42	8
State/local government	4	3	3	0
Psychology				
All sectors	7,342	2,763	2,410	353
Academic	6,807	2,678	2,347	331
Industry	234	150	138	12
Federal government	338	237	222	15
Nonprofit institutions	473	333	313	20
FFRDCs	3	3	3	0
State/local government	161	121	116	5
Social sciences				
All sectors	9,043	2,758	2,143	615
Academic	7,853	2,583	2,046	537
Industry	359	155	148	7
Federal government	560	248	220	28
Nonprofit institutions	724	349	288	61
FFRDCs	51	26	22	4
State/local government	79	45	44	1
Health sciences				
All sectors	2,979	1,287	1,183	104
Academic	2,392	1,159	1,072	87
Industry	153	94	93	1
Federal government	270	175	168	7
Nonprofit institutions	496	282	266	16
FFRDCs	4	2	2	0
State and local government	150	112	108	4
Professional fields				
All sectors	8,670	2,723	2,435	288
Academic	7,283	2,568	2,297	271
Industry	1,030	345	332	13
Federal government	276	107	98	9
Nonprofit institutions	366	166	160	6
FFRDCs	17	8	8	0
State/local government	158	66	66	0

FFRDC = federally funded research and development center

NOTES: Articles on whole-count basis, i.e., for articles with collaborating institutions from more than one country/economy, each country/economy with at least one participating institution is credited one count. Internationally coauthored articles have at least one collaborating U.S. and foreign institution.

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.