

Coauthorship share of United States, EU-15, Japan, and East Asia-4 on international S&E articles of indicated region and country/economy: 2003

(Percent)

Region and country/economy	S&E articles (number)		United States	EU-15							Japan	East Asia-4		
	Total	International		Total	France	Germany	Italy	Netherlands	Spain	UK		Total	China	South Korea
Major S&E article producers														
United States.....	242,397	60,180	na	44.4	6.0	9.6	5.3	3.0	2.8	9.2	8.4	10.7	4.7	3.6
EU-15.....	255,262	90,779	38.6	na	na	na	na	na	na	na	5.4	5.0	3.5	0.8
Austria.....	7,066	3,622	15.4	53.5	5.4	23.2	6.0	2.9	2.8	5.8	2.5	1.5	1.1	0.2
Belgium.....	9,941	5,547	15.1	56.9	14.5	8.4	4.9	9.3	3.4	9.2	2.1	1.9	1.5	0.2
Denmark.....	7,624	3,873	19.8	51.9	5.5	8.6	4.1	3.9	3.2	10.5	2.0	1.6	1.0	0.4
Finland.....	7,062	3,256	18.6	50.8	4.4	8.7	3.6	3.9	2.2	9.7	2.6	2.1	1.1	0.6
France.....	43,242	19,900	18.7	43.7	na	9.4	7.9	2.9	4.8	8.4	3.0	2.3	1.6	0.4
Germany.....	59,597	26,689	22.7	37.9	7.2	na	5.0	3.9	2.6	8.1	3.5	3.5	2.5	0.5
Greece.....	4,946	2,019	22.7	52.3	8.0	10.7	6.9	2.8	2.5	14.3	2.2	1.1	0.6	0.3
Ireland.....	2,520	1,265	16.4	61.2	4.9	7.8	4.5	4.3	3.5	27.8	1.8	1.9	1.1	0.2
Italy.....	31,567	12,669	24.2	48.7	10.8	9.2	na	3.6	5.3	10.4	2.4	1.3	0.8	0.3
Netherlands.....	18,746	8,905	21.2	53.1	6.7	11.7	5.8	na	2.8	11.8	2.5	1.6	1.1	0.3
Portugal.....	3,758	2,010	13.5	60.6	11.4	6.7	5.6	3.0	10.7	13.3	1.3	1.7	1.3	0.1
Spain.....	21,756	8,624	19.5	52.5	11.1	7.9	9.0	3.0	na	10.4	1.3	1.0	0.7	0.2
Sweden.....	14,374	7,086	20.0	47.1	4.5	9.4	3.8	3.1	2.3	9.6	3.0	2.6	1.9	0.4
United Kingdom.....	62,729	24,999	23.8	41.2	6.9	8.9	5.8	4.1	3.5	na	3.5	3.9	2.6	0.5
Japan.....	67,728	14,534	34.5	25.0	4.0	6.3	2.2	1.5	0.8	5.8	na	16.0	8.0	5.9
East Asia-4.....	63,400	16,110	42.6	22.4	3.1	5.8	1.6	1.0	0.6	6.4	15.8	na	na	na
China.....	34,110	9,132	33.1	26.2	3.7	7.1	1.7	1.2	0.7	7.0	14.4	8.8	na	2.8
Singapore.....	3,934	1,499	28.5	17.9	1.4	2.8	0.7	0.4	0.4	9.1	4.6	24.9	20.4	1.2
South Korea.....	16,114	4,507	47.8	11.7	1.8	3.0	1.4	0.6	0.3	2.6	18.6	6.8	5.3	na
Taiwan.....	10,448	2,178	44.8	11.5	1.4	2.7	1.2	0.4	0.4	3.7	11.7	15.8	11.0	2.6
Other regions/countries														
Other Asia														
Bangladesh.....	333	218	21.5	35.3	0.7	6.7	0.4	1.8	0.1	9.9	19.6	1.0	0.3	0.5
India.....	14,529	3,187	28.2	34.3	5.0	10.9	3.4	1.8	1.2	8.2	10.2	8.3	2.5	2.7
Indonesia.....	379	323	17.8	28.5	5.2	7.2	1.5	7.7	0.4	4.0	24.5	4.5	1.6	0.5
Malaysia.....	731	357	10.8	22.7	1.2	2.5	0.6	2.1	0.4	14.3	11.3	19.6	13.2	1.2
Pakistan.....	520	258	26.4	39.4	2.3	9.5	3.9	1.3	1.2	17.8	7.0	4.1	2.0	1.7
Philippines.....	338	249	25.7	17.0	2.2	2.6	0.8	2.7	0.4	3.1	20.2	7.5	5.5	1.3
Sri Lanka.....	213	129	22.7	36.2	0.7	2.1	0.0	3.8	0.0	22.5	18.1	1.2	1.2	0.0
Thailand.....	1,627	983	32.1	22.9	2.7	2.9	0.5	1.5	0.3	9.0	19.2	5.1	2.2	0.9
Vietnam.....	422	343	9.1	45.5	13.0	6.5	2.4	3.6	0.5	6.0	16.3	8.0	1.5	4.4
Other Western Europe														
Croatia.....	1,131	470	17.3	48.5	7.4	15.6	10.7	1.6	2.2	3.8	1.5	1.7	0.3	0.5
Cyprus.....	167	111	18.3	49.5	2.3	4.8	8.7	2.0	1.0	14.8	0.4	1.8	1.0	0.3
Iceland.....	349	227	19.7	59.1	3.8	3.3	1.4	2.6	1.1	12.8	2.9	1.1	0.3	0.0
Macedonia.....	80	41	12.7	43.0	2.8	10.6	4.0	0.2	0.4	8.2	5.6	0.0	0.0	0.0
Norway.....	4,780	2,403	19.5	58.1	5.3	6.7	3.6	4.5	2.2	10.1	2.0	1.2	0.7	0.3
Slovenia.....	1,367	664	15.4	47.7	5.9	9.5	7.8	3.3	1.2	6.4	6.0	2.2	0.9	0.7

Coauthorship share of United States, EU-15, Japan, and East Asia-4 on international S&E articles of indicated region and country/economy: 2003

(Percent)

Region and country/economy	S&E articles (number)		United States	EU-15							Japan	East Asia-4		
	Total	International		Total	France	Germany	Italy	Netherlands	Spain	UK		Total	China	South Korea
Switzerland	13,343	7,711	20.8	57.8	10.4	17.3	7.8	3.0	2.3	7.7	2.5	1.5	0.8	0.4
Turkey	7,062	1,517	37.2	36.7	4.1	7.3	4.0	1.9	1.4	13.1	3.9	1.0	0.3	0.5
Yugoslavia	779	328	16.0	48.2	5.9	14.6	3.7	2.2	3.5	7.4	4.9	2.2	1.9	0.1
Eastern Europe/former USSR	45,967	20,477	20.0	59.2	9.8	18.8	5.9	2.6	2.5	6.4	5.8	2.6	0.9	1.2
Armenia	312	200	18.9	50.6	11.4	19.2	8.8	1.6	1.4	3.7	1.7	2.2	0.3	1.1
Azerbaijan	158	84	6.8	16.9	2.9	3.3	0.2	1.3	0.9	6.5	6.1	0.2	0.2	0.0
Bulgaria	1,299	799	12.2	58.6	8.4	16.5	7.9	1.7	4.0	6.3	3.8	1.6	0.8	0.3
Belarus	762	391	5.8	47.2	4.8	20.9	4.9	0.7	0.2	3.7	3.9	2.7	1.2	1.3
Czech Republic	4,204	2,144	13.9	51.1	10.4	14.9	5.3	2.2	2.4	5.6	4.8	1.3	0.6	0.2
Estonia	550	297	10.7	63.4	3.4	12.1	3.0	1.6	1.8	4.7	1.6	0.4	0.1	0.3
Georgia	202	134	13.0	53.0	5.3	23.4	10.1	0.5	1.6	3.5	2.0	1.8	0.8	1.0
Hungary	3,769	2,140	21.9	51.8	6.3	13.8	4.7	3.0	2.2	7.0	4.1	1.1	0.5	0.5
Kazakhstan	202	113	12.4	32.7	2.0	7.8	7.7	0.7	4.0	7.5	10.2	3.5	0.1	3.4
Latvia	258	168	10.5	55.4	7.4	18.1	3.0	1.6	0.4	5.2	2.2	0.0	0.0	0.0
Lithuania	483	265	18.0	58.0	4.9	11.5	5.5	1.5	1.6	7.8	2.1	0.9	0.1	0.0
Moldova	158	129	10.9	51.1	4.8	16.9	5.1	3.6	4.5	5.5	1.7	0.0	0.0	0.0
Poland	9,328	4,318	19.4	48.8	9.8	14.8	4.6	2.2	2.1	5.3	4.2	1.9	0.7	0.6
Romania	1,612	1,037	12.2	60.5	16.6	13.2	9.9	2.1	3.0	4.6	6.3	1.9	0.7	0.4
Russia	20,630	8,363	18.5	52.1	8.1	18.6	5.5	2.6	2.0	5.0	6.2	3.2	1.2	1.4
Slovakia	1,456	869	10.5	49.2	6.0	12.2	4.4	1.6	1.3	7.1	2.9	0.8	0.4	0.3
Ukraine	3,064	1,672	14.3	43.6	6.7	16.6	3.3	1.6	2.4	5.2	2.9	3.6	0.3	2.7
Uzbekistan	279	143	16.3	28.2	4.2	12.4	5.1	0.2	0.4	2.5	8.8	6.8	1.1	5.7
Central/South America	24,205	10,094	37.4	44.7	9.0	7.0	4.3	1.4	9.7	7.2	2.2	1.4	0.9	0.3
Argentina	4,031	1,716	26.7	42.8	7.2	6.8	4.2	1.3	14.1	4.6	1.7	0.7	0.3	0.1
Brazil	10,779	3,794	33.2	38.7	8.8	7.3	4.4	1.4	3.2	7.2	2.4	1.6	1.1	0.3
Chile	2,236	1,231	28.6	43.7	9.5	7.7	4.3	0.7	10.3	5.1	1.0	1.3	0.5	0.5
Colombia	578	391	31.1	35.6	6.0	2.9	1.3	1.5	13.9	7.1	1.6	1.4	0.6	0.7
Costa Rica	183	158	31.6	33.5	5.8	5.9	0.7	5.5	3.5	4.9	0.9	3.2	0.7	0.8
Cuba	436	302	5.5	50.4	5.5	5.6	7.5	0.2	21.6	4.1	0.6	0.2	0.0	0.0
Mexico	5,002	2,215	38.1	33.4	6.4	4.0	2.6	1.3	10.0	6.0	2.0	1.6	1.1	0.3
Peru	270	232	38.4	31.5	3.8	6.0	2.8	1.2	4.3	6.0	0.4	0.4	0.3	0.0
Uruguay	318	214	23.5	36.0	9.4	2.1	3.2	0.0	7.9	5.2	1.1	0.4	0.4	0.0
Venezuela	822	438	34.3	37.3	9.2	4.4	3.0	0.3	11.6	6.0	1.4	0.5	0.4	0.2
Near East/North Africa	17,434	7,192	31.8	44.2	14.6	9.0	3.8	1.7	2.0	7.2	2.8	2.2	1.2	0.4
Algeria	442	275	3.1	83.2	69.5	2.6	1.7	0.1	2.4	1.9	0.9	0.5	0.3	0.0
Egypt	2,155	763	24.9	37.9	3.1	12.7	4.6	1.5	1.4	7.2	10.1	2.4	1.1	0.8
Iran	2,098	550	23.6	37.4	4.7	5.9	2.6	1.4	0.5	15.1	3.3	2.6	0.9	0.4
Israel	9,122	3,809	41.8	34.3	5.7	10.6	3.8	2.0	1.8	5.4	2.2	2.4	1.6	0.4
Jordan	349	154	18.7	47.6	3.0	16.6	3.2	0.9	0.2	20.2	0.4	1.6	0.8	0.3
Kuwait	325	136	27.3	28.8	0.2	3.6	0.6	0.1	0.4	11.1	0.8	0.7	0.0	0.7
Lebanon	296	136	24.4	49.9	35.9	1.1	2.7	0.4	1.4	8.0	1.0	0.1	0.0	0.0

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	Total	International		Total	France	Germany	Italy	Netherlands	Spain	UK		Total	China	South Korea
Morocco.....	692	475	5.2	80.3	51.8	4.8	8.7	0.3	8.6	1.8	0.3	1.2	0.3	0.4
Oman.....	171	100	19.9	31.6	4.8	3.8	0.7	0.4	0.0	16.9	2.4	1.7	0.0	0.4
Saudi Arabia.....	767	333	23.9	25.2	2.8	1.8	1.9	0.7	1.2	10.2	1.1	3.3	1.7	0.4
Tunisia.....	650	372	4.8	83.1	70.4	2.1	2.7	0.5	1.5	1.9	1.0	0.2	0.1	0.0
United Arab Emirates.....	294	167	22.1	37.5	6.1	7.1	0.0	1.7	1.2	9.8	0.8	2.1	1.8	0.0
Sub-Saharan Africa.....	6,293	3,765	24.9	52.7	10.5	7.2	2.5	4.8	1.2	15.7	2.5	1.1	0.6	0.4
Cameroon.....	222	169	10.7	61.0	31.7	6.4	0.6	4.1	1.8	7.7	1.5	1.8	1.1	0.7
Ethiopia.....	188	150	13.1	58.1	4.8	8.4	4.9	8.1	0.8	12.3	2.0	0.2	0.2	0.0
Ghana.....	155	120	21.8	47.6	1.5	10.5	1.7	5.0	0.0	18.3	3.4	1.2	0.9	0.2
Kenya.....	527	438	33.5	42.2	1.7	5.5	0.6	8.2	0.3	18.3	2.4	0.3	0.2	0.1
Nigeria.....	493	193	20.7	39.5	2.1	8.2	7.1	1.3	0.5	15.9	6.0	1.9	0.7	1.0
Senegal Republic.....	164	133	12.6	55.2	34.5	1.7	1.6	3.6	4.2	2.7	0.8	1.0	0.6	0.0
South Africa.....	3,218	1,504	26.2	42.1	5.5	7.7	1.8	3.6	1.4	14.5	2.0	1.6	0.8	0.6
Tanzania.....	207	189	17.0	48.8	0.8	3.7	1.6	4.5	1.2	17.1	4.7	0.3	0.1	0.2
Uganda.....	183	153	34.8	34.6	1.4	1.1	2.9	3.3	0.3	16.4	1.4	0.0	0.0	0.0
Zimbabwe.....	182	148	20.0	39.4	2.5	1.8	1.8	4.4	0.0	15.1	0.4	0.5	0.5	0.0
Other														
Australia.....	20,259	7,879	27.3	36.7	3.6	6.3	2.8	2.6	1.2	13.6	5.1	9.5	6.6	1.0
Canada.....	32,145	12,978	43.7	24.1	5.8	5.0	2.5	1.8	1.4	7.5	3.8	5.5	3.4	1.0
New Zealand.....	4,034	1,717	29.2	30.5	2.5	4.4	1.4	1.7	0.9	15.9	3.0	4.3	2.3	0.8

na = not applicable

EU = European Union; UK = United Kingdom; USSR = Union of Soviet Socialist Republics

NOTES: Data are region/country/economy's share of internationally coauthored articles with indicated region/country/economy. Authorship based on institutional address. International articles are those with at least one author at institutional address in given country/economy and one author at foreign address. Share based on article counts calculated on whole-count basis, i.e., each collaborating institution is credited one count. EU-15 consists of 15 EU countries before expansion of member countries on May 1, 2004 (listed countries plus Luxembourg). China data include Hong Kong. Eastern Europe consists of Bulgaria, Czech Republic, Hungary, Poland, and Romania.

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.

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