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ISI's Who Is Publishing in Science (WIPIS)
Offers Instant Access to Research and Research
Workers Worldwide

May 24, 1972

Very soon, subscribers will receive the 1972 annual volume of *ISI's Who Is Publishing In Science™ (WIPIS)*.¹ We believe that *WIPIS* is the world's most comprehensive current directory of scientists, scholars, and scientific organizations.

The 1972 volume shows the result of considerable work by ISI's staff to enlarge the scope of *WIPIS*, to eliminate redundant names and addresses, and to assure the accuracy of about 250-300,000 original entries from *Current Contents*®. *WIPIS* now also includes for the first time statistical data on the geographical distribution of publishing scientists. These data provide interesting comparisons of the concentration of research effort throughout the world. For example, in 1971 the most productive cities in terms of published papers were Moscow, London, New York, Washington, Paris, and Tokyo, in that order.²

WIPIS is an annual cumulation of the names and addresses of the first authors of all papers listed in five separate editions of *Current Contents* (CC®). The 1971 and previous volumes (formerly *IDR&DS*®)³ included only addresses from the *Life Sciences* and *Physical Sciences* editions of CC.

The use of computers is essential to the production of *WIPIS*. It is a massive job of sorting, merging, matching, listing, and photocomposing for

printing. However, we have stepped "backward" and instituted an extensive program of human "cerebral" editing. This has been necessary in order to compensate for limitations in computer programming. The same name and address is, in even the slightest variation, difficult to recognize as the same unless some human judgment is exercised. At the time each address is entered in CC, there may be considerable variation in the information provided by different journals. Consider the examples of *Leuven* and *Louvain*; *A.B. Smith* and *A.B.C. Smith*. There are some computer programs available that can correlate address lists, but none is as yet able to deal with all contingencies of variation that may arise in preparation of a directory. For example, last year's *WIPIS* listed the same man as two researchers from a polymer research station in the Armenian S.S.R.—*G.G. Kostanian* and *H.H. Kostanian*. The variation is due to different transliteration systems; in Soviet journals the Russian letter G is used to transliterate the Armenian H; hence, Russian mathematicians often cite *Gilbert* instead of *Hilbert*. Authors themselves create confusion—we have *W.C. Kosters* in one article and *W.C.G. Kosters* in another. All such variants and many others have been "unified".

NATION STATES

UNITED STATES	92011
USSR	17209
ENGLAND	16878
GERMANY	13651
FRANCE	10585
CANADA	9206
JAPAN	8473
INDIA	5144
AUSTRALIA	3914
ITALY	3279
SWEDEN	2524
NETHERLANDS	2451
SWITZERLAND	2402
CZECHOSLOVAKIA	2161
SCOTLAND	2066
POLAND	1970
ISRAEL	1787
BELGIUM	1473
HUNGARY	1461
AUSTRIA	1107
DENMARK	1091
NORWAY	856
ROUMANIA	851
NEW ZEALAND	755
FINLAND	731
SOUTH AFRICA	691
WALES	686
SPAIN	517
ARGENTINA	505
BULGARIA	486
YUGOSLAVIA	481
U. A. R.	442
BRAZIL	388
IRELAND	356
NORTH IRELAND	346
CHILE	340
MEXICO	246
NIGERIA	242
GREECE	220
TAIWAN	155
IRAN	145
PAKISTAN	140
VENEZUELA	137
TURKEY	112
MALAYSIA	105
KENYA	100
LEBANON	93
SINGAPORE	92
HONG KONG	90
UGANDA	89
THAILAND	78
JAMAICA	74
COLOMBIA	60
PHILIPPINES	59
SUDAN	58
PORTUGAL	55
GHANA	54
BANGLADESH	53
SENEGAL	53
ALGERIA	52
CEYLON	52
IRAQ	52
RHODESIA	51
TANZANIA	45
NEW GUINEA	43
ZAMBIA	40
KOREA	37
URUGUAY	34
VIETNAM	33
W IND ASSOC ST	33
IVORY COAST	32
MADAGASCAR	32
PERU	32
COSTA RICA	28

TRINIDAD & TOBA	27
GUATEMALA	26
CANAL ZONE	25
CONGO	24
TUNISIA	22
CUBA	21
CAMEROON	20
FUJI ISLANDS	17
ETHIOPIA	16
SIERRA LEONE	16
SAUDI ARABIA	14
INDONESIA	13
MOROCCO	13
ICELAND	12
LIBYA	12
LIECHTENSTEIN	11
PANAMA	11
MALTA	10
KUWAIT	9
CHAD	8
ECUADOR	8
MALAWI	8
AFGHANISTAN	7
BOTSWANA	7
EL SALVADOR	7
NEW CALEDONIA	7
CYPRUS	6
FRENCH W INDIES	6
HONDURAS	6
LIBERIA	6
LUXEMBOURG	6
NEPAL	6
BARBADOS	5
CENT AFR REP	5
GAMBIA	5
GUYANA	5
JORDAN	5
MONACO	5
BOLIVIA	4
BORNEO	4
CAMBODIA	4
NETH ANTILLES	4
SYRIA	4
TAHITI	4
BAHAMAS	3
BURMA	3
DAHOMY	3
MAURITIUS	3
MOZAMBIQUE	3
SURINAM	3
SWAZILAND	3
ANGOLA	2
BRIT HONDURAS	2
CANARY ISLANDS	2
NICARAGUA	2
PARAGUAY	2
SOLOMON ISLANDS	2
U VOLTA	2
WEST AFRICA	2
ABU DHABI	1
BERMUDA	1
BURUNDI	1
CAROLINE ISLAND	1
DUTCH GUIANA	1
GREENLAND	1
GUINEA	1
LESOTHO	1
MALI	1
MARTINIQUE	1
MONGOLIA	1
REPUB TOGO	1
RWANDA	1
W SAMOA	1
YEMEN	1

U. S. A.

CALIFORNIA	11612
NEW YORK	11097
MASSACHUSETTS	5347
ILLINOIS	5276
PENNSYLVANIA	4855
MARYLAND	3838
OHIO	3633
TEXAS	3587
D.C.	3454
NEW JERSEY	3397
MICHIGAN	3126
WISCONSIN	1892
FLORIDA	1885
MISSOURI	1806
INDIANA	1803
CONNECTICUT	1727
NORTH CAROLINA	1682
MINNESOTA	1680
COLORADO	1679
WASHINGTON	1660
GEORGIA	1445
VIRGINIA	1439
TENNESSEE	1389
IOWA	1168
LOUISIANA	903
OREGON	839
NEW MEXICO	789
ARIZONA	773
KENTUCKY	762
KANSAS	756
ALABAMA	656
OKLAHOMA	630
UTAH	589
NEBRASKA	441
RHODE ISLAND	411
MISSISSIPPI	401
HAWAII	387
SOUTH CAROLINA	377
DELAWARE	353
WEST VIRGINIA	344
NEW HAMPSHIRE	284
ARKANSAS	243
NORTH DAKOTA	212
MONTANA	208
VERMONT	180
MAINE	177
IDAHO	168
WYOMING	143
SOUTH DAKOTA	138
PUERTO RICO	132
ALASKA	118
NEVADA	113
VIRGIN ISLANDS	7
GUAM	6

U. S. S. R.

RSFSR	12985
UKSSR	2636
BESSR	345
AZSSR	196
UZSSR	177
ARSSR	175
KASSR	159
GESSR	138
MOSSR	103
ESSSR	85
LASSR	82
LISSR	74
TASSR	34
KISSR	14
DASSR	6
TUSSR	6

Geographical sources of published papers listed in the five editions of *Current Contents*® in 1971. The name of each country is followed by the number of papers it produced. Countries are listed in order of number of papers produced. Totals for the U.S.A. and the U.S.S.R. are broken down by states/possessions and republics respectively.

Material for the 1972 *WIPIS* has thus been reduced to about 219,000 publishing scientists at 45,000 worldwide installations. The three sections of *WIPIS* permit access to research activity, and to research reports, by individual, by organization (academic, industrial, governmental, professional, etc.), and by geographic area (country, state/province, city). The annual volumes of *WIPIS* do not replace, but add to previous volumes, which should be retained. Many scientists will publish one year, but not the next, while each year sees thousands of new graduates enter the journal lists.

The statistical data included in the 1972 *WIPIS* show research productivity of various countries and cities through-

out the world, as it is reflected in numbers of published papers. One of the *WIPIS* listings is reproduced on page 7 of this issue. You will see that the United States was the source of most published papers in 1971, while the last country named in the list is Yemen, one of several that contributed only one paper. One name in the list of nation states provoked my curiosity: Abu Dhabi. Abu Dhabi, I have discovered, is a sheikhdom of the Trucial Oman on the south Persian Gulf. An American scientist from Cornell authored the one paper in question; he is part of a research group there working on revitalization of desert land for agricultural use.⁴

1. Garfield, E. Who is publishing in science--and how much? *Current Contents* No. 17, p. 4-5, April 28, 1971.
2. For analyses of earlier data of this type, see: Price, D.J.D. Measuring the size of science. *Proc. Israel Acad. Sci. Humanities* 4(6):98-111, 1969.
3. Garfield, E. *IDR&IDS*®, an international directory of publishing scientists. *Current Contents* No. 30, p. 4, July 29, 1969.
4. Fontes, M.R. & Ozbun, J.L. Effect of growth retardants on growth and flowering of broccoli. *HortScience* 5(6, part 1):483, 1970.