Status of Mathematics Research in India in 1990 and 1994:
An analysis based on *Mathsci*

Subbiah Arunachalam * and K Umarani

M S Swaminathan Research Foundation
Third Cross Street, Taramani Institutional Area
CHENNAI 600 113, India
<arun@mssrf.res.in> Fax: 91-44-2541319

Status of mathematics research in India in 1990 and 1994: An analysis based on *Mathsci*

Subbiah Arunachalam* and K Umarani

M S Swaminathan Research Foundation
Third Cross Street, Taramani Institutional Area
CHENNAI 600 113
* Address for correspondence: <arun@mssrf.res.in>

Abstract

Mathematics research in India, as reflected by papers indexed in *Mathsci* 1990 and 1994, is quantified and mapped. There were 1319 papers originating in India and indexed in the1990 disc of *Mathsci* CD-ROM version, and 1391 papers indexed in1994. Of these 2710 papers, 2549 had appeared in 467 journals, 221 of which were indexed in *Journal Citation Reports* 1994. Indian researchers had published 999 papers in these two years in 62 Indian journals, 503 papers in 108 US journals, 254 papers in 40 journals from the Netherlands, and 155 papers in 42 British journals. 188 institutions located in 110 cities/towns and 23 states/union territories had contributed to India's research output indexed in *Mathsci*, although only three have contributed more than a hundred papers in the two years, and another nine had contributed 50 or more papers. Academic institutions had published 87% of all papers and central government funded research councils and departments accounted for 12.6%. Four cities, viz. Calcutta, New Delhi, Bombay, and Madras had published more than 200 papers each in the two years. Five states, viz. West Bengal, Uttar Pradesh, Maharashtra, Tamil Nadu, and Delhi had published more than 250 papers each. More than 53% of journal papers were published in journals not indexed in *Journal Citation Reports*. Only 81 papers had appeared in journals of impact factor greater than 2.000, and these are mostly physics journals. Of the 61 subfields in *Mathsci*, Indian researchers had been most active in Statistics, General topolgy, Quantum theory, and Special functions. India has a high activity index for Special functions and General topology and a moderately high activity index for Statistics, Integral transforms and Operational calculus, and Sequences, series and summability. The activity is low in Prtial differential equations, Ordinary differential equations, Numerical analysis, K-theory, and Computer science. The future of mathematics in India seems to rest with DAE, TIFR and ISI. Universities seem to be losing momentum.

Status of mathematics research in India in 1990 and 1994: An analysis based on *Mathsci*

Subbiah Arunachalam* and **K Umarani**

M S Swaminathan Research Foundation
Third Cross Street, Taramani Institutional Area
CHENNAI 600 113
* Address for correspondence: <arun@mssrf.res.in>

Introduction

Mathematics is the basis of modern civilization, although much of the pursuit of mathematics is without any inkling to the real world, says Basil Gordon of the University of California at Los Angeles. Indeed there is something for everybody to gain from the universal language of mathematics. Today it is virtually impossible to do advanced level work in any branch of science or engineering or some areas of economics and social sciences without the application of mathematics.

India has a very long tradition of excellence in mathematics and astronomy, dating back to antiquity. In modern times India has produced much work in both pure and applied mathematics as well as in the related areas of operations research, statistics, computer science and theoretical physics. According to Basil Gordon, Russia and the USA are the top contributors to the literature of mathematics, followed by England, France, Germany and then India and China. The 20th century has transformed mathematics from a cottage industry run by a few semi-amateurs into a worldwide industry run by an army of professionals, says Michael Atiyah in his preface to *Mathematics: Frontiers and Perspectives*, brought out by the American Mathematical Society on behalf of the International Mathematical Union as part of the celebration of the Year of Mathematics. A part of the army lives and works in India. Today Indian mathematicians, statisticians and computer scientists are welcome everywhere. Virtually every major university in North America has one or more Indian mathematicians, statisticians or computer scientists on its faculty.

There are a few accounts of mathematics research in 20th century India. Notable among them are those by Varadarajan[1], Narasimhan[2] and Seshadri,[3] all outstanding

2

mathematicians. They have written from the perspective of professional researchers trying to look at achievements of Indian mathematics, both of individuals and of institutions. In contrast, this report is written from the perspective of scientometricists trying to map mathematics research in India by analysing the published literature. There is another difference: While the three eminent mathematicians have covered several decades, we have analysed the research output over two selected years, 1990 and 1994.

The words "Indian mathematics" evoke in the minds of most people the images of Ramanujan and the well-known mathematicians of ancient India such as Aryabhatta, *Bhaskara and Brahmagupta. But what about more recent times?* Narasimhan[2] has chronicled the work of Indian mathematicians in the first half of the Twentieth Century, who under very difficult circumstances kept mathematical traditions alive in India. He singles out Calcutta and Madras as the two most important centres and has paid handsome tributes to K Anand Rau, R Vaidyanathaswamy, T Vijayaraghavan, S S Pillai and S Minakshisundaram of the Madras school, Syamdas Mukhopadhyay, Nikhilranjan Sen, Rabindranath Sen, P C Mahalnobis [founder of Indian Statistical Institute (ISI), Calcutta], and R C Bose of the Calcutta school, and Komaravolu Chandrasekharan [who founded the school of mathematics at Tata Institute of Fundamental Research (TIFR), Bombay] and C T Rajagopal (Ramanujan Institute, Madras). Narasimhan[2] pays glowing tributes to C P Ramanujam, "certainly one of the most powerful mathematical minds to emerge in India since the mid-fifties" and "in many ways, a singular figure."

Varadarajan[1] and Seshadri[3] have written brief accounts of mathematics in post-Independent India. Both of them highlight the very important role played by TIFR, largely thanks to the initial leadership of K Chandrasekharan, and ISI, Calcutta, where C Radhakrishna Rao played a crucial role. Among those who made a mark in this period are C P Ramanujam and V K Patodi, both of whom died in the prime of their creative life, C S Seshadri, M S Narasimhan, M S Raghunathan, S Ramanan, K Ramachandra (all of TIFR), C R Rao, S R S Varadhan, V S Varadarajan (all three now in the USA), K R Parthasarathy, and R Ranga Rao (all of ISI, Calcutta). Mention must also be made of certain foreigners such as the Jesuit priest Fr Racine of France and F W Levi of Germany, *both of whom had worked in India and helped many young aspiring Indian mathematicians.*

In what follows, we have attempted to map India's contribution to the literature of mathematics and related fields as seen from two years (1990 and 1994) of *Mathsci* database on CD-ROM. We have identified the institutions active in publishing, the journals used and their impact factors, the subfields in which different institutions are active, etc. We have not extended the analysis to the contributions made by individuals. This study is in continuation of a series of studies on mapping India's contribution to different fields such as physics[4], biology[5], agriculture,[6] medicine,[7,8] materials science,[9] and science as a whole (based on data from *Science Citation Index*).[10] Our previous study on mathematics research in India was submitted as a report to NSTMIS-DST, New Delhi.[11]

Methodology

The techniques used for data collection and analysis are largely similar to our earlier studies.[4-9] Bibliographic data on documents originating from Indian institutions were downloaded from the *Mathsci* CD-ROM database, giving "(6-*" as the search command under 'IN' (for institution) for the disc years 1990 and 1994. This search picks up all entries having an Indian address in the byline irrespective of whether it is the address of the first author, second author or the last author. Unlike with some other bibliographic databases on CD-ROM, downloading such data from *Mathsci* database is simple and straightforward. The fields downloaded are: AU (author), PY (publication year), JN (journal title), LA (language), PC (subject descriptor), DT (document type), and IN (institution name).

The *Mathsci* database has 61 sections covering such diverse subfields as "History and biography", "information and communication, circuits", and "Functions of a complex variable." While most subfields are part of mainstream mathematics, some subfields are closely related to mathematics, such as "Statistics", "Computer science", "Astronomy and astrophysics", "Geophysics", "Quantum theory", and "Economics, operations research, programming, games".

Impact factor values for journals were noted from *Journal Citation Reports* 1994. Not all journals indexed in *Mathsci* are indexed in *Science Citation Index*, and those journals not indexed in *SCI* are not assigned an impact factor.

4

The data were analysed using programs generated inhouse using FoxPro, Excel and Access.

Findings

Mathsci has indexed 1319 publications from India in 1990 and 1391 in 1994. But for 14 of these papers written in Hindi, all the rest were in English (Table 1). In Table 2, we have classified the documents by document type, as given in the database. Journal papers account for 93.4% of all publications in 1990 and 94.5% in 1994. The publication years of papers indexed in the two disc years are given in Table 3. For some reason, the database lists more than one publication year in some entries.

Journals often used

Indian researchers have used 467 journals in these two years to publish 2,549 papers in the area of mathematics and related fields (Table 4) for an average of 5.5 papers per journal in two years. Apart from the title of the journal, we have listed in this table, the country of publication of the journal and the impact factors of the journals as seen from *Journal Citation Reports*. As not all journals are listed in JCR, we have shown zero impact factor for all non-*JCR* journals. The three journals that have published the largest number of papers from India are Indian journals. The next two are American journals, one of them a statistics journal. Thirteen of the twenty journals often used by Indian mathematicians to publish their work are Indian journals. India has published more than ten papers in the two years in 66 journals and more than 20 papers in 27 journals. At the other extreme, India has published just one paper in 174 journals and two papers each in 76 journals. Figure 1 is a plot of number of journals vs. cumulative number of articles. Table 4A lists the same journals as in Table 4, but in the order of descending journal impact factor. Only 221 journals have an impact factor; all the 246 others are not indexed in *SCI* and *JCR*.

Distribution by subfield

Table 5 gives the distribution of the papers by subfield. In all, there are 61 subfields, but Indians are really active only in about half of them. The fields in which

5

Indian researchers have published large number of papers are: Statistics (code 62), General topology (54), Quantum theory (81), Special functions (33), Economics and operations research (90), and Relativity and gravitation (83). We have calculated the activity index (AI) for each subfield for both 1990 and 1994 using the formula[12]:

$$AI = \frac{\text{the world share of the given country in publication in the given field}}{\text{The overall world share of the given country in publications}}$$

or

$$AI = \frac{\text{the share of the given field in the publication of the given country}}{\text{the share of the given field in the world total of publications}}$$

We have also calculated the relative specialization index (RSI) (Table 6), using the formula

$$RSI = (AI - 1)/(AI + 1).$$

Both Special functions and Integral transforms have recorded a reasonably high activity index in 1990 and a lower value in 1994. In contrast, in General topology, India has recorded a reasonably high activity index in both 1990 and 1994 (Table 5). There are fields like Statistics and Associative rings, where the activity index has remained at a moderate level and within a small range in both 1990 and 1994. In the case of Sequences, series and summability, the activity index has risen sharply from 1.57 in 1990 to 3.18 in 1994. In many subfields the activity is less than 1.0, meaning that the activity in those fields are below the country's overall average. Table 6 lists the relative specialization indices for the different subfields in 1990 and 1994. It should be remembered that no country (or organization) can have positive RSIs for all subfields.

Distribution by journal country

The distribution of papers by country of publication of journal is shown in Table 7. Apart from Indian journals, Indian researchers publish their work often in US journals

and to a lesser extent in journals published from the Netherlands, UK and Germany. In all, in these two years, Indian work has appeared in journals published from more than 40 countries. The 62 Indian journals in which Indian mathematics papers have appeared are listed in Table 8. About 42.5% of journal papers in 1990 and 36.1% of journal papers in 1994 were published in Indian journals. This figure has come down to about 20% in 1998.[13] Of the 2,549 journal papers, 1369 (nearly 54%) have been published in journals not listed in *JCR*, and 753 (less than 30%) in journals whose impact factor is less than 0.5 (Table 9). Only 62 papers have appeared in journals with an impact factor greater than 3.0, and only 29 in journals with impact factor greater than 3.5. It may be noted that many of these higher impact journals are in the area of physics. Most mathematics journals have a low impact factor.

Distribution by institution

Table 10 lists the 188 Indian institutions that have published papers which have been indexed in *Mathsci* in 1990 and/or 1994. Figure 2 is a plot of number of institutions vs. cumulative number of papers. Well-known mathematics research centers such as the Tata Institute of Fundamental Research, University of Calcutta, Indian Statistical Institute, top the list. Please note that we have not clubbed different centers of Indian Statistical Institute into one entry in this table. While TIFR and University of Calcutta have published fewer papers in 1994 than in 1990, ISI and Indian Institute of Science, Bangalore, have published a larger number of papers in 1994 than in 1990. Table 11 provides a breakup of papers by institutional type. Academic institutions perform the bulk of mathematics research in India. This despite the fact that we have assigned ISI to the Ministry of Planning.

Distribution by city and state

Table 12 lists the number of publications that have come out of different cities and towns and Table 13 the number of publications from different states / union territories. Papers have come from 110 cities/ towns. Calcutta, New Delhi, Mumbai (Bombay), Chennai (Madras), Bangalore, Varanasi and Aligarh lead the rest of India as do West Bengal, Uttar Pradesh, Maharashtra, Tamil Nadu and Delhi among states.

Distribution by institution type

Table 14 lists the institutions under different organizational types. The Department of Atomic Energy's support of mathematics research is evident. However, academic institutions publish the largest number of papers. Figure 3 shows the distribution of papers by institutional type. Academic institutions account for the bulk of India's research output in mathematics and related areas.

Institutional strengths and journals preferred

Table 15 and 16 are in the form of a matrix giving information on the number of papers published by selected institutions in different journals in the two years.

Tables 17 and 18 list papers from selected institutions under journals in different impact factor ranges in the two years. Tata Institute of Fundamental research and Indian Institute of Science have a few papers in the higher impact factor ranges.

Tables 19 and 20 classify papers from selected institutions into different subfields. The large number of zeros indicates that many institutions do not publish work in all subfields. One also notices that institutional strengths have remained the same in both years. For example, Marathwada University has published many papers in Real functions and Hari Singh Gaur University in General topology.

Conclusion

This is a macroscopic study and we have analysed up to the institutional level and not gone to the departmental or individual level. There had been a slight increase in the number of publications in 1994, but as another study by us had shown there had been a considerable decline in 1998. Calcutta, New Delhi, Bombay, Madras, and Bangalore are the major centers of research. TIFR, ISI, and University of Calcutta are the leading institutions. Universities seem to be doing less and less, and publishing in low impact journals.[14] That is not a good sign. Statistics, General topology and Quantum theory are the subfields in which Indian researchers publish large number of papers.

References

1. Varadarajan, V.S. Mathematics in and out of Indian universities, *The Mathematical Intelligencer*, 1983, 5:38-42.

2. Narasimhan, R. The coming age of mathematics in India, In: P. Hilton, F. Hirzebruch, R REMMERT (Eds) Miscellanaea Mathematica., Berlin: Springer – Verlag, 1991, 235-258.

3. Seshadri, C. S. Mathematics in India during the last fifty years, talk delivered at the Indo-French Seminor on History of Development of Science in India and in France, Madras, October 1992.

4. Arunachalam, S. and Dhawan, M. *Physics research in India: An analysis based on Physics Abstracts 1992.* Report submitted to NSTMIS, Department of Science and Technology, New Delhi. 1996.

5. Arunachalam, S. Mapping life sciences research in India: A profile based on BIOSIS 1992 –1994. *Current Science*, 1999, **76:** 1191-1203.

6. Arunachalam, S. *Agricultural Research in India – A profile Based on CAB Abstracts 1990 – 1994.* Report submitted to NISSAT, DSIR, New Delhi, 1998.

7. Arunachalam, S. How relevant is medical research done in India? – A study based on Medline. *Current Science*, 1997, **72**: 912-922.

8. Arunachalam, S. Does India perform medical research in areas where it is most needed? *National Medical Journal of India*, 1998, 11: 27-34.

9. Arunachalam, S. Meyyappan, N. and Sridhar, G.S. *India's Contribution to the Literature of Materials Science and Related Fields: An Analysis Based on Materials Science Citation Index 1991 – 1994*, Report submitted to submitted to NSTMIS-DST, New Delhi, March 1998.

10. Arunachalam, S. and Srinivasan, R. *Science in India: A Profile based on India's Publications as covered by Science Citation Index 1989 – 1992*, Report submitted to NSTMIS-DST, New Delhi, March 1998.

11. Arunachalam, S. *India's Contribution to the Literature of Mathematics and related fields: An Analysis Based on MATHSCI 1988 – mid 1995*, Report submitted to NSTMIS-DST, New Delhi, March 1998.

12. European Commission, EUR 17639 - *Second European Report on S&T Indicators 1997.* Luxembourg: Office of the Official Publications of the European Communities. December 1997. Appendix, p. M-23.

13 Arunachalam, S. and Rino, S. I. *Mathematical Research in India in 1998: An Analysis based on Mathsci*, Report submitted to NISSAT-DSIR, October 2001.

14 Arunachalam, S. Mathematics research in India today: What does the literature reveal? *Scientometrics.* 2001, **52**:235-259.

Tables

Table 1: Indian papers covered by *MATHSCI* 1990 and 1994 classified by language

No.	Language	No. of papers		
		1990	1994	Total
1	English	1308	1388	2696
2	Hindi	11	3	14
	Total	1319	1391	2710

Table 2: Indian papers covered by *MATHSCI* 1990 and 1994 classified by document type

No.	Document type	No. of papers		
		1990	1994	Total
1	Book	9	8	17
2	Journal	1232	1314	2546
3	Journal, Journal-Translation	0	3	3
4	Proceedings-Paper	78	66	144
	Total	1319	1391	2710

Table 3: Number of papers published in various years
as seen from MATHSCI 1990 and 1994

No.	Publication year	No. of papers			Papers %
		1990	1994	Total	
1	1989; 1990 *	2	0	2	0.08
2	1990	1270	0	1270	46.87
3	1990; 1991	47	0	47	1.73
4	1991; 1992; 1993; 1994	0	15	15	0.55
5	1992; 1993; 1994; 1995; 1996	0	10	10	0.36
6	1993; 1994	0	8	8	0.29
7	1994	0	1343	1343	49.57
8	1994; 1995	0	15	15	0.55
	Total	1319	1391	2710	100.00

* In some entries more than one year is mentioned against PY.

Table 4: Journals used by Indian researchers for publishing their papers
as seen from *MATHSCI* 1990 and 1994
(arranged by number of papers)

No.	Journal title (abbreviations as in *Mathsci*)	IF [a]	Pub Country	No. of papers 1990	1994	Total
1	Indian-J.-Pure-Appl.-Math.	0.049	IN	64	47	111
2	Bull.-Calcutta-Math.-Soc.	0.000	IN	44	40	84
3	Acta-Cienc.-Indica-Math.	0.000	IN	38	35	73
4	Comm.-Statist.-Theory-Methods	0.152	US	30	15	45
5	J.-Math.-Anal.-Appl.	0.338	US	18	27	45
6	Proc.-Indian-Acad.-Sci.-Math.-Sci.	0.021	IN	21	24	45
7	J.-Phys.-A	1.779	GB	20	20	40
8	Fuzzy-Sets-and-Systems	0.610	NL	13	25	38
9	Math.-Ed. (Siwan)	0.000	IN	21	17	38
10	J.-Indian-Math.-Soc. (N.S.)	0.000	IN	13	19	32
11	Calcutta-Statist.-Assoc.-Bull.	0.000	IN	23	8	31
12	J.-Indian-Acad.-Math.	0.000	IN	13	17	30
13	Modern-Phys.-Lett.-A	1.172	SG	12	18	30
14	Phys.-Lett.-A	1.228	NL	14	13	27
15	Pure-Math.-Manuscript	0.000	IN	26	0	26
16	Astrophys.-Space-Sci.	0.310	NL	24	1	25
17	Indian-J.-Math.	0.000	IN	15	9	24
18	J.-Math.-Phys.-Sci.	0.000	IN	17	7	24
19	Math.-Student	0.000	IN	8	16	24
20	J.-Natur.-Phys.-Sci.	0.000	IN	8	15	23
21	Proc.-Math.-Soc.	0.000	IN	13	10	23
22	Internat.-J.-Math.-Math.-Sci.	0.000	US	13	9	22
23	Internat.-J.-Theoret.-Phys.	0.345	US	12	10	22
24	Pure-Appl.-Math.-Sci.	0.000	IN	11	11	22
25	J.-Math.-Phys.	0.969	US	11	10	21
26	J.-Nat.-Acad.-Math.-India	0.000	IN	12	9	21
27	J.-Statist.-Plann.-Inference	0.145	NL	8	13	21
28	J.-Fuzzy-Math.	0.000	US	0	20	20
29	J.-Indian-Soc.-Agricultural-Statist.	0.000	IN	11	8	19
30	Linear-Algebra-Appl.	0.430	US	8	11	19
31	Jnanabha	0.000	IN	9	9	18
32	Nuclear-Phys.-B	3.722	NL	10	8	18
33	Soochow-J.-Math.	0.000	TW	4	14	18
34	Statist.-Probab.-Lett.	0.257	NL	8	10	18
35	Ganita	0.000	IN	7	10	17
36	Ganita-Sandesh	0.000	IN	10	7	17
37	Tamkang-J.-Math.	0.000	TW	11	6	17

No.	Journal title (abbreviations as in *Mathsci*)	IF [a]	Pub Country	No. of papers		
				1990	1994	Total
38	Aligarh-Bull.-Math.	0.000	IN	7	9	16
39	J.-Indian-Statist.-Assoc.	0.000	IN	8	8	16
40	Phys.-Lett.-B	3.056	NL	8	8	16
41	Progr.-Math. (Varanasi)	0.000	IN	5	11	16
42	Demonstratio-Math.	0.000	PL	9	6	15
43	Inform.-Process.-Lett.	0.311	NL	6	9	15
44	Gen.-Relativity-Gravitation	0.670	US	4	10	14
45	Phys.-Rev.-D (3)	3.233	US	8	6	14
46	Proc.-Amer.-Math.-Soc.	0.236	US	4	10	14
47	Internat.-J.-Modern-Phys.-A	1.519	SG	3	10	13
48	J.-Ramanujan-Math.-Soc.	0.000	IN	4	9	13
49	Opsearch	0.000	IN	4	9	13
50	Proc.-Nat.-Acad.-Sci.-India-Sect.-A	0.000	IN	6	7	13
51	Sankhya-Ser.-B	0.000	IN	8	5	13
52	Vijnana-Parishad-Anusandhan-Patrika	0.000	IN	10	3	13
53	Classical-Quantum-Gravity	1.652	GB	8	4	12
54	Comput.-Math.-Appl.	0.304	GB	1	11	12
55	Internat.-J.-Systems-Sci.	0.146	GB	9	3	12
56	Math.-Today	0.000	IN	5	7	12
57	Optimization	0.000	CH	2	10	12
58	IAPQR-Trans.	0.000	IN	8	3	11
59	J.-Austral.-Math.-Soc.-Ser.-B	0.450	AU	3	8	11
60	Statistica (Bologna)	0.000	IT	7	4	11
61	An.-Stiint.-Univ.-``Al.-I.-Cuza''-Iasi-Sect.-I-a-Mat.	0.000	RO	7	3	10
62	Ganita-Bharati	0.000	IN	4	6	10
63	Hadronic-J.	0.000	US	5	5	10
64	Metrika	0.000	DE	5	5	10
65	Phys.-Rev.-A (3)	2.292	US	8	2	10
66	Ultra-Sci.-Phys.-Sci.	0.000	IN	0	10	10
67	Appl.-Math.-Comput.	0.241	US	5	4	9
68	J.-Bihar-Math.-Soc.	0.000	IN	9	0	9
69	Real-Anal.-Exchange	0.000	US	4	5	9
70	Sankhya-Ser.-A	0.000	IN	7	2	9
71	Sci.-Phys.-Sci.	0.000	IN	9	0	9
72	Bull.-Allahabad-Math.-Soc.	0.000	IN	3	5	8
73	Comm.-Algebra	0.288	US	4	4	8
74	Discrete-Math.	0.237	NL	2	6	8
75	Far-East-J.-Math.-Sci.	0.000	IN	0	8	8
76	J.-Algebra	0.468	US	4	4	8
77	J.-Optim.-Theory-Appl.	0.316	US	5	3	8

No.	Journal title (abbreviations as in *Mathsci*)	IF [a]	Pub Country	No. of papers		
				1990	1994	Total
78	Metron	0.000	IT	6	2	8
79	Utilitas-Math.	0.124	CA	4	4	8
80	Acta-Math.-Hungar.	0.176	HU	2	5	7
81	Appl.-Math.-Lett.	0.242	US	3	4	7
82	Bull.-Inst.-Math.-Acad.-Sinica	0.000	TW	4	3	7
83	Bull.-Math.-Soc.-Sci.-Math.-R.-S.-Roumanie (N.S.)	0.000	RO	4	3	7
84	Bull.-Pure-Appl.-Sci.-Sec.-E-Math.	0.000	IN	0	7	7
85	Current-Sci.	0.271	IN	0	7	7
86	Inform.-Sci.	0.266	US	2	5	7
87	J.-Appl.-Math.-Stochastic-Anal.	0.000	US	5	2	7
88	J.-Pure-Math.	0.000	IN	7	0	7
89	Nat.-Acad.-Sci.-Lett.	0.054	IN	7	0	7
90	Nonlinear-Anal.	0.380	GB	5	2	7
91	Note-Mat.	0.000	IT	2	5	7
92	Phys.-Rev.-Lett.	6.626	US	5	2	7
93	Sadhana	0.041	IN	1	6	7
94	Statist.-Decisions	0.000	DE	0	7	7
95	Acta-Phys.-Hungar.	0.000	HU	6	0	6
96	Aligarh-J.-Statist.	0.000	IN	3	3	6
97	Bull.-Austral.-Math.-Soc.	0.266	AU	4	2	6
98	Compositio-Math.	0.478	NL	5	1	6
99	Fortschr.-Phys.	0.800	DE	3	3	6
100	IEEE-Trans.-Comput.	0.904	US	2	4	6
101	Istanbul-Univ.-Fen-Fak.-Mat.-Derg.	0.000	TR	0	6	6
102	J.-Appl.-Probab.	0.432	GB	2	4	6
103	J.-Austral.-Math.-Soc.-Ser.-A	0.200	AU	3	3	6
104	J.-Math.-Res.-Exposition	0.000	CN	3	3	6
105	J.-Maulana-Azad-College-Tech.	0.000	IN	6	0	6
106	Kyungpook-Math.-J.	0.000	KR	1	5	6
107	Math.-Balkanica (N.S.)	0.000	BG	3	3	6
108	Oper.-Res.-Lett.	0.235	NL	3	3	6
109	Acta-Arith.	0.192	PL	4	1	5
110	Acta-Sci.-Math. (Szeged)	0.000	HU	1	4	5
111	Ann.-Inst.-Statist.-Math.	0.175	JP	5	0	5
112	Ann.-Physics	0.000	US	3	2	5
113	Asia-Pacific-J.-Oper.-Res.	0.053	SG	2	3	5
114	Canad.-J.-Phys.	0.408	CA	4	1	5
115	Colloq.-Math.	0.000	PL	3	2	5
116	Comm.-Math.-Phys.	2.282	DE	2	3	5
117	Comm.-Numer.-Methods-Engrg.	0.367	GB	0	5	5

No.	Journal title (abbreviations as in *Mathsci*)	IF [a]	Pub Country	No. of papers		
				1990	1994	Total
118	Complex-Variables-Theory-Appl.	0.000	CH	2	3	5
119	Fibonacci-Quart.	0.245	US	2	3	5
120	Glas.-Mat.-Ser. III	0.000	YU	1	4	5
121	Hadronic-J.-Suppl.	0.000	US	2	3	5
122	Internat.-J.-Engrg.-Sci.	0.633	GB	2	3	5
123	Internat.-J.-Math.-Ed.-Sci.-Tech.	0.000	GB	1	4	5
124	J.-Number-Theory	0.268	US	2	3	5
125	J.-Reine-Angew.-Math.	0.557	DE	1	4	5
126	J.-Sound-Vibration	0.696	US	2	3	5
127	J.-Statist.-Res.	0.000	BD	3	2	5
128	Math.-Ann.	0.512	DE	5	0	5
129	Phys.-Scripta	0.991	SE	2	3	5
130	Southeast-Asian-Bull.-Math.	0.000	SG	2	3	5
131	Statistics	0.000	DE	1	4	5
132	Vikram-Math.-J.	0.000	IN	5	0	5
133	Anal.-Math.	0.000	HU	2	2	4
134	Approx.-Theory-Appl. (N.S.)	0.000	CN	1	3	4
135	Arch.-Math. (Basel)	0.232	CH	0	4	4
136	Ars-Combin.	0.153	CA	2	2	4
137	Austral.-J.-Statist.	0.000	AU	3	1	4
138	Biometrika	0.832	GB	4	0	4
139	Boll.-Un.-Mat.-Ital.-A (7)	0.000	IT	1	3	4
140	Caribbean-J.-Math.-Comput.-Sci.	0.000	BB	0	4	4
141	Chinese-J.-Math.	0.000	CN	2	2	4
142	Comm.-Statist.-Simulation-Comput.	0.165	US	1	3	4
143	Comm.-Theoret.-Phys. (Allahabad)	0.000	IN	0	4	4
144	Enseign.-Math. (2)	0.000	CH	3	1	4
145	Graphs-Combin.	0.215	JP	0	4	4
146	IEEE-Trans.-Automat.-Control	0.867	US	0	4	4
147	Indian-J.-Hist.-Sci.	0.000	IN	1	3	4
148	J.-Anal.	0.000	IN	0	4	4
149	J.-Approx.-Theory	0.410	US	2	2	4
150	J.-Assam-Sci.-Soc.	0.000	IN	0	4	4
151	J.-Funct.-Anal.	0.647	US	3	1	4
152	J.-Inform.-Optim.-Sci.	0.000	IN	1	3	4
153	J.-Multivariate-Anal.	0.304	US	4	0	4
154	J.-Operator-Theory	0.000	RO	2	2	4
155	J.-Pure-Appl.-Algebra	0.359	NL	2	2	4
156	Math.-Biosci.	0.722	US	2	2	4
157	Math.-Japon.	0.000	JP	2	2	4
158	Pacific-J.-Math.	0.380	US	2	2	4
159	Period.-Math.-Hungar.	0.000	HU	2	2	4

No.	Journal title (abbreviations as in *Mathsci*)	IF [a]	Pub Country	No. of papers		
				1990	1994	Total
160	Proc.-Indian-Nat.-Sci.-Acad.-Part-A	0.000	IN	4	0	4
161	Publ.-Math.-Debrecen	0.137	HU	1	3	4
162	Rev.-Roumaine-Math.-Pures-Appl.	0.000	RO	1	3	4
163	Sequential-Anal.	0.000	US	2	2	4
164	Serdica	0.000	BG	2	2	4
165	Statist.-Papers	0.000	DE	0	4	4
166	Z.-Anal.-Anwendungen	0.000	DE	0	4	4
167	Z.-Angew.-Math.-Mech.	0.170	DE	2	2	4
168	Acta-Appl.-Math.	0.270	NL	1	2	3
169	Acta-Math.-Vietnam.	0.000	VN	2	1	3
170	An.-Univ.-Timisoara-Ser.-Mat.-Inform.	0.000	RO	0	3	3
171	Ann.-Statist.	0.780	US	1	2	3
172	Artificial-Intelligence	1.915	NL	1	2	3
173	Canad.-J.-Math.	0.336	CA	2	1	3
174	Canad.-Math.-Bull.	0.225	CA	2	1	3
175	Comm.-Fac.-Sci.-Univ.-Ankara-Ser.-A$\sb-1$-Math.-Statist.	0.000	TR	0	3	3
176	Czechoslovak-Math.-J.	0.115	CZ	0	3	3
177	Duke-Math.-J.	0.607	US	1	2	3
178	Econom.-Lett.	0.000	.NL	3	0	3
179	Games-Econom.-Behav.	0.000	US	0	3	3
180	Geom.-Dedicata	0.302	NL	1	2	3
181	Hardy-Ramanujan-J.	0.000	IN	3	0	3
182	Helv.-Phys.-Acta	0.657	CH	1	2	3
183	Internat.-J.-Game-Theory	0.189	DE	3	0	3
184	Internat.-J.-Management-Systems	0.000	IN	3	0	3
185	J.-Comput.-Appl.-Math.	0.349	NL	1	2	3
186	J.-Fract.-Calc.	0.000	JP	0	3	3
187	J.-Graph-Theory	0.246	US	2	1	3
188	J.-Inst.-Math.-Comput.-Sci.-Math.-Ser.	0.000	IN	0	3	3
189	J.-Phys.-Soc.-Japan	1.920	JP	1	2	3
190	Lett.-Math.-Phys.	1.056	NL	1	2	3
191	Manuscripta-Math.	0.276	DE	3	0	3
192	Mat.-Vesnik	0.000	YU	3	0	3
193	Math.-Chronicle	0.000	NZ	3	0	3
194	Math.-Comput.-Modelling	0.286	GB	1	2	3
195	Math.-Z.	0.384	DE	2	1	3
196	Monthly-Notices-Roy.-Astronom.-Soc.	3.089	GB	3	0	3
197	Nonlinear-World	0.000	DE	0	3	3
198	Numer.-Funct.-Anal.-Optim.	0.378	US	2	1	3

No.	Journal title (abbreviations as in *Mathsci*)	IF [a]	Pub Country	No. of papers		
				1990	1994	Total
199	Pakistan-J.-Statist.	0.000	PK	1	2	3
200	Parallel-Comput.	0.420	NL	0	3	3
201	Pattern-Recognition	0.691	GB	2	1	3
202	Publ.-Res.-Inst.-Math.-Sci.	0.305	JP	0	3	3
203	Rad.-Mat.	0.000	BA	2	1	3
204	Rend.-Circ.-Mat.-Palermo (2)	0.000	IT	2	1	3
205	Rev.-Mat.-Iberoamericana	0.000	ES	2	1	3
206	Rev.-Tecn.-Fac.-Ingr.-Univ.-Zulia	0.000	VE	2	1	3
207	Riv.-Mat.-Univ.-Parma (4)	0.000	IT	3	0	3
208	Riv.-Mat.-Univ.-Parma (5)	0.000	IT	0	3	3
209	SIAM-J.-Comput.	0.727	US	0	3	3
210	SIAM-J.-Matrix-Anal.-Appl.	1.000	US	2	1	3
211	SIAM-J.-Numer.-Anal.	1.021	US	2	1	3
212	Signal-Process.	0.440	NL	3	0	3
213	Stud.-Appl.-Math.	0.673	US	2	1	3
214	Studia-Univ.-Babes-Bolyai-Math.	0.000	RO	1	2	3
215	Topology-Appl.	0.196	NL	1	2	3
216	Translation: Theoret.-and-Math.-Phys.	0.395	US	0	3	3
217	Z.-Angew.-Math.-Phys.	0.388	CH	0	3	3
218	Acta-Math.-Sci. (English Ed.)	0.059	NL	0	2	2
219	Acta-Mech.	0.464	AT	1	1	2
220	Amer.-J.-Math.	0.553	US	0	2	2
221	Ann.-Appl.-Probab.	0.000	US	0	2	2
222	Ann.-Probab.	0.680	US	1	1	2
223	Ann.-Scuola-Norm.-Sup.-Pisa-Cl.-Sci. (4)	0.000	IT	2	0	2
224	Ann.-Univ.-Sci.-Budapest.-Eotvos-Sect.-Math.	0.000	HU	2	0	2
225	Ann.-of-Math. (2)	1.449	US	1	1	2
226	Arch.-Rational-Mech.-Anal.	0.864	DE	0	2	2
227	Astrophys.-J.	3.544	US	2	0	2
228	Automatica-J.-IFAC	0.000	GB	1	1	2
229	Biometrical-J.	0.165	DE	0	2	2
230	Boll.-Un.-Mat.-Ital.-B (7)	0.000	IT	1	1	2
231	Bul.-Stiint.-Tehn.-Univ.-Tehn.-Timisoara-Mat.-Fiz.	0.000	RO	0	2	2
232	Bull.-Malaysian-Math.-Soc. (2)	0.000	MY	2	0	2
233	Bull.-Vijnana-Parishad-India	0.000	IN	0	2	2
234	C.-R.-Acad.-Sci.-Paris-Ser.-I-Math.	0.314	FR	0	2	2
235	Celestial-Mech.-Dynam.-Astronom.	0.000	NL	1	1	2
236	Collect.-Math.	0.000	ES	1	1	2

No.	Journal title (abbreviations as in *Mathsci*)	IF [a]	Pub Country	No. of papers		
				1990	1994	Total
237	Comm.-Partial-Differential-Equations	0.479	US	2	0	2
238	Congr.-Numer.	0.000	CA	1	1	2
239	Discrete-Comput.-Geom.	0.764	US	0	2	2
240	Econometric-Theory	0.000	US	1	1	2
241	Ganit	0.000	IN	0	2	2
242	IEEE-Trans.-Circuits-and-Systems	0.732	US	2	0	2
243	IMA-J.-Math.-Appl.-Med.-Biol.	0.829	GB	2	0	2
244	Indag.-Math. (N.S.)	0.171	NL	1	1	2
245	Integral-Transform.-Spec.-Funct.	0.000	GB	0	2	2
246	Internat.-J.-Control	0.617	GB	1	1	2
247	Internat.-J.-Inform.-Management-Sci.	0.000	TW	1	1	2
248	Internat.-J.-Uncertain.-Fuzziness-Knowledge-Based-Systems	0.000	SG	0	2	2
249	Invent.-Math.	0.951	DE	1	1	2
250	Inverse-Problems	0.980	GB	1	1	2
251	J.-Combin.-Inform.-System-Sci.	0.000	IN	0	2	2
252	J.-Comput.-Phys.	1.084	US	0	2	2
253	J.-Econom.-Theory	0.000	US	1	1	2
254	J.-Indian-Inst.-Sci.	0.000	IN	1	1	2
255	J.-Modern-Opt.	1.005	GB	0	2	2
256	J.-Nonlinear-Math.-Phys.	0.000	RU	0	2	2
257	J.-Roy.-Statist.-Soc.-Ser.-B	2.538	GB	0	2	2
258	J.-Statist.-Phys.	1.524	US	1	1	2
259	Kybernetika (Prague)	0.193	CZ	0	2	2
260	Libertas-Math.	0.000	US	1	1	2
261	Linear-and-Multilinear-Algebra	0.000	CH	1	1	2
262	Math.-Notae	0.000	AR	0	2	2
263	Math.-Oper.-Res.	0.864	US	1	1	2
264	Math.-Scand.	0.220	DK	0	2	2
265	Math.-Social-Sci.	0.370	NL	1	1	2
266	Mathematica (Cluj)	0.000	RU	1	1	2
267	Mech.-Res.-Comm.	0.263	GB	1	1	2
268	Michigan-Math.-J.	0.250	US	0	2	2
269	Modern-Logic	0.000	US	0	2	2
270	Numer.-Methods-Partial-Differential-Equations	0.000	US	1	1	2
271	Osaka-J.-Math.	0.165	JP	1	1	2
272	Osterreich.-Akad.-Wiss.-Math.-Natur.-Kl.-Sitzungsber. II	0.000	AU	0	2	2
273	Phys.-A	1.310	NL	2	0	2
274	Portugal.-Math.	0.000	PT	0	2	2
275	Proc.-Edinburgh-Math.-Soc. (2)	0.429	GB	0	2	2

No.	Journal title (abbreviations as in *Mathsci*)	IF [a]	Pub Country	No. of papers		
				1990	1994	Total
276	Publ.-Inst.-Math. (Beograd) (N.S.)	0.000	YU	0	2	2
277	Quart.-Appl.-Math.	0.545	US	1	1	2
278	Rend.-Sem.-Mat.-Univ.-Politec.-Torino	0.000	IT	1	1	2
279	Rev.-Acad.-Canaria-Cienc.	0.000	BR	0	2	2
280	Rev.-Bull.-Calcutta-Math.-Soc.	0.000	IN	0	2	2
281	Rev.-Math.-Phys.	0.000	SG	0	2	2
282	SIAM-J.-Control-Optim.	0.968	US	0	2	2
283	SIAM-J.-Discrete-Math.	0.475	US	0	2	2
284	South-African-Statist.-J.	0.158	ZA	0	2	2
285	Statist.-Hefte	0.000	DE	2	0	2
286	Stochastic-Anal.-Appl.	0.114	US	2	0	2
287	Tensor (N.S.)	0.000	JP	0	2	2
288	Theoret.-Comput.-Sci.	0.413	NL	1	1	2
289	Tohoku-Math.-J. (2)	0.250	JP	1	1	2
290	Turkish-J.-Math.	0.000	TR	0	2	2
291	Z.-Oper.-Res.	0.000	DE	1	1	2
292	Zb.-Rad.-Prirod.-Mat.-Fak.-Ser.-Mat.	0.000	YU	0	2	2
293	Zeszyty-Nauk.-Politech.-Rzeszowskiej-Mat.	0.000	PL	0	2	2
294	Acta-Sci.-Natur.-Univ.-Jilin.	0.000	CN	0	1	1
295	Acta-Tech.-CSAV	0.000	CZ	1	0	1
296	Adv.-Comput.-Math.	0.000	CH	0	1	1
297	Adv.-in-Appl.-Probab.	0.549	GB	1	0	1
298	Algebra-Colloq.	0.000	CN	0	1	1
299	Algorithmica	0.463	US	1	0	1
300	Amer.-J.-Phys.	0.550	US	0	1	1
301	Analysis	0.000	FR	0	1	1
302	Ann.-Acad.-Sci.-Fenn.-Ser.-A-I-Math.	0.169	FI	1	0	1
303	Ann.-Inst.-H.-Poincare-Anal.-Non-Lineaire	0.623	FR	1	0	1
304	Ann.-Mat.-Pura-Appl. (4)	0.120	IT	1	0	1
305	Ann.-Math.-Artificial-Intelligence	0.000	CH	0	1	1
306	Ann.-Physik (7)	0.000	DE	1	0	1
307	Ann.-Sci.-Math.-Quebec	0.000	CA	0	1	1
308	Ann.-Univ.-Mariae-Curie-Sklodowska-Sect.-A	0.000	PL	1	0	1
309	Appl.-Algebra-Engrg.-Comm.-Comput.	0.000	DE	0	1	1
310	Appl.-Anal.	0.000	CH	0	1	1

No.	Journal title (abbreviations as in *Mathsci*)	IF [a]	Pub Country	No. of papers		
				1990	*1994*	*Total*
311	Appl.-Math.-Modelling	0.271	US	1	0	1
312	Appl.-Math.-Notes	0.000	CA	1	0	1
313	Appl.-Math.-Optim.	0.574	DE	1	0	1
314	Arch.-Math. (Brno)	0.000	CS	1	0	1
315	Asterisque	0.286	FR	0	1	1
316	Astronom.-and-Astrophys.	2.328	DE	1	0	1
317	Asymptotic-Anal.	0.000	NL	0	1	1
318	Atti-Sem.-Mat.-Fis.-Univ.-Modena	0.000	IT	1	0	1
319	Bol.-Soc.-Brasil.-Mat. (N.S.)	0.000	BR	1	0	1
320	Bul.-Univ.-Brasov-Ser.-C	0.000	RO	1	0	1
321	Bulgar.-J.-Phys.	0.000	BG	0	1	1
322	Bull.-Sci.-Math. (2)	0.347	FR	1	0	1
323	Bull.-Yamagata-Univ.-Natur.-Sci.	0.000	JP	0	1	1
324	C.-R.-Math.-Rep.-Acad.-Sci.-Canada	0.000	CA	0	1	1
325	Calc.-Var.-Partial-Differential-Equations	0.450	US	0	1	1
326	Chaos-Solitons-Fractals	0.000	GB	0	1	1
327	Circuits-Systems-Signal-Process.	0.357	US	1	0	1
328	Combinatorica	0.370	HU	0	1	1
329	Comm.-Anal.-Geom.	0.000	HK	0	1	1
330	Comm.-Statist.-Stochastic-Models	0.000	US	1	0	1
331	Comment.-Math.-Helv.	0.382	CH	1	0	1
332	Comment.-Math.-Prace-Mat.	0.000	PL	1	0	1
333	Comment.-Math.-Univ.-Carolin.	0.000	CZ	0	1	1
334	Comput.-Aided-Geom.-Design	0.000	NL	1	0	1
335	Comput.-Oper.-Res.	0.359	GB	1	0	1
336	Comput.-Statist.-Data-Anal.	0.431	NL	0	1	1
337	Comput.-and Fluids	0.442	GB	0	1	1
338	Comput.-and Structures	0.265	GB	0	1	1
339	Computing	0.424	AT	0	1	1
340	Control-Theory-Adv.-Tech.	0.185	JP	0	1	1
341	Differential-Equations-Dynam.-Systems	0.000	US	0	1	1
342	Differential-Integral-Equations	0.000	US	1	0	1
343	Discrete-Appl.-Math.	0.321	NL	1	0	1
344	Dynamic-Systems-Appl.	0.000	US	0	1	1
345	Estadistica	0.000	CH	1	0	1
346	European-J.-Combin.	0.309	GB	1	0	1
347	European-J.-Oper.-Res.	0.356	NL	1	0	1
348	Exposition.-Math.	0.000	DE	1	0	1
349	Extracta-Math.	0.000	ES	1	0	1
350	Found.-Phys.-Lett.	0.306	US	1	0	1

No.	Journal title (abbreviations as in *Mathsci*)	IF [a]	Pub Country	No. of papers		
				1990	1994	Total
351	Fukuoka-Univ.-Sci.-Rep.	0.000	JP	1	0	1
352	Fund.-Math.	0.253	PL	1	0	1
353	Glasgow-Math.-J.	0.337	GB	0	1	1
354	Hunan-Ann.-Math.	0.000	CN	0	1	1
355	IEEE-Trans.-Inform.-Theory	1.971	US	0	1	1
356	IEEE-Trans.-Systems-Man-Cybernet.	0.649	US	0	1	1
357	Indian-Sci.-Cruiser	0.000	IN	0	1	1
358	Indiana-Univ.-Math.-J.	0.400	US	0	1	1
359	Inst.-Hautes-Etudes-Sci.-Publ.-Math.	0.000	FR	1	0	1
360	Integral-Equations-Operator-Theory	0.298	CH	0	1	1
361	Internat.-Econom.-Rev.	0.000	US	1	0	1
362	Internat.-J.-Bifur.-Chaos-Appl.-Sci.-Engrg.	0.000	SG	0	1	1
363	Internat.-J.-Circuit-Theory-Appl.	0.627	GB	1	0	1
364	Internat.-J.-Found.-Comput.-Sci.	0.000	SG	1	0	1
365	Internat.-J.-Math.-Statist.-Sci.	0.000	US	0	1	1
366	Internat.-J.-Modern-Phys.-B	0.860	SG	1	0	1
367	Internat.-J.-Modern-Phys.-D	0.000	SG	0	1	1
368	Internat.-J.-Numer.-Methods-Engrg.	1.002	GB	0	1	1
369	Investigacion-Oper.	0.000	CU	1	0	1
370	Israel-J.-Math.	0.364	IL	0	1	1
371	J.-Algebraic-Geom.	0.000	HK	0	1	1
372	J.-Algorithms	0.430	US	0	1	1
373	J.-Amer.-Statist.-Assoc.	1.244	US	0	1	1
374	J.-Appl.-Statist.-Sci.	0.000	US	0	1	1
375	J.-Chengdu-Univ.-Sci.-Tech. (Chengdu)	0.000	CN	0	1	1
376	J.-College-Engrg.-Nihon-Univ.-Ser.-B	0.000	JP	1	0	1
377	J.-Combin.-Theory-Ser.-A	0.299	US	0	1	1
378	J.-Combin.-Theory-Ser.-B	0.669	US	0	1	1
379	J.-Comput.-Chem.	3.769	US	1	0	1
380	J.-Differential-Geom.	0.800	US	1	0	1
381	J.-Econometrics	1.449	NL	0	1	1
382	J.-Franklin-Inst.-B	0.252	US	0	1	1
383	J.-Geom.	0.000	CH	1	0	1
384	J.-Guidance-Control-Dynamics	0.407	US	1	0	1
385	J.-Indian-Soc.-Statist.-Oper.-Res.	0.000	IN	1	0	1
386	J.-Integral-Equations-Appl.	0.000	US	1	0	1
387	J.-Japan-Statist.-Soc.	0.000	JP	0	1	1

No.	Journal title (abbreviations as in *Mathsci*)	IF [a]	Pub Country	No. of papers		
				1990	1994	Total
388	J.-Korean-Statist.-Soc.	0.000	KP	0	1	1
389	J.-Logic-Programming	1.148	US	0	1	1
390	J.-London-Math.-Soc. (2)	0.485	GB	0	1	1
391	J.-Math.-Chem.	1.032	NL	1	0	1
392	J.-Math.-Pures-Appl. (9)	0.596	FR	1	0	1
393	J.-Math.-Sci.-Univ.-Tokyo	0.000	JP	0	1	1
394	J.-Math.-Sociol.	0.412	GB	1	0	1
395	J.-Nonparametr.-Statist.	0.000	CH	0	1	1
396	J.-Tech.-Phys.	0.000	PL	1	0	1
397	J.-Theoret.-Probab.	0.000	US	0	1	1
398	J.-Xinjiang-Univ.-Natur.-Sci.	0.000	CN	0	1	1
399	Kobe-J.-Math.	0.000	JP	0	1	1
400	Kybernetes	0.141	GB	0	1	1
401	Math.-Methods-Statist.	0.000	US	0	1	1
402	Math.-Montisnigri	0.000	YU	0	1	1
403	Math.-Nachr.	0.174	DE	0	1	1
404	Math.-Pannon.	0.000	HU	1	0	1
405	Math.-Proc.-Cambridge-Philos.-Soc.	0.417	GB	0	1	1
406	Mathematika	0.667	GB	1	0	1
407	Mem.-Fac.-Sci.-Kochi-Univ.-Ser.-A-Math.	0.000	JP	0	1	1
408	Modern-Phys.-Lett.-B	0.000	SG	0	1	1
409	Mohu-Xitong-yu-Shuxue	0.000	CN	0	1	1
410	Monatsh.-Math.	0.181	AT	0	1	1
411	Nagoya-Math.-J.	0.352	JP	1	0	1
412	Naval-Res.-Logist.	0.347	US	1	0	1
413	New-Zealand-J.-Math.	0.000	NZ	0	1	1
414	Nieuw-Arch.-Wisk. (4)	0.000	NL	1	0	1
415	Nonlinear-Times-Digest	0.000	US	0	1	1
416	Nonlinearity	1.474	GB	1	0	1
417	Nordic-J.-Comput.	0.000	FI	0	1	1
418	Nuclear-Phys.-B-Proc.-Suppl.	0.000	NL	1	0	1
419	Nuovo-Cimento-B (11)	0.305	IT	1	0	1
420	OR-Spektrum	0.081	DE	1	0	1
421	Oper.-Res.	0.729	US	0	1	1
422	Optimal-Control-Appl.-Methods	0.311	GB	1	0	1
423	Panamer.-Math.-J.	0.000	US	0	1	1
424	Philos.-Trans.-Roy.-Soc.-London-Ser.-A	1.547	GB	1	0	1
425	Phys.-D	2.070	NL	1	0	1
426	Phys.-Essays	0.039	CA	1	0	1
427	Phys.-Fluids	0.000	US	0	1	1

No.	Journal title (abbreviations as in *Mathsci*)	IF [a]	Pub Country	No. of papers		
				1990	1994	Total
428	Phys.-Fluids-A	1.782	US	1	0	1
429	Phys.-Fluids-B	1.897	US	1	0	1
430	Phys.-Rep.	6.541	NL	1	0	1
431	Phys.-Rev.-C (3)	1.842	US	1	0	1
432	Phys.-Rev.-E (3)	1.888	US	0	1	1
433	Polytech.-Inst.-Bucharest-Sci.-Bull.-Chem.-Materials-Sci.	0.000	RO	1	0	1
434	Probab.-Theory-Related-Fields	0.562	DE	1	0	1
435	Proc.-Roy.-Soc.-London-Ser.-A	1.272	GB	0	1	1
436	Publ.-Mat.	0.000	ES	0	1	1
437	Punjab-Univ.-J.-Math. (Lahore)	0.000	IN	0	1	1
438	Pure-Math.-Appl.-Ser.-B	0.000	HU	1	0	1
439	Qatar-Univ.-Sci.-J.	0.000	QA	0	1	1
440	Quaestiones-Math.	0.000	ZA	0	1	1
441	Quart.-J.-Math.-Oxford-Ser. (2)	0.319	GB	0	1	1
442	Questiio (2)	0.000	ES	0	1	1
443	Queueing-Systems-Theory-Appl.	0.000	CH	0	1	1
444	RAIRO-Inform.-Theor.-Appl.	0.180	FR	1	0	1
445	Random-Oper.-Stochastic-Equations	0.000	NL	0	1	1
446	Rebrape	0.000	BR	1	0	1
447	Rend.-Istit.-Mat.-Univ.-Trieste	0.000	IT	0	1	1
448	Rend.-Mat.-Appl. (7)	0.000	IT	0	1	1
449	Rend.-Sem.-Mat.-Univ.-Padova	0.000	IT	1	0	1
450	Rev.-Acad.-Cienc.-Zaragoza (2)	0.000	ES	0	1	1
451	Rev.-Econom.-Stud.	0.000	GB	1	0	1
452	Rev.-Mexicana-Fis.	0.198	MX	0	1	1
453	Riv.-Nuovo-Cimento (3)	1.792	IT	1	0	1
454	Rocky-Mountain-J.-Math.	0.161	US	0	1	1
455	Rostock.-Math.-Kolloq.	0.000	DE	0	1	1
456	SIAM-J.-Appl.-Math.	0.743	US	1	0	1
457	Scand.-J.-Statist.	0.564	SE	1	0	1
458	Shanghai-Keji-Daxue-Xuebao	0.000	CN	0	1	1
459	Soc.-Choice-Welf.	0.000	US	0	1	1
460	Surikaisekikenkyusho-Kokyuroku	0.000	JP	0	1	1
461	Symmetry-Cult.-Sci.	0.000	HU	1	0	1
462	Systems-Control-Lett.	0.689	NL	0	1	1
463	Systems-Sci.	0.000	PL	1	0	1
464	Teor.-Primen.-Meh.	0.000	YU	1	0	1
465	Transport-Theory-Statist.-Phys.	0.000	US	0	1	1
466	Wave-Motion	0.586	US	0	1	1
467	Yokohama-Math.-J.	0.000	JP	1	0	1
				1232	1317	2549
	Non journal papers			87	74	161
	Total			**1319**	**1391**	**2710**

* Item 216 is a translated version of a Russian journal
[a] Impact factor vaulues taken from *JCR - 1994*

Table 4A: Journals used by Indian researchers for publishing their papers
as seen from *MATHSCI* 1990 and 1994
(arranged by impact factor)

No.	Journal title (abbreviations as in *Mathsci*)	IF [a]	Pub Country	No. of papers		
				1990	1994	Total
1	Phys.-Rev.-Lett.	6.626	US	5	2	7
2	Phys.-Rep.	6.541	NL	1	0	1
3	J.-Comput.-Chem.	3.769	US	1	0	1
4	Nuclear-Phys.-B	3.722	NL	10	8	18
5	Astrophys.-J.	3.544	US	2	0	2
6	Phys.-Rev.-D (3)	3.233	US	8	6	14
7	Monthly-Notices-Roy.-Astronom.-Soc.	3.089	GB	3	0	3
8	Phys.-Lett.-B	3.056	NL	8	8	16
9	J.-Roy.-Statist.-Soc.-Ser.-B	2.538	GB	0	2	2
10	Astronom.-and-Astrophys.	2.328	DE	1	0	1
11	Phys.-Rev.-A (3)	2.292	US	8	2	10
12	Comm.-Math.-Phys.	2.282	DE	2	3	5
13	Phys.-D	2.070	NL	1	0	1
14	IEEE-Trans.-Inform.-Theory	1.971	US	0	1	1
15	J.-Phys.-Soc.-Japan	1.920	JP	1	2	3
16	Artificial-Intelligence	1.915	NL	1	2	3
17	Phys.-Fluids-B	1.897	US	1	0	1
18	Phys.-Rev.-E (3)	1.888	US	0	1	1
19	Phys.-Rev.-C (3)	1.842	US	1	0	1
20	Riv.-Nuovo-Cimento (3)	1.792	IT	1	0	1
21	Phys.-Fluids-A	1.782	US	1	0	1
22	J.-Phys.-A	1.779	GB	20	20	40
23	Classical-Quantum-Gravity	1.652	GB	8	4	12
24	Philos.-Trans.-Roy.-Soc.-London-Ser.-A	1.547	GB	1	0	1
25	J.-Statist.-Phys.	1.524	US	1	1	2
26	Internat.-J.-Modern-Phys.-A	1.519	SG	3	10	13
27	Nonlinearity	1.474	GB	1	0	1
28	Ann.-of-Math. (2)	1.449	US	1	1	2
29	J.-Econometrics	1.449	NL	0	1	1
30	Phys.-A	1.310	NL	2	0	2
31	Proc.-Roy.-Soc.-London-Ser.-A	1.272	GB	0	1	1
32	J.-Amer.-Statist.-Assoc.	1.244	US	0	1	1
33	Phys.-Lett.-A	1.228	NL	14	13	27
34	Modern-Phys.-Lett.-A	1.172	SG	12	18	30
35	J.-Logic-Programming	1.148	US	0	1	1
36	J.-Comput.-Phys.	1.084	US	0	2	2

No.	Journal title (abbreviations as in *Mathsci*)	IF [a]	Pub Country	No. of papers		
				1990	1994	Total
37	Lett.-Math.-Phys.	1.056	NL	1	2	3
38	J.-Math.-Chem.	1.032	NL	1	0	1
39	SIAM-J.-Numer.-Anal.	1.021	US	2	1	3
40	J.-Modern-Opt.	1.005	GB	0	2	2
41	Internat.-J.-Numer.-Methods-Engrg.	1.002	GB	0	1	1
42	SIAM-J.-Matrix-Anal.-Appl.	1.000	US	2	1	3
43	Phys.-Scripta	0.991	SE	2	3	5
44	Inverse-Problems	0.980	GB	1	1	2
45	J.-Math.-Phys.	0.969	US	11	10	21
46	SIAM-J.-Control-Optim.	0.968	US	0	2	2
47	Invent.-Math.	0.951	DE	1	1	2
48	IEEE-Trans.-Comput.	0.904	US	2	4	6
49	IEEE-Trans.-Automat.-Control	0.867	US	0	4	4
50	Arch.-Rational-Mech.-Anal.	0.864	DE	0	2	2
51	Math.-Oper.-Res.	0.864	US	1	1	2
52	Internat.-J.-Modern-Phys.-B	0.860	SG	1	0	1
53	Biometrika	0.832	GB	4	0	4
54	IMA-J.-Math.-Appl.-Med.-Biol.	0.829	GB	2	0	2
55	Fortschr.-Phys.	0.800	DE	3	3	6
56	J.-Differential-Geom.	0.800	US	1	0	1
57	Ann.-Statist.	0.780	US	1	2	3
58	Discrete-Comput.-Geom.	0.764	US	0	2	2
59	SIAM-J.-Appl.-Math.	0.743	US	1	0	1
60	IEEE-Trans.-Circuits-and-Systems	0.732	US	2	0	2
61	Oper.-Res.	0.729	US	0	1	1
62	SIAM-J.-Comput.	0.727	US	0	3	3
63	Math.-Biosci.	0.722	US	2	2	4
64	J.-Sound-Vibration	0.696	US	2	3	5
65	Pattern-Recognition	0.691	GB	2	1	3
66	Systems-Control-Lett.	0.689	NL	0	1	1
67	Ann.-Probab.	0.680	US	1	1	2
68	Stud.-Appl.-Math.	0.673	US	2	1	3
69	Gen.-Relativity-Gravitation	0.670	US	4	10	14
70	J.-Combin.-Theory-Ser.-B	0.669	US	0	1	1
71	Mathematika	0.667	GB	1	0	1
72	Helv.-Phys.-Acta	0.657	CH	1	2	3
73	IEEE-Trans.-Systems-Man-Cybernet.	0.649	US	0	1	1
74	J.-Funct.-Anal.	0.647	US	3	1	4
75	Internat.-J.-Engrg.-Sci.	0.633	GB	2	3	5
76	Internat.-J.-Circuit-Theory-Appl.	0.627	GB	1	0	1
77	Ann.-Inst.-H.-Poincare-Anal.-Non-Lineaire	0.623	FR	1	0	1
78	Internat.-J.-Control	0.617	GB	1	1	2

No.	Journal title (abbreviations as in *Mathsci*)	IF [a]	Pub Country	No. of papers		
				1990	1994	Total
79	Fuzzy-Sets-and-Systems	0.610	NL	13	25	38
80	Duke-Math.-J.	0.607	US	1	2	3
81	J.-Math.-Pures-Appl. (9)	0.596	FR	1	0	1
82	Wave-Motion	0.586	US	0	1	1
83	Appl.-Math.-Optim.	0.574	DE	1	0	1
84	Scand.-J.-Statist.	0.564	SE	1	0	1
85	Probab.-Theory-Related-Fields	0.562	DE	1	0	1
86	J.-Reine-Angew.-Math.	0.557	DE	1	4	5
87	Amer.-J.-Math.	0.553	US	0	2	2
88	Amer.-J.-Phys.	0.550	US	0	1	1
89	Adv.-in-Appl.-Probab.	0.549	GB	1	0	1
90	Quart.-Appl.-Math.	0.545	US	1	1	2
91	Math.-Ann.	0.512	DE	5	0	5
92	J.-London-Math.-Soc. (2)	0.485	GB	0	1	1
93	Comm.-Partial-Differential-Equations	0.479	US	2	0	2
94	Compositio-Math.	0.478	NL	5	1	6
95	SIAM-J.-Discrete-Math.	0.475	US	0	2	2
96	J.-Algebra	0.468	US	4	4	8
97	Acta-Mech.	0.464	AT	1	1	2
98	Algorithmica	0.463	US	1	0	1
99	J.-Austral.-Math.-Soc.-Ser.-B	0.450	AU	3	8	11
100	Calc.-Var.-Partial-Differential-Equations	0.450	US	0	1	1
101	Comput.-and Fluids	0.442	GB	0	1	1
102	Signal-Process.	0.440	NL	3	0	3
103	J.-Appl.-Probab.	0.432	GB	2	4	6
104	Comput.-Statist.-Data-Anal.	0.431	NL	0	1	1
105	Linear-Algebra-Appl.	0.430	US	8	11	19
106	J.-Algorithms	0.430	US	0	1	1
107	Proc.-Edinburgh-Math.-Soc. (2)	0.429	GB	0	2	2
108	Computing	0.424	AT	0	1	1
109	Parallel-Comput.	0.420	NL	0	3	3
110	Math.-Proc.-Cambridge-Philos.-Soc.	0.417	GB	0	1	1
111	Theoret.-Comput.-Sci.	0.413	NL	1	1	2
112	J.-Math.-Sociol.	0.412	GB	1	0	1
113	J.-Approx.-Theory	0.410	US	2	2	4
114	Canad.-J.-Phys.	0.408	CA	4	1	5
115	J.-Guidance-Control-Dynamics	0.407	US	1	0	1
116	Indiana-Univ.-Math.-J.	0.400	US	0	1	1

No.	Journal title (abbreviations as in *Mathsci*)	IF [a]	Pub Country	No. of papers		
				1990	1994	Total
117	Translation: Theoret.-and-Math.-Phys.	0.395	US	0	3	3
118	Z.-Angew.-Math.-Phys.	0.388	CH	0	3	3
119	Math.-Z.	0.384	DE	2	1	3
120	Comment.-Math.-Helv.	0.382	CH	1	0	1
121	Nonlinear-Anal.	0.380	GB	5	2	7
122	Pacific-J.-Math.	0.380	US	2	2	4
123	Numer.-Funct.-Anal.-Optim.	0.378	US	2	1	3
124	Math.-Social-Sci.	0.370	NL	1	1	2
125	Combinatorica	0.370	HU	0	1	1
126	Comm.-Numer.-Methods-Engrg.	0.367	GB	0	5	5
127	Israel-J.-Math.	0.364	IL	0	1	1
128	J.-Pure-Appl.-Algebra	0.359	NL	2	2	4
129	Comput.-Oper.-Res.	0.359	GB	1	0	1
130	Circuits-Systems-Signal-Process.	0.357	US	1	0	1
131	European-J.-Oper.-Res.	0.356	NL	1	0	1
132	Nagoya-Math.-J.	0.352	JP	1	0	1
133	J.-Comput.-Appl.-Math.	0.349	NL	1	2	3
134	Bull.-Sci.-Math. (2)	0.347	FR	1	0	1
135	Naval-Res.-Logist.	0.347	US	1	0	1
136	Internat.-J.-Theoret.-Phys.	0.345	US	12	10	22
137	J.-Math.-Anal.-Appl.	0.338	US	18	27	45
138	Glasgow-Math.-J.	0.337	GB	0	1	1
139	Canad.-J.-Math.	0.336	CA	2	1	3
140	Discrete-Appl.-Math.	0.321	NL	1	0	1
141	Quart.-J.-Math.-Oxford-Ser. (2)	0.319	GB	0	1	1
142	J.-Optim.-Theory-Appl.	0.316	US	5	3	8
143	C.-R.-Acad.-Sci.-Paris-Ser.-I-Math.	0.314	FR	0	2	2
144	Inform.-Process.-Lett.	0.311	NL	6	9	15
145	Optimal-Control-Appl.-Methods	0.311	GB	1	0	1
146	Astrophys.-Space-Sci.	0.310	NL	24	1	25
147	European-J.-Combin.	0.309	GB	1	0	1
148	Found.-Phys.-Lett.	0.306	US	1	0	1
149	Publ.-Res.-Inst.-Math.-Sci.	0.305	JP	0	3	3
150	Nuovo-Cimento-B (11)	0.305	IT	1	0	1
151	Comput.-Math.-Appl.	0.304	GB	1	11	12
152	J.-Multivariate-Anal.	0.304	US	4	0	4
153	Geom.-Dedicata	0.302	NL	1	2	3
154	J.-Combin.-Theory-Ser.-A	0.299	US	0	1	1
155	Integral-Equations-Operator-Theory	0.298	CH	0	1	1
156	Comm.-Algebra	0.288	US	4	4	8

No.	Journal title (abbreviations as in *Mathsci*)	IF [a]	Pub Country	No. of papers		
				1990	1994	Total
157	Math.-Comput.-Modelling	0.286	GB	1	2	3
158	Asterisque	0.286	FR	0	1	1
159	Manuscripta-Math.	0.276	DE	3	0	3
160	Current-Sci.	0.271	IN	0	7	7
161	Appl.-Math.-Modelling	0.271	US	1	0	1
162	Acta-Appl.-Math.	0.270	NL	1	2	3
163	J.-Number-Theory	0.268	US	2	3	5
164	Inform.-Sci.	0.266	US	2	5	7
165	Bull.-Austral.-Math.-Soc.	0.266	AU	4	2	6
166	Comput.-and Structures	0.265	GB	0	1	1
167	Mech.-Res.-Comm.	0.263	GB	1	1	2
168	Statist.-Probab.-Lett.	0.257	NL	8	10	18
169	Fund.-Math.	0.253	PL	1	0	1
170	J.-Franklin-Inst.-B	0.252	US	0	1	1
171	Michigan-Math.-J.	0.250	US	0	2	2
172	Tohoku-Math.-J. (2)	0.250	JP	1	1	2
173	J.-Graph-Theory	0.246	US	2	1	3
174	Fibonacci-Quart.	0.245	US	2	3	5
175	Appl.-Math.-Lett.	0.242	US	3	4	7
176	Appl.-Math.-Comput.	0.241	US	5	4	9
177	Discrete-Math.	0.237	NL	2	6	8
178	Proc.-Amer.-Math.-Soc.	0.236	US	4	10	14
179	Oper.-Res.-Lett.	0.235	NL	3	3	6
180	Arch.-Math. (Basel)	0.232	CH	0	4	4
181	Canad.-Math.-Bull.	0.225	CA	2	1	3
182	Math.-Scand.	0.220	DK	0	2	2
183	Graphs-Combin.	0.215	JP	0	4	4
184	J.-Austral.-Math.-Soc.-Ser.-A	0.200	AU	3	3	6
185	Rev.-Mexicana-Fis.	0.198	MX	0	1	1
186	Topology-Appl.	0.196	NL	1	2	3
187	Kybernetika (Prague)	0.193	CZ	0	2	2
188	Acta-Arith.	0.192	PL	4	1	5
189	Internat.-J.-Game-Theory	0.189	DE	3	0	3
190	Control-Theory-Adv.-Tech.	0.185	JP	0	1	1
191	Monatsh.-Math.	0.181	AT	0	1	1
192	RAIRO-Inform.-Theor.-Appl.	0.180	FR	1	0	1
193	Acta-Math.-Hungar.	0.176	HU	2	5	7
194	Ann.-Inst.-Statist.-Math.	0.175	JP	5	0	5
195	Math.-Nachr.	0.174	DE	0	1	1
196	Indag.-Math. (N.S.)	0.171	NL	1	1	2
197	Z.-Angew.-Math.-Mech.	0.170	DE	2	2	4
198	Ann.-Acad.-Sci.-Fenn.-Ser.-A-I-Math.	0.169	FI	1	0	1

No.	Journal title (abbreviations as in *Mathsci*)	IF [a]	Pub Country	No. of papers		
				1990	1994	Total
199	Comm.-Statist.-Simulation-Comput.	0.165	US	1	3	4
200	Biometrical-J.	0.165	DE	0	2	2
201	Osaka-J.-Math.	0.165	JP	1	1	2
202	Rocky-Mountain-J.-Math.	0.161	US	0	1	1
203	South-African-Statist.-J.	0.158	ZA	0	2	2
204	Ars-Combin.	0.153	CA	2	2	4
205	Comm.-Statist.-Theory-Methods	0.152	US	30	15	45
206	Internat.-J.-Systems-Sci.	0.146	GB	9	3	12
207	J.-Statist.-Plann.-Inference	0.145	NL	8	13	21
208	Kybernetes	0.141	GB	0	1	1
209	Publ.-Math.-Debrecen	0.137	HU	1	3	4
210	Utilitas-Math.	0.124	CA	4	4	8
211	Ann.-Mat.-Pura-Appl. (4)	0.120	IT	1	0	1
212	Czechoslovak-Math.-J.	0.115	CZ	0	3	3
213	Stochastic-Anal.-Appl.	0.114	US	2	0	2
214	OR-Spektrum	0.081	DE	1	0	1
215	Acta-Math.-Sci. (English Ed.)	0.059	NL	0	2	2
216	Nat.-Acad.-Sci.-Lett.	0.054	IN	7	0	7
217	Asia-Pacific-J.-Oper.-Res.	0.053	SG	2	3	5
218	Indian-J.-Pure-Appl.-Math.	0.049	IN	64	47	111
219	Sadhana	0.041	IN	1	6	7
220	Phys.-Essays	0.039	CA	1	0	1
221	Proc.-Indian-Acad.-Sci.-Math.-Sci.	0.021	IN	21	24	45
222	Bull.-Calcutta-Math.-Soc.	0.000	IN	44	40	84
223	Acta-Cienc.-Indica-Math.	0.000	IN	38	35	73
224	Math.-Ed. (Siwan)	0.000	IN	21	17	38
225	J.-Indian-Math.-Soc. (N.S.)	0.000	IN	13	19	32
226	Calcutta-Statist.-Assoc.-Bull.	0.000	IN	23	8	31
227	J.-Indian-Acad.-Math.	0.000	IN	13	17	30
228	Pure-Math.-Manuscript	0.000	IN	26	0	26
229	Indian-J.-Math.	0.000	IN	15	9	24
230	J.-Math.-Phys.-Sci.	0.000	IN	17	7	24
231	Math.-Student	0.000	IN	8	16	24
232	J.-Natur.-Phys.-Sci.	0.000	IN	8	15	23
233	Proc.-Math.-Soc.	0.000	IN	13	10	23
234	Internat.-J.-Math.-Math.-Sci.	0.000	US	13	9	22
235	Pure-Appl.-Math.-Sci.	0.000	IN	11	11	22
236	J.-Nat.-Acad.-Math.-India	0.000	IN	12	9	21
237	J.-Fuzzy-Math.	0.000	US	0	20	20
238	J.-Indian-Soc.-Agricultural-Statist.	0.000	IN	11	8	19
239	Jnanabha	0.000	IN	9	9	18
240	Soochow-J.-Math.	0.000	TW	4	14	18

No.	Journal title (abbreviations as in *Mathsci*)	IF [a]	Pub Country	No. of papers		
				1990	1994	Total
241	Ganita	0.000	IN	7	10	17
242	Ganita-Sandesh	0.000	IN	10	7	17
243	Tamkang-J.-Math.	0.000	TW	11	6	17
244	Aligarh-Bull.-Math.	0.000	IN	7	9	16
245	J.-Indian-Statist.-Assoc.	0.000	IN	8	8	16
246	Progr.-Math. (Varanasi)	0.000	IN	5	11	16
247	Demonstratio-Math.	0.000	PL	9	6	15
248	J.-Ramanujan-Math.-Soc.	0.000	IN	4	9	13
249	Opsearch	0.000	IN	4	9	13
250	Proc.-Nat.-Acad.-Sci.-India-Sect.-A	0.000	IN	6	7	13
251	Sankhya-Ser.-B	0.000	IN	8	5	13
252	Vijnana-Parishad-Anusandhan-Patrika	0.000	IN	10	3	13
253	Math.-Today	0.000	IN	5	7	12
254	Optimization	0.000	CH	2	10	12
255	IAPQR-Trans.	0.000	IN	8	3	11
256	Statistica (Bologna)	0.000	IT	7	4	11
257	An.-Stiint.-Univ.-``Al.-I.-Cuza''-Iasi-Sect.-I-a-Mat.	0.000	RO	7	3	10
258	Ganita-Bharati	0.000	IN	4	6	10
259	Hadronic-J.	0.000	US	5	5	10
260	Metrika	0.000	DE	5	5	10
261	Ultra-Sci.-Phys.-Sci.	0.000	IN	0	10	10
262	J.-Bihar-Math.-Soc.	0.000	IN	9	0	9
263	Real-Anal.-Exchange	0.000	US	4	5	9
264	Sankhya-Ser.-A	0.000	IN	7	2	9
265	Sci.-Phys.-Sci.	0.000	IN	9	0	9
266	Bull.-Allahabad-Math.-Soc.	0.000	IN	3	5	8
267	Far-East-J.-Math.-Sci.	0.000	IN	0	8	8
268	Metron	0.000	IT	6	2	8
269	Bull.-Inst.-Math.-Acad.-Sinica	0.000	TW	4	3	7
270	Bull.-Math.-Soc.-Sci.-Math.-R.-S.-Roumanie (N.S.)	0.000	RO	4	3	7
271	Bull.-Pure-Appl.-Sci.-Sec.-E-Math.	0.000	IN	0	7	7
272	J.-Appl.-Math.-Stochastic-Anal.	0.000	US	5	2	7
273	J.-Pure-Math.	0.000	IN	7	0	7
274	Note-Mat.	0.000	IT	2	5	7
275	Statist.-Decisions	0.000	DE	0	7	7
276	Acta-Phys.-Hungar.	0.000	HU	6	0	6
277	Aligarh-J.-Statist.	0.000	IN	3	3	6
278	Istanbul-Univ.-Fen-Fak.-Mat.-Derg.	0.000	TR	0	6	6

No.	Journal title (abbreviations as in *Mathsci*)	IF[a]	Pub Country	No. of papers		
				1990	1994	Total
279	J.-Math.-Res.-Exposition	0.000	CN	3	3	6
280	J.-Maulana-Azad-College-Tech.	0.000	IN	6	0	6
281	Kyungpook-Math.-J.	0.000	KR	1	5	6
282	Math.-Balkanica (N.S.)	0.000	BG	3	3	6
283	Acta-Sci.-Math. (Szeged)	0.000	HU	1	4	5
284	Ann.-Physics	0.000	US	3	2	5
285	Colloq.-Math.	0.000	PL	3	2	5
286	Complex-Variables-Theory-Appl.	0.000	CH	2	3	5
287	Glas.-Mat.-Ser. III	0.000	YU	1	4	5
288	Hadronic-J.-Suppl.	0.000	US	2	3	5
289	Internat.-J.-Math.-Ed.-Sci.-Tech.	0.000	GB	1	4	5
290	J.-Statist.-Res.	0.000	BD	3	2	5
291	Southeast-Asian-Bull.-Math.	0.000	SG	2	3	5
292	Statistics	0.000	DE	1	4	5
293	Vikram-Math.-J.	0.000	IN	5	0	5
294	Anal.-Math.	0.000	HU	2	2	4
295	Approx.-Theory-Appl. (N.S.)	0.000	CN	1	3	4
296	Austral.-J.-Statist.	0.000	AU	3	1	4
297	Boll.-Un.-Mat.-Ital.-A (7)	0.000	IT	1	3	4
298	Caribbean-J.-Math.-Comput.-Sci.	0.000	BB	0	4	4
299	Chinese-J.-Math.	0.000	CN	2	2	4
300	Comm.-Theoret.-Phys. (Allahabad)	0.000	IN	0	4	4
301	Enseign.-Math. (2)	0.000	CH	3	1	4
302	Indian-J.-Hist.-Sci.	0.000	IN	1	3	4
303	J.-Anal.	0.000	IN	0	4	4
304	J.-Assam-Sci.-Soc.	0.000	IN	0	4	4
305	J.-Inform.-Optim.-Sci.	0.000	IN	1	3	4
306	J.-Operator-Theory	0.000	RO	2	2	4
307	Math.-Japon.	0.000	JP	2	2	4
308	Period.-Math.-Hungar.	0.000	HU	2	2	4
309	Proc.-Indian-Nat.-Sci.-Acad.-Part-A	0.000	IN	4	0	4
310	Rev.-Roumaine-Math.-Pures-Appl.	0.000	RO	1	3	4
311	Sequential-Anal.	0.000	US	2	2	4
312	Serdica	0.000	BG	2	2	4
313	Statist.-Papers	0.000	DE	0	4	4
314	Z.-Anal.-Anwendungen	0.000	DE	0	4	4
315	Acta-Math.-Vietnam.	0.000	VN	2	1	3
316	An.-Univ.-Timisoara-Ser.-Mat.-Inform.	0.000	RO	0	3	3
317	Comm.-Fac.-Sci.-Univ.-Ankara-Ser.-A$\sb-1$-Math.-Statist.	0.000	TR	0	3	3
318	Econom.-Lett.	0.000	NL	3	0	3

No.	Journal title (abbreviations as in *Mathsci*)	IF[a]	Pub Country	No. of papers		
				1990	1994	Total
319	Games-Econom.-Behav.	0.000	US	0	3	3
320	Hardy-Ramanujan-J.	0.000	IN	3	0	3
321	Internat.-J.-Management-Systems	0.000	IN	3	0	3
322	J.-Fract.-Calc.	0.000	JP	0	3	3
323	J.-Inst.-Math.-Comput.-Sci.-Math.-Ser.	0.000	IN	0	3	3
324	Mat.-Vesnik	0.000	YU	3	0	3
325	Math.-Chronicle	0.000	NZ	3	0	3
326	Nonlinear-World	0.000	DE	0	3	3
327	Pakistan-J.-Statist.	0.000	PK	1	2	3
328	Rad.-Mat.	0.000	BA	2	1	3
329	Rend.-Circ.-Mat.-Palermo (2)	0.000	IT	2	1	3
330	Rev.-Mat.-Iberoamericana	0.000	ES	2	1	3
331	Rev.-Tecn.-Fac.-Ingr.-Univ.-Zulia	0.000	VE	2	1	3
332	Riv.-Mat.-Univ.-Parma (4)	0.000	IT	3	0	3
333	Riv.-Mat.-Univ.-Parma (5)	0.000	IT	0	3	3
334	Studia-Univ.-Babes-Bolyai-Math.	0.000	RO	1	2	3
335	Ann.-Appl.-Probab.	0.000	US	0	2	2
336	Ann.-Scuola-Norm.-Sup.-Pisa-Cl.-Sci. (4)	0.000	IT	2	0	2
337	Ann.-Univ.-Sci.-Budapest.-Eotvos-Sect.-Math.	0.000	HU	2	0	2
338	Automatica-J.-IFAC	0.000	GB	1	1	2
339	Boll.-Un.-Mat.-Ital.-B (7)	0.000	IT	1	1	2
340	Bul.-Stiint.-Tehn.-Univ.-Tehn.-Timisoara-Mat.-Fiz.	0.000	RO	0	2	2
341	Bull.-Malaysian-Math.-Soc. (2)	0.000	MY	2	0	2
342	Bull.-Vijnana-Parishad-India	0.000	IN	0	2	2
343	Celestial-Mech.-Dynam.-Astronom.	0.000	NL	1	1	2
344	Collect.-Math.	0.000	ES	1	1	2
345	Congr.-Numer.	0.000	CA	1	1	2
346	Econometric-Theory	0.000	US	1	1	2
347	Ganit	0.000	IN	0	2	2
348	Integral-Transform.-Spec.-Funct.	0.000	GB	0	2	2
349	Internat.-J.-Inform.-Management-Sci.	0.000	TW	1	1	2
350	Internat.-J.-Uncertain.-Fuzziness-Knowledge-Based-Systems	0.000	SG	0	2	2
351	J.-Combin.-Inform.-System-Sci.	0.000	IN	0	2	2
352	J.-Econom.-Theory	0.000	US	1	1	2
353	J.-Indian-Inst.-Sci.	0.000	IN	1	1	2
354	J.-Nonlinear-Math.-Phys.	0.000	RU	0	2	2
355	Libertas-Math.	0.000	US	1	1	2
356	Linear-and-Multilinear-Algebra	0.000	CH	1	1	2

No.	Journal title (abbreviations as in *Mathsci*)	IF [a]	Pub Country	No. of papers		
				1990	1994	Total
357	Math.-Notae	0.000	AR	0	2	2
358	Mathematica (Cluj)	0.000	RU	1	1	2
359	Modern-Logic	0.000	US	0	2	2
360	Numer.-Methods-Partial-Differential-Equations	0.000	US	1	1	2
361	Osterreich.-Akad.-Wiss.-Math.-Natur.-Kl.-Sitzungsber. II	0.000	AU	0	2	2
362	Portugal.-Math.	0.000	PT	0	2	2
363	Publ.-Inst.-Math. (Beograd) (N.S.)	0.000	YU	0	2	2
364	Rend.-Sem.-Mat.-Univ.-Politec.-Torino	0.000	IT	1	1	2
365	Rev.-Acad.-Canaria-Cienc.	0.000	BR	0	2	2
366	Rev.-Bull.-Calcutta-Math.-Soc.	0.000	IN	0	2	2
367	Rev.-Math.-Phys.	0.000	SG	0	2	2
368	Statist.-Hefte	0.000	DE	2	0	2
369	Tensor (N.S.)	0.000	JP	0	2	2
370	Turkish-J.-Math.	0.000	TR	0	2	2
371	Z.-Oper.-Res.	0.000	DE	1	1	2
372	Zb.-Rad.-Prirod.-Mat.-Fak.-Ser.-Mat.	0.000	YU	0	2	2
373	Zeszyty-Nauk.-Politech.-Rzeszowskiej-Mat.	0.000	PL	0	2	2
374	Acta-Sci.-Natur.-Univ.-Jilin.	0.000	CN	0	1	1
375	Acta-Tech.-CSAV	0.000	CZ	1	0	1
376	Adv.-Comput.-Math.	0.000	CH	0	1	1
377	Algebra-Colloq.	0.000	CN	0	1	1
378	Analysis	0.000	FR	0	1	1
379	Ann.-Math.-Artificial-Intelligence	0.000	CH	0	1	1
380	Ann.-Physik (7)	0.000	DE	1	0	1
381	Ann.-Sci.-Math.-Quebec	0.000	CA	0	1	1
382	Ann.-Univ.-Mariae-Curie-Sklodowska-Sect.-A	0.000	PL	1	0	1
383	Appl.-Algebra-Engrg.-Comm.-Comput.	0.000	DE	0	1	1
384	Appl.-Anal.	0.000	CH	0	1	1
385	Appl.-Math.-Notes	0.000	CA	1	0	1
386	Arch.-Math. (Brno)	0.000	CS	1	0	1
387	Asymptotic-Anal.	0.000	NL	0	1	1
388	Atti-Sem.-Mat.-Fis.-Univ.-Modena	0.000	IT	1	0	1
389	Bol.-Soc.-Brasil.-Mat. (N.S.)	0.000	BR	1	0	1
390	Bul.-Univ.-Brasov-Ser.-C	0.000	RO	1	0	1
391	Bulgar.-J.-Phys.	0.000	BG	0	1	1

No.	Journal title (abbreviations as in *Mathsci*)	IF [a]	Pub Country	No. of papers		
				1990	1994	Total
392	Bull.-Yamagata-Univ.-Natur.-Sci.	0.000	JP	0	1	1
393	C.-R.-Math.-Rep.-Acad.-Sci.-Canada	0.000	CA	0	1	1
394	Chaos-Solitons-Fractals	0.000	GB	0	1	1
395	Comm.-Anal.-Geom.	0.000	HK	0	1	1
396	Comm.-Statist.-Stochastic-Models	0.000	US	1	0	1
397	Comment.-Math.-Prace-Mat.	0.000	PL	1	0	1
398	Comment.-Math.-Univ.-Carolin.	0.000	CZ	0	1	1
399	Comput.-Aided-Geom.-Design	0.000	NL	1	0	1
400	Differential-Equations-Dynam.-Systems	0.000	US	0	1	1
401	Differential-Integral-Equations	0.000	US	1	0	1
402	Dynamic-Systems-Appl.	0.000	US	0	1	1
403	Estadistica	0.000	CH	1	0	1
404	Exposition.-Math.	0.000	DE	1	0	1
405	Extracta-Math.	0.000	ES	1	0	1
406	Fukuoka-Univ.-Sci.-Rep.	0.000	JP	1	0	1
407	Hunan-Ann.-Math.	0.000	CN	0	1	1
408	Indian-Sci.-Cruiser	0.000	IN	0	1	1
409	Inst.-Hautes-Etudes-Sci.-Publ.-Math.	0.000	FR	1	0	1
410	Internat.-Econom.-Rev.	0.000	US	1	0	1
411	Internat.-J.-Bifur.-Chaos-Appl.-Sci.-Engrg.	0.000	SG	0	1	1
412	Internat.-J.-Found.-Comput.-Sci.	0.000	SG	1	0	1
413	Internat.-J.-Math.-Statist.-Sci.	0.000	US	0	1	1
414	Internat.-J.-Modern-Phys.-D	0.000	SG	0	1	1
415	Investigacion-Oper.	0.000	CU	1	0	1
416	J.-Algebraic-Geom.	0.000	HK	0	1	1
417	J.-Appl.-Statist.-Sci.	0.000	US	0	1	1
418	J.-Chengdu-Univ.-Sci.-Tech. (Chengdu)	0.000	CN	0	1	1
419	J.-College-Engrg.-Nihon-Univ.-Ser.-B	0.000	JP	1	0	1
420	J.-Geom.	0.000	CH	1	0	1
421	J.-Indian-Soc.-Statist.-Oper.-Res.	0.000	IN	1	0	1
422	J.-Integral-Equations-Appl.	0.000	US	1	0	1
423	J.-Japan-Statist.-Soc.	0.000	JP	0	1	1
424	J.-Korean-Statist.-Soc.	0.000	KP	0	1	1
425	J.-Math.-Sci.-Univ.-Tokyo	0.000	JP	0	1	1
426	J.-Nonparametr.-Statist.	0.000	CH	0	1	1
427	J.-Tech.-Phys.	0.000	PL	1	0	1
428	J.-Theoret.-Probab.	0.000	US	0	1	1
429	J.-Xinjiang-Univ.-Natur.-Sci.	0.000	CN	0	1	1

No.	Journal title (abbreviations as in *Mathsci*)	IF [a]	Pub Country	No. of papers		
				1990	1994	Total
430	Kobe-J.-Math.	0.000	JP	0	1	1
431	Math.-Methods-Statist.	0.000	US	0	1	1
432	Math.-Montisnigri	0.000	YU	0	1	1
433	Math.-Pannon.	0.000	HU	1	0	1
434	Mem.-Fac.-Sci.-Kochi-Univ.-Ser.-A-Math.	0.000	JP	0	1	1
435	Modern-Phys.-Lett.-B	0.000	SG	0	1	1
436	Mohu-Xitong-yu-Shuxue	0.000	CN	0	1	1
437	New-Zealand-J.-Math.	0.000	NZ	0	1	1
438	Nieuw-Arch.-Wisk. (4)	0.000	NL	1	0	1
439	Nonlinear-Times-Digest	0.000	US	0	1	1
440	Nordic-J.-Comput.	0.000	FI	0	1	1
441	Nuclear-Phys.-B-Proc.-Suppl.	0.000	NL	1	0	1
442	Panamer.-Math.-J.	0.000	US	0	1	1
443	Phys.-Fluids	0.000	US	0	1	1
444	Polytech.-Inst.-Bucharest-Sci.-Bull.-Chem.-Materials-Sci.	0.000	RO	1	0	1
445	Publ.-Mat.	0.000	ES	0	1	1
446	Punjab-Univ.-J.-Math. (Lahore)	0.000	IN	0	1	1
447	Pure-Math.-Appl.-Ser.-B	0.000	HU	1	0	1
448	Qatar-Univ.-Sci.-J.	0.000	QA	0	1	1
449	Quaestiones-Math.	0.000	ZA	0	1	1
450	Questiio (2)	0.000	ES	0	1	1
451	Queueing-Systems-Theory-Appl.	0.000	CH	0	1	1
452	Random-Oper.-Stochastic-Equations	0.000	NL	0	1	1
453	Rebrape	0.000	BR	1	0	1
454	Rend.-Istit.-Mat.-Univ.-Trieste	0.000	IT	0	1	1
455	Rend.-Mat.-Appl. (7)	0.000	IT	0	1	1
456	Rend.-Sem.-Mat.-Univ.-Padova	0.000	IT	1	0	1
457	Rev.-Acad.-Cienc.-Zaragoza (2)	0.000	ES	0	1	1
458	Rev.-Econom.-Stud.	0.000	GB	1	0	1
459	Rostock.-Math.-Kolloq.	0.000	DE	0	1	1
460	Shanghai-Keji-Daxue-Xuebao	0.000	CN	0	1	1
461	Soc.-Choice-Welf.	0.000	US	0	1	1
462	Surikaisekikenkyusho-Kokyuroku	0.000	JP	0	1	1
463	Symmetry-Cult.-Sci.	0.000	HU	1	0	1
464	Systems-Sci.	0.000	PL	1	0	1
465	Teor.-Primen.-Meh.	0.000	YU	1	0	1
466	Transport-Theory-Statist.-Phys.	0.000	US	0	1	1
467	Yokohama-Math.-J.	0.000	JP	1	0	1
				1232	1317	2549
	Non journal papers			87	74	161
	Total			**1319**	**1391**	**2710**

* Item 117 is a translated version of a Russian journal
[a] Impact factor vaulues taken from *JCR - 1994*

Table 5: India's contribution to the world literature in different subfields along with activity index

No.	Subfield	No. of papers (World)		No. of papers (India)		Activity index	
		1990	1994	1990	1994	1990	1994
1	62 Statistics	2982	3203	157	142	2.07	1.69
2	54 General-topology	1278	1267	106	110	3.27	3.31
3	81 Quant-Theory	4220	4297	78	97	0.72	0.86
4	33 Special-functions	612	688	82	46	5.28	2.55
5	90 Econom-oper-res	3360	3090	53	58	0.62	0.71
6	83 Relat-Gravitat	1409	1459	67	43	1.87	1.12
7	53 Differential-geometry	1596	1626	36	67	0.89	1.57
8	47 Operator-theory	2678	2866	39	49	0.57	0.`5
9	11 Number-theory	2296	2182	37	50	0.63	0.87
10	30 Functions-of-a-complex-variable	1252	1357	40	42	1.26	1.19
11	46 Functional-analysis	2503	2418	38	36	0.59	0.56
12	60 Probability-theory-and-stochastic-processes	2876	2991	47	26	0.64	0.33
13	16 Associative-rings-and-algebras	1109	1192	32	38	1.13	1.21
14	05 Combinatorics-	2610	2755	26	34	0.39	0.47
15	76 Fluid-Mech	2245	2481	28	31	0.49	0.47
16	68 Comput-sci	3371	3676	22	35	0.25	0.36
17	65 Numer-Anal	4095	4514	26	30	0.25	0.25
18	19 Group-theory-and-generalizations	1994	2078	23	32	0.45	0.58
19	35 Partial-differential-equations	4594	4889	30	21	0.25	0.16
20	34 Ordinary-differential-equations	2897	3215	17	32	0.23	0.38
21	26 Real-functions	683	740	18	29	1.04	1.49
22	93 System-theory	2682	2752	19	28	0.27	0.38
23	42 Fourier-analysis	701	855	26	20	1.46	0.89
24	58 Global-analysis,-analysis-on-manifolds	4343	4085	25	17	0.22	0.15
25	01 History-and-biography	1476	1359	10	26	0.26	0.73
26	14 Algebraic-geometry	1095	1317	20	16	0.72	0.46
27	44 Integral-transforms,-operational-calculus	281	248	23	12	3.23	1.84
28	82 Stat-Mech	1867	1586	16	19	0.33	0.45
29	90 Econom-oper-res	3360	3090	14	18	0.16	0.22
30	41 Approximations-and-expansions	917	1012	14	15	0.60	0.56
31	92 Biol-nat-sci	1171	751	18	7	0.60	0.35

No.	Subfield	No. of papers (World)		No. of papers (India)		Activity index	
		1990	1994	1990	1994	1990	1994
32	40 Sequences,-series,-summability	175	204	7	17	1.57	3.13
33	45 Integral-equations	513	439	13	8	1.00	0.69
34	15 Linear-and-multilinear-algebra	808	818	11	9	0.53	0.42
35	17 Nonassociative-rings-and-algebras	1245	1286	13	7	0.41	0.20
36	13 Commutative-rings-and-algebras	422	572	10	9	0.93	0.60
37	22 Topological-groups,-Lie-groups	983	798	7	12	0.28	0.57
38	28 Measure-and-integration	582	668	9	9	0.61	0.51
39	73 Mech-solid	1542	1558	8	8	0.20	0.19
40	39 Finite-differences-and-functional-equations	309	546	3	11	0.38	0.76
41	49 Calculus-of-variations-and-optimal-control	1486	1538	2	11	0.05	0.27
42	70 Mech-part-sys	1040	913	6	6	0.22	0.25
43	12 Field-theory-and-polynomials	321	287	4	6	0.49	0.79
44	32 Several-complex-variables-and-analytic-spaces	1009	965	2	8	0.07	0.31
45	57 Manifolds-and-cell-complexes	949	1094	3	6	0.12	0.20
46	03 Mathematical-logic-and-foundations	2157	2425	2	6	0.03	0.09
47	43 Abstract-harmonic-analysis	244	261	4	4	0.64	0.58
48	85 Astron-astrophys	164	77	8	0	1.92	0.00
49	06 Order,-lattices,-ordered-algebraic-structures	655	651	1	6	0.06	0.35
50	00 General-	870	798	3	3	0.13	0.14
51	04 Set-theory	413	613	3	2	0.28	0.12
52	18 Category-theory,-homological-algebra	339	325	1	4	0.11	0.47
53	78 Optics, electromagnetic theory	470	456	2	3	0.16	0.25
54	51 Geometry-	545	481	2	2	0.14	0.15
55	52 Convex-and-discrete-geometry	520	661	1	3	0.07	0.17

No.	Subfield	No. of papers (World)		No. of papers (India)		Activity index	
		1990	1994	1990	1994	1990	1994
56	80 Classical thermodynamics, heat transfer	388	316	3	0	0.30	0.00
57	86 Geophys	266	274	3	0	0.44	0.00
58	19 K-theory-	242	207	1	1	0.16	0.18
59	55 Algebraic-topology	443	458	0	2	0.00	0.16
60	08 General-algebraic-systems	208	218	0	1	0.00	0.17
61	31 Potential-theory	275	335	0	1	0.00	0.11
	Total (From the CD-ROM version of *Mathsci*)			1319	1391		
	Total (From the web version of *Mathscinet*)	55887	56636	1416	1482		

For the calculation of activity index, we have used the numbers of papers from India and the world as seen from the web edition *Mathscinet*.

Table 6: Relative Specialisation Index (*RSI*) for different subfields

No.	Subfield	Activity index		Relative specialisation index	
		1990	1994	1990	1994
1	62 Statistics	2.07	1.69	0.349	0.257
2	54 General-topology	3.27	3.31	0.532	0.536
3	81 Quant-Theory	0.72	0.86	-0.163	-0.075
4	33 Special-functions	5.28	2.55	0.682	0.437
5	90 Econom-oper-res	0.62	0.71	-0.235	-0.170
6	83 Relat-Gravitat	1.87	1.12	0.303	0.057
7	53 Differential-geometry	0.89	1.57	-0.058	0.222
8	47 Operator-theory	0.57	0.65	-0.274	-0.212
9	11 Number-theory	0.63	0.87	-0.227	-0.070
10	30 Functions-of-a-complex-variable	1.26	1.18	0.115	0.083
11	46 Functional-analysis	0.59	0.56	-0.258	-0.282
12	60 Probability-theory-and-stochastic-processes	0.64	0.33	-0.220	-0.504
13	16 Associative-rings-and-algebras	1.13	1.21	0.061	0.095
14	05 Combinatorics-	0.39	0.47	-0.439	-0.361
15	76 Fluid-Mech	0.49	0.47	-0.342	-0.361
16	68 Comput-sci	0.25	0.36	-0.600	-0.471
17	65 Numer-Anal	0.25	0.25	-0.600	-0.600
18	19 Group-theory-and-generalizations	0.45	0.58	-0.379	-0.266
19	35 Partial-differential-equations	0.25	0.16	-0.600	-0.724
20	34 Ordinary-differential-equations	0.23	0.38	-0.626	-0.449
21	26 Real-functions	1.04	1.49	0.020	0.197
22	93 System-theory	0.27	0.38	-0.575	-0.449
23	42 Fourier-analysis	1.46	0.89	0.187	-0.058
24	58 Global-analysis,-analysis-on-manifolds	0.22	0.15	-0.639	-0.739
25	01 History-and-biography	0.26	0.73	-0.587	-0.156
26	14 Algebraic-geometry	0.72	0.46	-0.163	-0.370
27	44 Integral-transforms,-operational-calculus	3.23	1.84	0.527	0.296
28	82 Stat-Mech	0.33	0.45	-0.504	-0.379
29	90 Econom-oper-res	0.16	0.22	-0.724	-0.639
30	41 Approximations-and-expansions	0.6	0.56	-0.250	-0.282
31	92 Biol-nat-sci	0.6	0.35	-0.250	-0.481

No.	Subfield	Activity index		Relative specialisation index	
		1990	1994	1990	1994
32	40 Sequences,-series,-summability	1.57	3.18	0.222	0.522
33	45 Integral-equations	1	0.69	0.000	-0.183
34	15 Linear-and-multilinear-algebra	0.53	0.42	-0.307	-0.408
35	17 Nonassociative-rings-and-algebras	0.41	0.2	-0.418	-0.667
36	13 Commutative-rings-and-algebras	0.93	0.6	-0.036	-0.250
37	22 Topological-groups,-Lie-groups	0.28	0.57	-0.563	-0.274
38	28 Measure-and-integration	0.61	0.51	-0.242	-0.325
39	73 Mech-solid	0.2	0.19	-0.667	-0.681
40	39 Finite-differences-and-functional-equations	0.38	0.76	-0.449	-0.136
41	49 Calculus-of-variations-and-optimal-control	0.05	0.27	-0.905	-0.575
42	70 Mech-part-sys	0.22	0.25	-0.639	-0.600
43	12 Field-theory-and-polynomials	0.49	0.79	-0.342	-0.117
44	32 Several-complex-variables-and-analytic-spaces	0.07	0.31	-0.869	-0.527
45	57 Manifolds-and-cell-complexes	0.12	0.2	-0.786	-0.667
46	03 Mathematical-logic-and-foundations	0.03	0.09	-0.942	-0.835
47	43 Abstract-harmonic-analysis	0.64	0.58	-0.220	-0.266
48	85 Astron-astrophys	1.92	0	0.315	-
49	06 Order,-lattices,-ordered-algebraic-structures	0.06	0.35	-0.887	-0.481
50	00 General-	0.13	0.14	-0.770	-0.754
51	04 Set-theory	0.28	0.12	-0.563	-0.786
52	18 Category-theory,-homological-algebra	0.11	0.47	-0.802	-0.361
53	78 Optics, electromagnetic theory	0.16	0.25	-0.724	-0.600
54	51 Geometry-	0.14	0.15	-0.754	-0.739
55	52 Convex-and-discrete-geometry	0.07	0.17	-0.869	-0.709
56	80 Classical thermodynamics, heat transfer	0.3	0	-0.538	-1.000
57	86 Geophys	0.44	0	-0.389	-1.000
58	19 K-theory-	0.16	0.18	-0.724	-0.695
59	55 Algebraic-topology	0	0.16	-1.000	-0.724

No.	Subfield	Activity index		Relative specialisation index	
		1990	1994	1990	1994
60	08 General-algebraic-systems	0	0.17	-1.000	-0.709
61	31 Potential-theory	0	0.11	-1.000	-0.802

Table 7: India's contribution to the journal literature of mathematics arranged by country of publication of the journal as seen from *MATHSCI* 1990 and 1994 (arranged by number of papes)

No.	Publication country	1990		1994		Total	Total %
		No. of journals	No. of papers	No. of journals	No. of papers		
1	INDIA	48	524	51	475	999	36.86
2	UNITED STATES	69	232	87	271	503	18.56
3	NETHERLANDS	33	129	29	125	254	9.37
4	GREAT BRITAIN	27	74	29	81	155	5.72
5	GERMANY	19	37	18	49	86	3.17
6	SINGAPORE	6	21	9	41	62	2.29
7	ITALY	14	30	10	22	52	1.99
8	TAIWAN	4	20	4	24	44	1.62
9	SWITZERLAND	8	12	13	30	42	1.55
10	JAPAN	9	14	15	25	39	1.44
11	HUNGARY	10	19	6	17	36	1.33
12	ROMANIA	7	17	7	18	35	1.30
13	POLAND	8	21	4	11	32	1.18
14	AUSTRALIA	4	13	5	16	29	1.07
15	CANADA	8	17	8	12	29	1.07
16	CHINA	3	6	10	15	21	0.77
17	YUGOSLAVIA	3	5	4	9	14	0.52
18	BULGARIA	2	5	3	6	11	0.41
19	TURKEY	0	0	3	11	11	0.41
20	SPAIN	3	4	5	5	9	0.33
21	FRANCE	5	5	3	4	9	0.33
22	CZECH REPUBLIC	1	1	3	6	7	0.26
23	KOREA	1	1	2	6	7	0.26
24	SWEDEN	2	3	1	3	6	0.22
25	BANGLADESH	1	3	1	2	5	0.18
26	AUSTRIA	1	1	3	3	4	0.15
27	BARBADOS	0	0	1	4	4	0.15
28	BRAZIL	2	2	1	2	4	0.15
29	NEW ZEALAND	1	3	1	1	4	0.15
30	RUSSIA	1	1	2	3	4	0.15
31	BOSNIA	1	2	1	1	3	0.11
32	PAKISTAN	1	1	1	2	3	0.11
33	VIET NAM	1	2	1	1	3	0.11
34	VENEZUELA	1	2	1	1	3	0.11
35	SOUTH AFRICA	0	0	2	3	3	0.11
36	ARGENTINA	0	0	1	2	2	0.07

No.	Publication country	1990		1994		Total	Total %
		No. of journals	No. of papers	No. of journals	No. of papers		
37	DENMARK	0	0	1	2	2	0.07
38	FINLAND	1	1	1	1	2	0.07
39	HONG KONG	0	0	2	2	2	0.07
40	MALAYSIA	1	2	0	0	2	0.07
41	PORTUGAL	0	0	1	2	2	0.04
42	CZECHOSLOVAKIA	1	1	0	0	1	0.04
43	CUBA	1	1	0	0	1	0.04
44	ISRAEL	0	0	1	1	1	0.04
45	MEXICO	0	0	1	1	1	0.04
46	QATAR	0	0	1	1	1	0.04
	Total	308	1232	353	1317	2549[*]	94.16
	Non-journal papers		87		74	161	5.94
			1319		1391	2710	100.00

* in 467 journals

Table 8: Indian journals covered by *MATHSCI* 1990 and 1994
(arranged by number of papers)

No.	Journal title	No. of papers		
		1990	1994	Total
1	Indian-J.-Pure-Appl.-Math.	64	47	111
2	Bull.-Calcutta-Math.-Soc.	44	40	84
3	Acta-Cienc.-Indica-Math.	38	35	73
4	Proc.-Indian-Acad.-Sci.-Math.-Sci	21	24	45
5	Math.-Ed. (Siwan)	21	17	38
6	J.-Indian-Math.-Soc. (N.S.)	13	19	32
7	Calcutta-Statist.-Assoc.-Bull.	23	8	31
8	J.-Indian-Acad.-Math.	13	17	30
9	Pure-Math.-Manuscript	26	0	26
10	Indian-J.-Math.	15	9	24
11	J.-Math.-Phys.-Sci.	17	7	24
12	Math.-Student	8	16	24
13	J.-Natur.-Phys.-Sci.	8	15	23
14	Proc.-Math.-Soc.	13	10	23
15	Pure-Appl.-Math.-Sci.	11	11	22
16	J.-Nat.-Acad.-Math.-India	12	9	21
17	J.-Indian-Soc.-Agricultural-Statist.	11	8	19
18	Jnanabha	9	9	18
19	Ganita	7	10	17
20	Ganita-Sandesh	10	7	17
21	Aligarh-Bull.-Math.	7	9	16
22	J.-Indian-Statist.-Assoc.	8	8	16
23	Progr.-Math. (Varanasi)	5	11	16
24	J.-Ramanujan-Math.-Soc.	4	9	13
25	Opsearch	4	9	13
26	Proc.-Nat.-Acad.-Sci.-India-Sect.-A	6	7	13
27	Sankhya-Ser.-B	8	5	13
28	Vijnana-Parishad-Anusandhan-Patrika	10	3	13
29	Math.-Today	5	7	12
30	IAPQR-Trans.	8	3	11
31	Ganita-Bharati	4	6	10
32	Ultra-Sci.-Phys.-Sci.	0	10	10
33	J.-Bihar-Math.-Soc.	9	0	9
34	Sankhya-Ser.-A	7	2	9
35	Sci.-Phys.-Sci.	9	0	9
36	Bull.-Allahabad-Math.-Soc.	3	5	8
37	Far-East-J.-Math.-Sci.	0	8	8
38	Bull.-Pure-Appl.-Sci.-Sec.-E-Math.	0	7	7
39	Current-Sci.	0	7	7

No.	Journal title	No. of papers		
		1990	1994	Total
40	J.-Pure-Math.	7	0	7
41	Nat.-Acad.-Sci.-Lett.	7	0	7
42	Sadhana	1	6	7
43	Aligarh-J.-Statist.	3	3	6
44	J.-Maulana-Azad-College-Tech.	6	0	6
45	Vikram-Math.-J.	5	0	5
46	Comm.-Theoret.-Phys. (Allahabad)	0	4	4
47	Indian-J.-Hist.-Sci.	1	3	4
48	J.-Anal.	0	4	4
49	J.-Assam-Sci.-Soc.	0	4	4
50	J.-Inform.-Optim.-Sci. *	1	3	4
51	Proc.-Indian-Nat.-Sci.-Acad.-Part-A	4	0	4
52	Hardy-Ramanujan-J.	3	0	3
53	Internat.-J.-Management-Systems	3	0	3
54	J.-Inst.-Math.-Comput.-Sci.-Math.-Ser.	0	3	3
55	Bull.-Vijnana-Parishad-India	0	2	2
56	Ganit	0	2	2
57	J.-Combin.-Inform.-System-Sci.	0	2	2
58	J.-Indian-Inst.-Sci.	1	1	2
59	Rev.-Bull.-Calcutta-Math.-Soc.	0	2	2
60	Indian-Sci.-Cruiser	0	1	1
61	J.-Indian-Soc.-Statist.-Oper.-Res.	1	0	1
62	Punjab-Univ.-J.-Math. (Lahore)	0	1	1
	Total	524	475	999

* Journals indexed in *JCR* 1994.

**Table 9: Distribution Indian mathematical science papers
by impact factor range of journals
[based on impact factor data from *JCR* 1994]**

IF range (*JCR* 1994)	No. of Journals	No. of papers		
		1990	1994	Total
0.000	246	656	713	1369
>0.0 - 0.5	130*	369	384	753
>0.5 - 1.0	50	84	104	188
>1.0 - 1.5	15	34	44	78
>1.5 - 2.0	13	39	41	80
>2.0 - 2.5	4	12	5	17
>2.5 - 3.0	1	0	2	2
>3.0 - 3.5	3	19	14	33
>3.5 - 4.0	3	13	8	21
>6.0 - 7.0	2	6	2	8
	467	1232	1317	2549

• The five Indian journals which have an imapct factor
  (*JCR* 1994) greater than zero are in this range

Table 10: Indian institutions publishing papers as seen from *MATHSCI* 1990 and 1994
(arranged by number of papers)

No.	Institution	City	State	No. of papers		
				1990	1994	Total
1	Tata Institute of Fundamental Research	Bombay	MA	95	77	172
2	University of Calcutta	Calcutta	WB	75	56	131
3	Indian Statistical Institute	Calcutta	WB	55	67	122
4	Indian Institute of Science	Bangalore	KA	35	60	95
5	Banaras Hindu University	Varanasi	UP	47	47	94
6	Indian Statistical Institute	New Delhi	DI	33	39·	72
7	University of Delhi	New Delhi	DI	30	40	70
8	Indian Institute of Technology	Madras	TN	26	45	71
9	Jadavpur University	Calcutta	WB	34	34	68
10	University of Madras	Madras	TN	27	32	59
11	Aligarh Muslim University	Aligarh	UP	17	37	54
12	Indian Institute of Technology	Kharagpur	WB	18	32	50
13	Indian Institute of Technology	Kanpur	UP	22	27	49
14	Institute of Mathematical Sciences	Madras	TN	15	32	47
15	Panjab University	Chandigarh	CH	18	27	45
16	Indian Institute of Technology	Bombay	MA	21	24	45
17	University of Kalyani	Kalyani	WB	22	21	43
18	Lucknow University	Lucknow	UP	16	26	42
19	Indian Institute of Technology	New Delhi	DI	20	22	42
20	Dr. Hari Singh Gour University	Sagar	MP	22	19	41
21	Marathwada University	Aurangabad	MA	19	19	38
22	University of Poona	Pune	MA	18	13	31
23	Cochin University of Science and Technology	Cochin	KE	13	15	28
24	Burdwan University	Burdwan	WB	11	17	28
25	Tata Institute of Fundamental Research	Bangalore	KA	23	4	27
26	Indian Statistical Institute	Bangalore	KA	13	14	27
27	Jawaharlal Nehru University	New Delhi	DI	15	11	26
28	University of Roorkee	Roorkee	UP	13	13	26
29	Kalyan Mahavidhyalaya	Bhilainagar	MP	17	9	26
30	University of Jodhpur	Jodhpur	RN	17	8	25
31	University of Rajasthan	Jaipur	RN	20	5	25
32	Andhra University	Waltair	AP	17	8	25
33	University of Gorakhpur	Gorakhpur	UP	11	13	24
34	Vikram University	Ujjain	MP	12	10	22
35	Saha Institute of Nuclear Physics	Calcutta	WB	8	14	22
36	Gurukula Kangri Vishvavidhyalaya University	Hardwar	UP	6	14	20

No.	Institution	City	State	No. of papers		
				1990	1994	Total
37	University of Mysore	Mysore	KA	6	13	19
38	Shivaji University	Kolhapur	MA	9	10	19
39	Karnatak University	Dharwad	KA	8	10	18
40	University of Allahabad	Allahabad	UP	9	9	18
41	University of Jammu	Jammu	JK	6	12	18
42	Berhampur University	Berhampur	OA	2	16	18
43	Government Post Graduate College	Narshingpur	MP	17	0	17
44	Bharathiar University	Coimbatore	TN	7	8	15
45	Institute of Physics	Bhubaneswar	OA	6	9	15
46	Magadh University	Bodh-Gaya	BR	9	5	14
47	Maharshi Dayanand University	Rohtak	HA	8	6	14
48	University of Bombay	Bombay	MA	10	4	14
49	University of Hyderabad	Hyderabad	AP	6	8	14
50	Cotton College	Gauhati	AM	10	4	14
51	Utkal University	Bhubaneswar	OA	1	13	14
52	Mehta Research Institute	Allahabad	UP	1	13	14
53	Gauhati University	Gauhati	AM	3	10	13
54	Shri G.S Institute of Technology	Indore	MP	8	5	13
55	Garhwal University	Srinagar	UP	12	1	13
56	University of Kerala	Trivandrum	KE	8	4	12
57	Rani Durgavati University	Jabalpur	MP	3	9	12
58	Punjab Agricultural University	Ludhiana	PB	4	8	12
59	Bharathidasan University	Tiruchirapalli	TN	7	5	12
60	Indian Institute of Management	Calcutta	WB	7	5	12
61	Sardar Patel University	Vallabh Vidyanagar	GT	7	5	12
62	Osmania University	Hyderabad	AP	7	5	12
63	Jamia Millia Islamia	New Delhi	DI	3	9	12
64	Indian Agricultural Statistics Research Institute	New Delhi	DI	5	6	11
65	D.V Postgraduate College	Orai	UP	6	5	11
66	Nagarjuna University	Nagarjuna Nagar	AP	5	6	11
67	Bangalore University	Bangalore	KA	5	6	11
68	Awadesh Pratap Singh University	Rewa	MP	1	10	11
69	Almora College	Almora	UP	2	9	11
70	Birla Institute of Technology	Mesra	BR	4	6	10
71	Malaviya Regional Engineering College	Jaipur	RN	7	3	10
72	Guru Nanak Dev University	Amritsar	PB	3	7	10
73	Visva-Bharati University	Santiniketan	WB	6	4	10
74	National Aeronautical Laboratory	Bangalore	KA	1	8	9
75	Pandit Ravishankar Shukla University	Raipur	MP	6	3	9

No.	Institution	City	State	No. of papers		
				1990	1994	Total
76	Madurai Kamaraj University	Madurai	TN	2	7	9
77	Physical Research Laboratory	Ahmedabad	GT	4	5	9
78	Gujarat University	Ahmedabad	GT	6	2	8
79	University of North Bengal	Darjeeling	WB	7	1	8
80	Annamalai University	Annamalai Nagar	TN	2	6	8
81	Sambalpur University	Sambalpur	OA	4	3	7
82	Haryana Agricultural University	Hissar	HA	6	1	7
83	Tata College	Chaibasa	BR	7	0	7
84	Agra University	Agra	UP	5	2	7
85	Meerut University	Meerut	UP	4	3	7
86	Bangabasi Evening College	Calcutta	WB	3	4	7
87	RamaKrishna Mission Vivekananda College	Madras	TN	4	2	6
88	Maitreyi College	New Delhi	DI	4	2	6
89	University of Baroda	Baroda	GT	3	3	6
90	Goa University	Goa	GA	2	4	6
91	Mahatma Gandhi College	Ahmedpur	MA	3	3	6
92	Manipur University	Imphal	MR	6	0	6
93	Mangalore University	Mangalore	KA	1	5	6
94	SPIC Science Foundation	Madras	TN	0	6	6
95	Kurukshetra University	Kurukshetra	HA	3	2	5
96	College of Technology and Agricultural Engineering	Udaipur	RN	5	0	5
97	Kumaun University	Nainital	UP	4	1	5
98	Institute of Science	Aurangabad	MA	1	4	5
99	Bhaba Atomic Research Centre	Bombay	MA	4	1	5
100	Indian Association for the Cultivation of Science	Calcutta	WB	2	3	5
101	South Gujarat University	Surat	GT	2	3	5
102	Anna University	Chennai	TN	1	4	5
103	Tilak Dhari Post Graduate College	Jaunpur	UP	2	3	5
104	Birla Institute of Technology and Science	Pilani	RN	0	5	5
105	Bhagalpur University	Bhagalpur	BR	2	2	4
106	Presidency College	Calcutta	WB	4	0	4
107	Madras Christian College	Madras	TN	2	2	4
108	Bhavan's Mehta College	Bharwari	UP	3	1	4
109	Birsa Agricultural University	Ranchi	BR	3	1	4
110	Sri Venkateswara University	Tirupati	AP	3	1	4
111	University of Calicut	Calicut	KE	3	1	4
112	Shri Guru Teg Bahadur Khalsa College	New Delhi	DI	1	3	4
113	North Eastern Hill University	Shillong	ME	4	0	4

No.	Institution	City	State	1990	1994	Total
114	Ranchi University	Ranchi	BR	2	2	4
115	University of Nagpur	Nagpur	MA	2	2	4
116	Raman Research Institute	Bangalore	KA	1	3	4
117	Post Graduate College	Ghazipur	UP	2	2	4
118	Jawaharlal Nehru Agricultural University	Jabalpur	MP	3	1	4
119	Vikhram Sarabhai Space Centre	Trivandrum	KE	2	2	4
120	Punjabi University	Patiala	PB	1	3	4
121	Patna University	Patna	BR	3	0	3
122	Asutosh College	Calcutta	WA	2	1	3
123	Indian Institute of Managemant	Ahmedabad	GT	3	0	3
124	Janta College	Etawah	UP	1	2	3
125	Ravenshaw College	Cuttack	OA	3	0	3
126	Bengal Engineering College	Howrah	WB	2	1	3
127	Khallikote College	Berhampur	OA	2	1	3
128	Visveswaraya Regional College of Engineering	Nagpur	MA	3	0	3
129	Saurashtra University	Rajkot	GT	1	2	3
130	Madras University Post Graduate Center	Salem	TN	3	0	3
131	Government Engineering College	Ujjain	MP	2	1	3
132	Government EngineeringCollege	Jabalpur	MP	0	3	3
133	Indira Gandhi Centrefor Atomic Research	Kalpakkam	TN	0	3	3
134	Indian Statistical Institute	Madras	TN	0	3	3
135	Milind College of Science	Aurangabad	MA	2	0	2
136	Zahir Hussain College of Engineering	Aligarh	UP	2	0	2
137	Mahatma Gandhi Memorial College	Udupi	KA	2	0	2
138	National Council of Education Research And Training	New Delhi	DI	1	1	2
139	Loyola College	Madras	TN	2	0	2
140	Regional Engineering College	Rourkela	OA	1	1	2
141	St. Andrew's College	Gorakhpur	UP	2	0	2
142	Zakir Husain College	New Delhi	DI	1	1	2
143	Indian School of Mines	Dhanbad	BR	2	0	2
144	Jute Agricultural Research Institute	Barrackpore	WB	2	0	2
145	National College	Tiruchirapalli	KA	1	1	2
146	Gaya College	Gaya	BR	1	1	2
147	Bundelkhand University	Jhansi	UP	2	0	2
148	University of Kashmir	Srinagar	JK	0	2	2
149	FerozeGandhi College	Rae Bareli	UP	0	2	2
150	Narasingha Dutt College	Howrah	WB	0	2	2

No.	Institution	City	State	No. of papers		
				1990	1994	Total
151	Regional College of Education	Mysore	KA	0	2	2
152	L.M.S. Govt. Postgraduate College	Rishikesh	UP	0	2	2
153	Himachal Pradesh University	Simla	HP	0	2	2
154	Institute of Advanced Study in Science and Technology	Gauhati	AM	0	2	2
155	Sahu Jain College	Najibabad	UP	0	2	2
156	Pachunga University (P.U.) College	Aizawl	MM	0	2	2
157	University of Indore	Indore	MP	1	0	1
158	Kakatiya University	Warangal	AP	1	0	1
159	Indian National Science Academy	New Delhi	DI	1	0	1
160	Bareilly College	Bareilly	UP	1	0	1
161	Malaviya Regional Engineering College	Jaipur	RN	1	0	1
162	Department of Science and Technology	New Delhi	DI	1	0	1
163	Agra College	Agra	UP	1	0	1
164	Presidency College	Madras	TN	1	0	1
165	Christ Church College	Kanpur	UP	1	0	1
166	Lajpat Rai College	Ghaziabad	UP	1	0	1
167	Surendranath College	Calcutta	WB	1	0	1
168	Vidya Sagar University	Midnapore	WB	1	0	1
169	Bombay Metropolitan Region Development Authority	Bombay	MA	1	0	1
170	V.S.S.D. College	Kanpur	UP	1	0	1
171	St. John's College	Agra	UP	1	0	1
172	Moti Lal Nehru Regional Engineering College	Allahabad	UP	1	0	1
173	Hindu College	New Delhi	DI	1	0	1
174	Dibrugarh University	Dibrugarh	AM	1	0	1
175	R.K. Mission Residential College	Narendrapur	WB	1	0	1
176	Government College	Shahdol	MP	1	0	1
177	Harcourt Butler Technological Institute	Kanpur	UP	1	0	1
178	Pachunga University (P.U.) College	Aizawl	MM	1	0	1
179	D.A.V. Post Graduate College	DehraDun	UP	0	1	1
180	Indian Institute of Management	Bangalore	KA	0	1	1
181	Milind College of Science	Aurangabad	MA	0	1	1
182	Institute of Armament Technology	Pune	MA	0	1	1
183	Government Maharaja College	Chhatarpur	MP	0	1	1

No.	Institution	City	State	No. of papers		
				1990	1994	Total
184	Netajinagar Vidyamandir (College)	Calcutta	WB	0	1	1
185	Holkar Science College	Indore	MP	0	1	1
186	Council of Scientific and Industrial Research	New Delhi	DI	0	1	1
187	Institute of Management Technology	Ghaziabad	UP	0	1	1
188	Harish Chandra Post Graduate College	Varanasi	UP	0	1	1
	Total			1319	1391	2710

Table 11: Contribution made by different organizations types as seen from *MATHSCI* 1990 and 1994

Organization type	1990	1994	Total
Academic	1045	1080	2125
Research	166	175	341
Central Ministries	107	130	237
Private Foundation	0	6	6
State Government	1	0	1
	1319	1391	2710

Academic

Universities

	1990	1994	Total
General	882	990	1872
Engineering	16	11	27
	898	1001	1899

Colleges

	1990	1994	Total
General	114	65	179
Engineering	33	14	47
	147	79	226

Research Institutions

	1990	1994	Total
DAE	152	153	305
ICAR	7	6	13
CSIR	1	9	10
Dept.of Space	6	7	13
	166	175	341

Central Ministries

	1990	1994	Total
Planning	101	123	224
Science & Technology	5	6	11
Human Resources Development	1	1	2
	106	130	237
Private foundations	0	6	6
State Government institutions	1	0	1
Total	1319	1391	2710

Table 12: Indian cities contribution in the field of mathematics as seen from *MATHSCI* 1990 and 1994 (arranged by number of papers)

No.	City	No. of papers		
		1990	1994	Total
1	Calcutta	191	185	376
2	New Delhi	116	135	251
3	Bombay	131	106	237
4	Madras	78	126	204
5	Bangalore	78	96	174
6	Varanasi	47	48	95
7	Aligarh	19	37	56
8	Kanpur	25	27	52
9	Kharagpur	18	32	50
10	Aurangabad	22	24	46
11	Chandigarh	18	27	45
12	Kalyani	22	21	43
13	Lucknow	16	26	42
14	Sagar	22	19	41
15	Jaipur	28	8	36
16	Allahabad	11	22	33
17	Pune	18	14	32
18	Bhubaneswar	7	22	29
19	Gauhati	13	16	29
20	Burdwan	11	17	28
21	Cochin	13	15	28
22	Bhilainagar	17	9	26
23	Gorakhpur	13	13	26
24	Hyderabad	13	13	26
25	Roorkee	13	13	26
26	Jodhpur	17	8	25
27	Ujjain	14	11	25
28	Waltair	17	8	25
29	Berhampur	4	17	21
30	Mysore	6	15	21
31	Ahmedabad	13	7	20
32	Hardwar	6	14	20
33	Jabalpur	6	13	19
34	Kolhapur	9	10	19
35	Dharwad	8	10	18
36	Jammu	6	12	18
37	Narshingpur	17	0	17

No.	City	No. of papers		
		1990	1994	Total
38	Trivandrum	10	6	16
39	Coimbatore	7	8	15
40	Indore	9	6	15
41	Srinagar (UP)	12	1	13
42	Bodh-Gaya	9	5	14
43	Rohtak	8	6	14
44	Tiruchirapalli	8	6	14
45	Ludhiana	4	8	12
46	Vallabh Vidyanagar	7	5	12
47	Almora	2	9	11
48	Nagarjuna Nagar	5	6	11
49	Orai	6	5	11
50	Rewa	1	10	11
51	Amritsar	3	7	10
52	Mesra	4	6	10
53	Santiniketan	6	4	10
54	Agra	7	2	9
55	Madurai	2	7	9
56	Raipur	6	3	9
57	Annamalai Nagar	2	6	8
58	Darjeeling	7	1	8
59	Ranchi	5	3	8
60	Chaibasa	7	0	7
61	Hissar	6	1	7
62	Meerut	4	3	7
63	Nagpur	5	2	7
64	Sambalpur	4	3	7
65	Ahmedpur	3	3	6
66	Baroda	3	3	6
67	Goa	2	4	6
68	Imphal	6	0	6
69	Mangalore	1	5	6
70	Howrah	2	3	5
71	Jaunpur	2	3	5
72	Kurukshetra	3	2	5
73	Nainital	4	1	5
74	Pilani	0	5	5
75	Surat	2	3	5
76	Udaipur	5	0	5
77	Bhagalpur	2	2	4
78	Bharwari	3	1	4
79	Calicut	3	1	4

No.	City	No. of papers		
		1990	1994	Total
80	Ghazipur	2	2	4
81	Patiala	1	3	4
82	Shillong	4	0	4
83	Tirupati	3	1	4
84	Aizawl	1	2	3
85	Cuttack	3	0	3
86	Etawah	1	2	3
87	Kalpakkam	0	3	3
88	Patna	3	0	3
89	Rajkot	1	2	3
90	Salem	3	0	3
91	Barrackpore	2	0	2
92	Dhanbad	2	0	2
93	Gaya	1	1	2
94	Ghaziabad	1	1	2
95	Jhansi	2	0	2
96	Najibabad	0	2	2
97	Rae Bareli	0	2	2
98	Rishikesh	0	2	2
99	Rourkela	1	1	2
100	Simla	0	2	2
101	Srinagar (JK)	0	2	2
102	Udupi	2	0	2
103	Bareilly	1	0	1
104	Chatarpur	0	1	1
105	DehraDun	0	1	1
106	Dibrugarh	1	0	1
107	Midnapore	1	0	1
108	Narendrapur	1	0	1
109	Shahdol	1	0	1
110	Warangal	1	0	1
	Total	1319	1391	2710

Table 13: India's contribution to the world literautre of mathematics as seen from MATHSCI 1990 and 1994 classified by state (arranged by number of papers)

No.	State	State Code	No. of papers		
			1990	1994	Total
1	WEST BENGAL	WB	261	263	524
2	UTTAR PRADESH	UP	197	237	434
3	MAHARASHTRA	MA	188	159	347
4	TAMILNADU	TN	99	155	254
5	DELHI	DI	116	135	251
6	KARNATAKA	KA	96	127	223
7	MADHYA PRADESH	MP	93	72	165
8	RAJASTHAN	RN	50	21	71
9	ANDHRA PRADESH	AP	39	28	67
10	ORISSA	OA	19	43	62
11	BIHAR	BR	33	17	50
12	KERALA	KE	26	22	48
13	GUJARAT	GT	26	20	46
14	CHANDIGARH	CH	18	27	45
15	ASSAM	AM	14	16	30
16	HARYANA	HA	17	9	26
17	PUNJAB	PB	8	18	26
18	JAMMU & KASHMIR	JK	6	14	20
19	GOA	GA	2	4	6
20	MANIPUR	MR	6	0	6
21	MEHAYALAYA	ME	4	0	4
22	MIZORAM	MM	1	2	3
23	HIMACHAL PRADESH	HP	0	2	2
			1319	1391	2710

Table 14: Institutions classified by organizations type

No.	Institution	No. of papers		
		1990	1994	Total

Research Institutions

Department of Atomic Energy

No.	Institution	1990	1994	Total
1	Tata Institute of Fundamental Research, Bombay	95	77	172
2	Institute of Mathematical Sciences, Madras			
3	Tata Institute of Fundamental Research, Bangalore	23	4	27
4	Saha Institute of Nuclear Physics, Calcutta	8	14	22
5	Institute of Physics, Bhubaneswar	6	9	15
6	Mehta Research Institute, Allahabad	1	13	14
7	Bhaba Atomic Research Centre, Bombay	4	1	5
8	Indira Gandhi Centre for Atomic Research Kalpakkam	0	3	3
	Total	152	153	305

Indian Council of Agricultural Research

No.	Institution	1990	1994	Total
9	Indian Agricultural Statistics Research Institute, New Delhi	5	6	11
10	Jute Agricultural Research Institute, Barrackpore	2	0	2
	Total	7	6	13

Council of Scientific and Industrial Research

No.	Institution	1990	1994	Total
11	National Aeronautical Laboratory, Bagalore	1	8	9
12	Council of Scientific and Industrial Research, New Delhi	0	1	1
	Total	1	9	10

Department of Space

No.	Institution	1990	1994	Total
13	Physical Research Laboratory, Ahmedabad	4	5	9
14	Vikhram Sarbhai Space Centre, Trivandrum	2	2	4
	Total	1	9	10

Central Ministries
Planning

15	Indian Statistical Institute, Calcutta	55	67	122
16	Indian Statistical Institute, New Delhi	33	39	72
17	Indian Statistical Institute, Bangalore	13	14	27
18	Indian Statistical Institute, Madras	0	3	3
	Total	101	123	224

ISI is also classified as an institute of national importance [and could be treated as an academic institution]

Science and Technology

19	Indian Association for the Cultivation of Science, Calcutta	2	3	5
20	Raman Research Institute, Bangalore	1	3	4
21	Dept of Science and Technology, New Delhi	1	0	1
22	Indian National Science Academy, New Delhi	1	0	1
		5	6	11

Human Resource Development

23	National Council of Education Research and Training, New Delhi	1	3	4

Foundations

24	SPIC Science Foundation, Madras	0	6	6

State Government

25	Bombay Metropolitan Region Development Authority, Bombay	1	0	1

Academic

General Universities

26	University of Calcutta, Calcutta	75	56	131
27	Indian Institute of Science, Bangalore	35	60	95
28	Banaras Hindu University, Varanasi	47	47	94
29	University of Delhi, New Delhi	30	40	70
30	Indian Instiute of Technology, Madras	26	45	71

31	Jadavpur University, Calcutta	34	34	68
32	University of Madras, Madras	27	32	59
33	Aligarh Muslim University, Aligarh	17	37	54
34	Indian Institute of Technology, Kharagpur	18	32	50
35	Indian Institute of Technology, Kanpur	22	27	49
36	Panjab University, Chandigarh	18	27	45
37	Indian Instiute of Technology, Bombay	21	24	45
38	University of Kalyani, Kalyani	22	21	43
39	Lucknow University, Lucknow	16	26	42
40	Indian Institute of Technology, New Delhi	20	22	42
41	Dr. Hari Singh Gour University, Sagar	22	19	41
42	Marathwada University, Aurangabad	19	19	38
43	University of Poona, Pune	18	13	31
44	Cochin University of Science and Technology, Cochin	13	15	28
45	Burdwan University	11	17	28
46	Jawaharlal Nehru University, New Delhi	15	11	26
47	University of Roorkee, Roorkee	13	13	26
48	University of Jodhpur, Jodhpur	17	8	25
49	University of Rajasthan, Jaipur	20	5	25
50	Andhra University, Waltair	17	8	25
51	University of Gorakhpur, Gorakhpur	11	13	24
52	Vikram University, Ujjain	12	10	22
53	Gurukula Kangri Vishvavidhyalaya, Hardwar	6	14	20
54	University of Mysore, Mysore	6	13	19
55	Shivaji University, Kolhapur	9	10	19
56	Karnatak University, Dharwad	8	10	18
57	University of Allahabad, Allahabad	9	9	18
58	University of Jammu, Jammu	6	12	18
59	Berhampur University, Berhampur	2	16	18
60	Bharathiar University, Coimbatore	7	8	15
61	Magadh University, Bodh-Gaya	9	15	24
62	Maharshi Dayanand University, Rohtak	8	6	14
63	University of Bombay, Bombay	10	4	14
64	University of Hyderabad, Hyderabad	6	8	14
65	Utkal University, Bhubaneswar	1	13	14
66	Gauhati University, Gauhati	3	10	13
67	Garhwal University, Srinagar	12	1	13
68	University of Kerala, Trivandrum	8	4	12
69	Rani Durgavati University, Jabalpur	3	9	12
70	Bharathidasan University, Tirchirapalli	7	5	12
71	Indian Institute of Management, Calcutta	7	5	12
72	Sardar Patel University, Vallabh Vidyanagar	7	5	12
73	Osmania University, Hyderabad	7	5	12
74	Jamia Milla Islamia, New Delhi	3	9	12
75	Nagarjuna University, Nagarjuna Nagar	5	6	11
76	Bangalore University, Bangalore	5	6	11
77	Awadesh Pratap Singh University, Rewa	1	10	11
78	Almora College, Almora	2	9	11
79	Birla Institute of Technology, Mesra	4	6	10
80	Guru Nanak Dev University, Amritsar	3	7	10
81	Visva-Bharati University, Santiniketan	6	4	10

82	Pandit Ravishankar Shukla University, Raipur	6	3	9
83	Madurai Kamaraj University, Madurai	2	7	9
84	Gujarat University, Ahmedabad	6	2	8
85	University of North Bengal, Darjeeling	7	1	8
86	Annamalai University, Annamalai Nagar	2	6	8
87	Sambalpur University, Sambalpur	4	3	7
88	Agra University, Agra	5	2	7
89	Meerut University, Meerut	4	3	7
90	University of Baroda, Baroda	3	3	6
91	Goa University, Goa	2	4	6
92	Manipur University, Imphal	6	0	6
93	Mangalore University, Mangalore	1	5	6
94	Kurukshetra University, Kurukshetra	3	2	5
95	Kumaun University, Nainital	4	1	5
96	South Gujarat University, Surat	2	3	5
97	Anna University, Chennai	1	4	5
98	Birla Institute of Technology and Science, Pilani	0	5	5
99	Bhagalpur University, Bhagalpur	2	2	4
100	Sri Vemkateswara University, Tirupati	3	1	4
101	University of Calicut, Calicut	3	1	4
102	North Eastern Hill University, Shillong	4	0	4
103	Ranchi University, Ranchi	2	2	4
104	University of Nagpur, Nagpur	2	2	4
105	Punjabi University, Patiala	1	3	4
106	Patna University, Patna	3	0	3
107	Indian Institute of Management, Ahmedabad	3	0	3
108	Saurashtra University, Rajkot	1	2	3
109	Madras University PG Center, Salem	3	0	3
110	Miliand College of Science, Aurangabad	2	0	2
111	Indian School of Mines, Dhanbad	2	0	2
112	Bundelkhand University, Jhansi	2	0	2
113	University of Kashmir, Srinagar	0	2	2
114	Himachal Pradesh University, Simla	0	2	2
115	Institute of Advanced Study in Science and Technology, Gauhati	0	2	2
116	Sahu Jain College, Najibabad	0	2	2
117	Pachunga University (P.U.) College, Aizwal	1	2	3
118	University of Indore, Indore	1	0	1
119	Kakatiya University, Warangal	1	0	1
120	Vidya Sagar University, Midnapore	1	0	1
121	Dibrugarh University, Dibrugarh	1	0	1
122	Indian Institute of Management, Bangalore	0	1	1
123	Institute of Armament Technology, Pune	0	1	1
124	Institute of Management Technology, Ghaziabad	0	1	1
	Total	882	990	1872

Agricultural Universities

125	Punjab Agricultural University, Ludhiana	4	8	12
126	Haryana Agricultural University, Hissar	6	1	7
127	Birsa Agricultural University, Ranchi	3	1	4
128	Jawaharlal Nehru Agricultural University, Jabalpur	3	1	4
	Total	16	11	27

Colleges

General

129	Kalyan Mahavidhyalaya, Bhilainagar	17	9	26
130	Government Post Graduate College, Narshingpur	17	0	17
131	Cotton College, Guwahati	10	4	14
132	D.V Postgraduate College, Orai	6	5	11
133	Tata College, Chaibasa	7	0	7
134	Bangabasi Evening College, Calcutta	3	4	7
135	Ramakrishna Mission Vivekananda College, Madras	4	2	6
136	Maitreyi College, New Delhi	4	2	6
137	Mahatma Gandhi College, Ahmedpur	3	3	6
138	Institute of Science, Aurangabad	1	4	5
139	Tilak Dhari Post Graduate College, Jaunpur	2	3	5
140	Presidency College, Calcutta	4	0	4
141	Madras Christian College, Madras	2	2	4
142	Bhavan's Mehta College, Bharwari	3	1	4
143	Shri Guru Teg Bahadur Khalsa College, New Delhi	1	3	4
144	Post Graduate College, Ghaizpur	2	2	4
145	Asutosh College, Calcutta	2	1	3
146	Janta College, Etawah	1	2	3
147	Ravenshaw College, Cuttack	3	0	3
148	Khallikote College, Berhampur	2	1	3
149	Mahatma Gandhi Memorial College, Udupi	2	0	2
150	Loyola College, Madras	2	0	2
151	St. Andrew's College, Gorakhpur	2	0	2
152	Zakir Husain College, New Delhi	1	1	2
153	National College, Tiruchirapalli	1	1	2
154	Gaya College, Gaya	1	1	2
155	FerozeGandhi College, Rae Bareli	0	2	2
156	Narasingha Dutt College, Howrah	0	2	2
157	Regional College of Education, Mysore	2	0	2
158	L.M.S. Govt. Postgraduate College, Rishikesh	0	2	2
159	Bareilly College, Bareilly	1	0	1
160	Agra College, Agra	1	0	1
161	Presidency College, Madras	1	0	1
162	Christ Church College, Kanpur	1	0	1

163	Lajpat Rai College, Ghaziabad	1	0	1
164	Surendranath College, Calcutta	1	0	1
165	V.S.S.D College, Agra	1	0	1
166	St. John College, Agra	1	0	1
167	Hindu College, New Delhi	1	0	1
168	R.K. Mission Residental College, Narenrapur	1	0	1
169	Government College, Shahdol	1	0	1
170	D.A.V Post Graduate College, Dehradun	0	1	1
171	Milind College of Science, Aurangabad	0	1	1
172	Government Maharaja College, Chhatarpur	0	1	1
173	Netajinagar Vidyamandir (College), Aurangabad	0	1	1
174	Holkar Science College, Indore	0	1	1
175	Harish Chandra Post Graduate College, Varanasi	0	1	1
	Total	**114**	**65**	**179**

Engineering Colleges

176	Shri G.S. Institute of Technology, Indore	8	5	3
177	Malaviya Regional Engineering College, Jaipur	7	3	10
178	College of Technology and Agricultural Engineering, Udaipur	5	0	5
179	Bengal Engineering College, Howrah	2	1	3
180	Visveswaraya Regional College of Engineering, Nagpur	3	0	3
181	Government Engineering College, Ujjain	2	1	3
182	Government Engineering College, Jabalpur	0	3	3
183	Zahir Hussian College of Engineering Aligarh	2	0	2
184	Regional Engineering College, Rourkela	1	1	2
185	Malaviya Regional Engineering College, Jaipur	1	0	1
186	Moti Lal Nehru Regional Engineering College, Allahabad	1	0	1
187	Harcourt Butler Technological Institute, Kanpur	1	0	1
	Total	**33**	**14**	**47**
	Grand Total	**1319**	**1391**	**2710**

Table 15: India's contribution to journal literautre of mathematics categorised by selected institutions and selected journals (*MATHSCI* 1990)

Journals \ Institutions→	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	Total
Astrophys.-Space-Sci	1	0	0	0	6	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Bull.-Calcutta-Math.-Soc.	1	4	1	0	6	0	0	0	2	1	0	0	0	0	0	0	3	0	0	1	0	0	1	0	0	0	0	0	20
Calcutta-Statist.-Assoc.-Bull	0	5	5	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	15
Classical-Quantum-Gravity	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	6
Comm.-Statist.-Theory-Methods	0	1	3	0	1	2	0	1	0	0	0	0	0	1	0	1	1	1	1	0	0	1	0	0	0	0	0	0	14
Fuzzy-Sets-and-Systems	0	6	0	0	1	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Indian-J.-Pure-Appl.-Math	0	1	0	1	3	0	1	2	0	2	0	1	1	1	0	0	2	0	1	1	4	1	0	1	0	0	0	0	23
Internat.-J.-Theoret.-Phys.	0	0	0	0	3	0	0	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
J.-Indian-Math.-Soc. (N.S.)	0	0	0	0	0	0	0	1	0	3	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	7
J.-Math.-Anal.-Appl	0	0	0	0	0	0	0	1	0	0	2	0	1	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	8
J.-Math.-Phys.	0	0	1	0	0	0	4	2	2	1	0	1	1	0	0	1	0	0	1	0	0	0	2	0	0	0	0	0	16
J.-Math.-Phys.-Sci	0	0	0	0	0	0	4	0	0	1	0	1	0	0	0	1	0	0	1	0	0	0	2	0	0	0	0	0	10
J.-Phys.-A	1	0	2	0	3	0	2	0	4	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	15
Linear-Algerba-Appl	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Modern-Phys.-Lett.-A	6	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	11
Nuclear-Phys.-B	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	11
Phys.-Lett.-A	0	0	3	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	7
Phys.-Lett.-B	4	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	8
Phys.-Rev.-D	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	7
Phys.-Rev.-Lett	2	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	5
Proc.-Indian-Acad.-Sci.-Math.-Sci	4	0	0	3	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	4	0	0	0	14
Pure-Math.-Manuscript	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	22
Total	30	39	15	9	23	11	11	9	17	9	3	5	5	5	3	4	7	1	5	3	5	4	6	4	5	7	5	4	254

A	-	Tata Inst Fund Res, Bombay	I	-	Jadavpur University, Calcutta	Q	-	Kalyani University, Kalyani
B	-	Calcutta University, Calcutta	J	-	Madras Univeristy, Madras	R	-	Lucknow University, Lucknow
C	-	Indian Statistical Inst, Calcutta	K	-	Aligarh Muslim University, Aligarh	S	-	Indian Inst Technol, Delhi
D	-	Indian Inst Sci, Bangalore	L	-	Indian Inst Technol, Kharagpur	T	-	H.S. Gour University, Sagar
E	-	Banaras Hindu University, Varanasi	M	-	Indian Inst Technol, Kanpur	U	-	Marathwada University, urangabad
F	-	Indian Statistical Inst, Delhi	N	-	Inst Mathemat Sci, Madras	V	-	University of Poonea, Pune
G	-	Indian Inst Technol, Madras	O	-	Panjab University, Chandigarh	W	-	Cochin University ofScience and Technology, Cochin
H	-	Delhi University, Delhi	P	-	Indian Inst Technol, Bombay			

X	-	Burdwan University, Burdwan
Y	-	Tata Inst Fund Res, Bangalore
Z	-	Saha Institute of Nuclear Physics, Calcutta
AA	-	Institute of Physics, Bhubaneswar
BB	-	Physical Research Laboratory, Ahmedabad

Table 16: India's contribution to journal literautre of mathematics categorised by selected institutions and selected journals (*MATHSCI* 1994)

Journals \ Institutions→	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	Total
Bull.-Calcutta-Math.-Soc.	0	8	0	0	4	0	0	1	0	1	1	0	0	0	0	0	2	0	0	0	0	0	0	5	0	0	0	0	22
Calcutta-Statist.-Assoc.-Bull	0	1	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	8
Classical-Quantum-Gravity	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Comm.-Statist.-Theory-Methods	0	1	2	0	2	0	0	0	0	0	0	0	1	0	3	0	0	2	0	0	0	0	1	0	0	0	0	0	12
Fuzzy-Sets-and-Systems	0	1	3	0	2	0	2	3	0	2	1	3	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	20
Indian-J.-Pure-Appl.-Math	0	4	6	0	1	0	0	1	0	2	5	0	0	1	1	0	1	0	0	0	2	1	1	2	0	0	0	0	28
Internat.-J.-Theoret.-Phys.	1	0	3	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	8
J.-Indian-Math.-Soc. (N.S.)	1	0	0	1	0	0	0	1	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	8
J.-Math.-Anal.-Appl	0	0	0	0	4	0	1	0	0	1	0	0	2	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	11
J.-Math.-Phys.	0	0	2	0	0	0	0	1	2	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	8
J.-Math.-Phys.-Sci	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
J.-Phys.-A	1	0	0	0	0	0	1	0	3	2	0	1	0	3	2	0	0	0	0	0	0	0	0	0	0	3	1	0	17
Linear-Algerba-Appl	0	0	1	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Modern-Phys.-Lett.-A	3	0	0	1	0	0	0	0	3	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	2	1	16
Nuclear-Phys.-B	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	2	7
Phys.-Lett.-A	0	3	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	2	0	2	11
Phys.-Lett.-B	3	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	8
Phys.-Rev.-D	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	5
Phys.-Rev.-Lett	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2
Proc.-Indian-Acad.-Sci.-Math.-Sci	5	0	0	3	0	4	0	0	0	1	0	0	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	18
Total	17	18	22	6	13	15	4	7	13	9	7	7	4	17	8	3	4	8	0	0	4	1	7	10	0	7	6	7	223

A	-	Tata Inst Fund Res, Bombay	I	-	Jadavpur University, Calcutta	Q	-	Kalyani University, Kalyani
B	-	Calcutta University, Calcutta	J	-	Madras Univeristy, Madras	R	-	Lucknow University, Lucknow
C	-	Indian Statistical Inst, Calcutta	K	-	Aligarh Muslim University, Aligarh	S	-	Indian Inst Technol, Delhi
D	-	Indian Inst Sci, Bangalore	L	-	Indian Inst Technol, Kharagpur	T	-	H.S. Gour University, Sagar
E	-	Banaras Hindu University, Varanasi	M	-	Indian Inst Technol, Kanpur	U	-	Marathwada University, urangabad
F	-	Indian Statistical Inst, Delhi	N	-	Inst Mathemat Sci, Madras	V	-	University of Poonea, Pune
G	-	Indian Inst Technol, Madras	O	-	Panjab University, Chandigarh	W	-	Cochin University ofScience and Technology, Cochin
H	-	Delhi University, Delhi	P	-	Indian Inst Technol, Bombay			

X	-	Burdwan University, Burdwan
Y	-	Tata Inst Fund Res, Bangalore
Z	-	Saha Institute of Nuclear Physics, Calcutta
AA	-	Institute of Physics, Bhubaneswar
BB	-	Physical Research Laboratory, Ahmedabad

Table 17: India's contribution to journal literature of mathematics categorsied by selected institutions and impact factors of journals
(*MATHSCI* -1990)

Imp Factor range→ / Institutions	A	B	C	D	E	F	G	H	I	Total
Tata Inst Fund Res, Bombay	30	28	8	7	4	1	6	8	3	95
Calcutta University, Calcutta	62	4	8	1	0	0	0	0	0	75
Indian Statistical Inst, Calcutta	33	10	6	3	2	1	0	0	0	55
Indian Inst Sci, Bangalore	9	15	2	1	2	1	3	1	1	35
Banaras Hindu University, Varanasi	26	16	1	0	3	1	0	0	0	47
Indian Statistical Inst, Delhi	14	13	4	0	0	0	0	0	0	33
Indian Inst Technol, Madras	14	8	2	0	2	0	0	0	0	26
Delhi University, Delhi	14	13	3	0	0	0	0	0	0	30
Jadavpur University, Calcutta	9	9	8	2	4	0	1	1	0	34
Madras University, Madras	19	7	0	0	1	0	0	0	0	27
Aligarh Muslim University, Aligarh	13	4	0	0	0	0	0	0	0	17
Indian Inst Technol, Kharagpur	8	6	3	0	1	0	0	0	0	18
Indian Inst Technol, Kanpur	12	6	1	2	0	0	1	0	0	22
Institute of Mathemat Sci, Madras	3	7	0	0	1	3	0	0	1	15
Panjan University, Chandigarh	9	6	2	0	1	0	0	0	0	18
Indian Inst Technol, Bombay	6	11	2	2	0	0	0	0	0	21
Kalyani University, Kalyani	15	5	0	0	1	1	0	0	0	22
Lucknow University, Lucknow	12	3	1	0	0	0	0	0	0	16
Indian Inst Technol, Delhi	9	8	2	0	1	0	0	0	0	20
H.S. Gour University, Sagar	21	1	0	0	0	0	0	0	0	22
Marathwada University, Aurangabad	14	5	0	0	0	0	0	0	0	19
University of Poona, Pune	9	4	1	0	1	2	0	0	1	18
Cochin University of Science and Technology, Cochin	12	0	1	0	0	0	0	0	0	13
Burdwan University, Burdwan	6	4	1	0	0	0	0	0	0	11
Tata Inst Fund Res, Bangalore	7	12	4	0	0	0	0	0	0	23
Saha Institute fo Nuclear Physics, Calcutta	0	0	0	2	3	0	3	0	0	8
Institute of Physics, Bhubaneswar	0	0	1	1	0	0	1	3	0	6
Physical Research Laboratory, Ahmedabad	0	0	0	1	0	0	3	0	0	4
	386	207	61	22	27	10	18	13	6	750

A - 0.000	F > 2.0 - 2.5
B > 0.0 - 0.5	G > 3.0 - 3.5
C > 0.5 - 1.0	H > 3.5 - 4.0
D > 1.0 - 1.5	I > 6.0 - 7.0
E > 1.5 - 2.0	

Table 18: India's contribution to journal literature of mathematics categorsied
by selected institutions and impact factors of journals
(*MATHSCI* -1994)

Institutions / Imp Factor range →	A	B	C	D	E	F	G	H	I	J	Total
Tata Inst Fund Res, Bombay	21	28	11	5	4	2	0	4	2	0	77
Calcutta University, Calcutta	42	9	1	3	1	0	0	0	0	0	56
Indian Statistical Inst. Calcutta	32	23	9	0	0	0	1	2	0	0	67
Indian Inst Sci. Bangalore	16	29	10	4	1	0	0	0	0	0	60
Banaras Hindu University, Varanasi	32	10	5	0	0	0	0	0	0	0	47
Indian Statistical Inst, Delhi	15	18	4	1	1	0	0	0	0	0	39
Indian Inst Technol, Madras	31	9	4	0	1	0	0	0	0	0	45
Delhi University, Delhi	23	11	5	0	1	0	0	0	0	0	40
Jadavpur University, Calcutta	11	4	8	3	7	1	0	0	0	0	34
Madras University, Madras	12	15	2	0	3	0	0	0	0	0	32
Aligarh Muslim University, Aligarh	27	9	1	0	0	0	0	0	0	0	37
Indian Inst Technol. Kharagpur	17	5	7	0	3	0	0	0	0	0	32
Indian Inst Technol, Kanpur	9	12	4	1	0	0	0	1	0	0	27
Institute of Mathemat Sci, Madras	5	7	1	8	5	2	0	1	2	1	32
Panjan University, Chandigarh	8	17	0	0	2	0	0	0	0	0	27
Indian Inst Technol, Bombay	14	5	5	0	0	0	0	0	0	0	24
Kalyani University, Kalyani	20	1	0	0	0	0	0	0	0	0	21
Lucknow University, Lucknow	17	8	0	1	0	0	0	0	0	0	26
Indian Inst Technol, Delhi	12	7	2	0	1	0	0	0	0	0	22
H.S. Gour University, Sagar	19	0	0	0	0	0	0	0	0	0	19
Marathwada University, Aurangabad	13	6	0	0	0	0	0	0	0	0	19
University of Poona, Pune	2	8	2	0	1	0	0	0	0	0	13
Cochin University of Science and Technology, Cochin	6	5	3	1	0	0	0	0	0	0	15
Burdwan University, Burdwan	12	3	0	2	0	0	0	0	0	0	17
Tata Inst Fund Res, Bangalore	4	0	0	0	0	0	0	0	0	0	4
Saha Institute fo Nuclear Physics, Calcutta	4	1	0	3	3	0	0	1	1	1	14
Institute of Physics, Bhubaneswar	2	0	0	2	1	0	0	2	2	0	9
Physical Research Laboratory, Ahmedabad	0	0	0	3	0	0	0	2	0	0	5
	426	250	84	37	35	5	1	13	7	2	860

A - 0.000   F >2.0 - 2.5
B > 0.0 - 0.5   G >2.5 - 3.0
C > 0.5 - 1.0   H >3.0 - 3.5
D > 1.0 - 1.5   I >3.5 - 4.0
E > 1.5 - 2.0   J >6.0 - 7.0

Table 19: India's contribution to journal literature of mathematics categorised by selected institutions and subfields (*MATHSCI*- 1990)

Institutions

Subfield	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	Total
05 Combinatorics-	4	1	0	0	0	1	1	0	0	4	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	14
11 Number-theory	16	0	0	1	0	0	0	0	0	1	0	0	0	0	3	1	0	0	1	0	0	0	1	1	0	0	0	0	25
13 Commutative-rings-and-algebras	4	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	7
14 Algebraic-geometry	18	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	20
15 Linear-and-multilinar-algebra	0	0	0	1	0	4	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	7
16 Associative-rings-and-algebra	0	2	0	0	0	0	4	0	0	3	6	0	0	0	2	1	0	0	1	2	0	0	2	0	0	0	0	0	23
17 Nonassociative-rings-and-algebras	6	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	11
20 Group-theory-and-generalizations	0	4	0	0	0	0	2	1	0	1	1	0	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	14
22 Topological-groups,-Lie-groups	3	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	7
26 Real-functions	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	9	0	0	3	0	0	0	15
28 Measure-and-integration	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	1	0	0	0	0	0	6
30 Functions-of-a-complex-variable	0	6	1	0	0	0	2	0	0	1	0	1	4	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	16
33 Special-functions	0	13	0	0	5	0	1	0	0	3	2	0	0	0	0	0	0	0	3	0	0	0	0	0	0	1	0	0	28
35 Partial-differential-equations	0	0	0	5	0	0	0	0	0	7	0	0	0	0	0	0	0	0	1	0	0	0	1	0	11	2	0	0	27
41 Approximations-and-expansions	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2	0	2	0	0	0	0	0	0	0	0	0	6
42 Fourier-analysis	1	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	6
45 Integral-equations	0	0	0	1	0	0	0	1	0	0	0	0	2	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	6
46 Functional-analysis	0	2	1	0	4	4	1	5	0	1	0	0	1	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	22
47 Operator-theory	0	0	0	0	1	2	0	2	0	0	2	0	1	0	0	1	1	0	0	2	0	2	0	0	0	0	0	0	14
53 Differential-geometry	1	5	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	0	0	0	0	0	0	0	0	16
54 General-topology	0	11	2	0	1	0	0	2	2	2	1	1	0	0	0	0	2	0	0	18	1	0	1	1	0	0	0	0	45
58 Global-analysis,-analysis-on-manifolds	0	0	0	2	0	1	0	2	8	2	0	0	0	1	0	0	0	0	1	0	0	1	1	0	0	1	0	0	20
60 Probability-theory-and- stochastic-processes	0	3	5	0	0	4	2	2	0	2	0	0	0	0	0	1	0	0	1	0	2	1	1	1	0	0	0	0	25
62 Statistics	0	13	29	0	3	7	0	3	0	5	0	0	2	0	3	1	4	6	2	0	0	5	2	2	0	0	0	0	87
65 Numer-Anal	0	2	3	2	0	1	2	0	0	0	0	1	2	0	1	3	0	0	4	0	0	0	0	0	1	0	0	0	22
68 Comput-sci	1	1	2	3	0	0	4	0	0	0	0	4	0	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	19
76 Fluid-Mech	0	1	1	2	6	0	0	1	2	0	0	0	1	0	1	1	1	0	2	0	0	0	2	0	0	0	0	0	21

Subfield \ Institutions	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	Total
81 Quant-Theory	22	1	8	6	0	1	2	1	0	0	0	0	1	4	1	0	1	0	0	0	0	0	0	1	0	5	4	1	59
82 Stat-Mech	5	0	0	1	3	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	12
83 Relat-Gravitat	6	0	0	0	7	0	0	0	7	0	0	0	1	1	0	0	0	0	0	0	0	2	0	1	0	0	1	3	29
90 Econom-oper-res	0	3	1	1	6	6	1	8	2	0	0	1	1	0	1	2	0	0	4	0	0	0	1	1	1	0	0	0	40
92 Biol-nat-sci	0	1	1	0	1	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
93 System-theory	0	0	0	4	0	0	1	0	0	0	0	0	4	1	0	0	1	0	0	0	0	0	0	0	3	0	0	0	14
94 Inform-commun	0	1	0	1	0	1	2	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	7
	87	72	54	30	42	32	26	30	34	26	14	14	20	15	16	19	20	16	19	22	14	16	12	11	19	8	6	4	698

A - Tata Inst Fund Res, Bombay
B - Calcutta University, Calcutta
C - Indian Statistical Inst, Calcutta
D - Indian Inst Sci, Bangalore
E - Banaras Hindu University, Varanasi
F - Indian Statistical Inst, Delhi
G - Indian Inst Technol, Madras
H - Delhi University, Delhi

I - Jadavpur University, Calcutta
J - Madras Univeristy, Madras
K - Aligarh Muslim University, Aligarh
L - Indian Inst Technol, Kharagpur
M - Indian Inst Technol, Kanpur
N - Inst Mathemat Sci, Madras
O - Panjab University, Chandigarh
P - Indian Inst Technol, Bombay

Q - Kalyani University, Kalyani
R - Lucknow University, Lucknow
S - Indian Inst Technol, Delhi
T - H.S. Gour University, Sagar
U - Marathwada University, Aurangabad
V - University of Poonea, Pune
W - Cochin University of Science and Technology, Cochin

X - Burdwan University, Burdwan
Y - Tata Inst Fund Res, Bangalore
Z - Saha Institute of Nuclear Physics, Calcutta
AA - Institute of Physics, Bhubaneswar
BB - Physical Research Laboratory, Ahmedabad

Table 20: India's contribution to journal literature of mathematics categorised by selected institutions and subfields (*MATHSCI*- 1994)

Subfield \ Institutions→	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	Total
05 Combinatorics-	4	0	0	2	0	2	4	0	1	1	0	0	1	1	0	3	0	0	1	0	0	0	2	0	0	0	0	0	22
11 Number-theory	15	0	0	0	0	0	0	1	0	1	0	0	0	3	7	0	0	2	0	0	0	0	0	0	0	0	0	0	29
13 Commutative-rings-and-algebras	5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	8
14 Algebraic-geometry	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
15 Linear-and-multilinar-algebra	0	0	2	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
16 Associative-rings-and-algebra	1	2	0	0	1	0	9	1	0	0	6	1	0	0	2	1	0	0	0	0	0	0	2	0	0	0	0	0	26
17 Nonassociative-rings-and-algebras	3	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
20 Group-theory-and-generalizations	1	5	0	0	0	0	8	3	0	0	1	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	22
22 Topological-groups,-Lie-groups	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	8
26 Real-functions	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	3	1	0	0	0	20
28 Measure-and-integration	1	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	6
30 Functions-of-a-complex-variable	0	1	0	0	0	0	0	1	0	4	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
33 Special-functions	0	0	1	0	4	0	0	0	0	0	4	0	0	1	0	0	0	5	0	0	0	0	0	0	0	0	0	0	15
34 Ordinary-differential-equations	0	2	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	1	0	0	3	0	0	0	0	0	0	0	10
35 Partial-differential-equations	0	0	0	8	0	0	0	0	2	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	13
39 Finite-differences-and-functional equations	0	0	0	0	0	0	2	0	0	8	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	11
41 Approximations-and-expansions	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2
42 Fourier-analysis	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	6
46 Functional-analysis	0	1	3	1	1	2	3	3	0	1	2	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	20
47 Operator-theory	0	0	0	2	2	6	1	5	0	0	1	1	0	1	0	0	0	0	0	0	2	1	0	1	0	0	0	0	23
49 Calculus-of-variations-and-optimal-control	0	0	0	0	1	0	1	2	1	0	3	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	11
53 Differential-geometry	2	3	0	1	15	0	0	0	0	0	2	0	0	1	0	0	14	4	0	0	0	0	0	0	0	0	0	0	42
54 General-topology	0	14	1	0	6	0	3	3	0	3	5	4	0	0	0	0	1	0	0	16	0	0	2	2	0	0	0	0	60
58 Global-analysis,-analysis-on-manifolds	1	0	0	2	0	0	0	2	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	17
60 Probability-theory-and-stochastic-processes	0	0	3	1	0	6	0	2	0	1	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	16
62 Statistics	0	5	29	0	4	7	0	2	0	3	1	1	3	0	9	0	1	9	0	0	0	8	4	3	0	0	0	0	89

Institutions→ Subfield	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	Total
65 Numer-Anal	0	0	2	8	0	1	2	0	1	0	0	0	2	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	19
68 Comput-sci	4	2	6	3	0	0	1	0	0	0	0	4	4	2	0	2	0	0	4	0	0	0	0	0	0	0	0	0	32
76 Fluid-Mech	0	3	0	5	1	0	1	0	1	0	0	2	1	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	18
81 Quant-Theory	14	3	9	1	0	2	1	3	7	3	0	2	1	16	1	1	0	0	0	0	0	1	1	2	0	8	6	2	84
82 Stat-Mech	0	3	1	1	0	0	0	0	4	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	4	1	0	17
83 Relat-Gravitat	6	0	1	2	6	0	1	0	5	0	1	0	0	1	0	1	0	0	0	0	0	1	0	0	0	1	2	2	30
90 Econom-oper-res	0	2	2	6	3	4	2	6	0	2	0	8	1	0	0	4	2	0	4	0	0	0	1	2	0	0	0	0	49
92 Biol-nat-sci	0	0	1	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	5
93 System-theory	0	3	0	8	0	1	1	0	0	0	0	1	2	0	0	4	0	0	2	0	0	0	0	1	0	0	0	0	23
94 Inform-commun	1	0	0	0	0	0	1	0	0	0	0	2	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	8
	75	54	61	52	45	37	45	34	34	29	28	31	24	27	23	20	20	23	22	19	17	13	15	16	4	14	9	4	795

A - Tata Inst Fund Res, Bombay	I - Jadavpur University, Calcutta	Q - Kalyani University, Kalyani
B - Calcutta University, Calcutta	J - Madras Univeristy, Madras	R - Lucknow University, Lucknow
C - Indian Statistical Inst, Calcutta	K - Aligarh Muslim University, Aligarh	S - Indian Inst Technol, Delhi
D - Indian Inst Sci, Bangalore	L - Indian Inst Technol, Kharagpur	T - H.S. Gour University, Sagar
E - Banaras Hindu University, Varanasi	M - Indian Inst Technol, Kanpur	U - Marathwada University, Aurangabad
F - Indian Statistical Inst, Delhi	N - Inst Mathemat Sci, Madras	V - University of Poonea, Pune
G - Indian Inst Technol, Madras	O - Panjab University, Chandigarh	W - Cochin University ofScience and Technology, Cochin
H - Delhi University, Delhi	P - Indian Inst Technol, Bombay	

X - Burdwan University, Burdwan
Y - Tata Inst Fund Res, Bangalore
Z - Saha Institute of Nuclear Physics, Calcutta
AA - Institute of Physics, Bhubaneswar
BB - Physical Research Laboratory, Ahmedabad

Figures
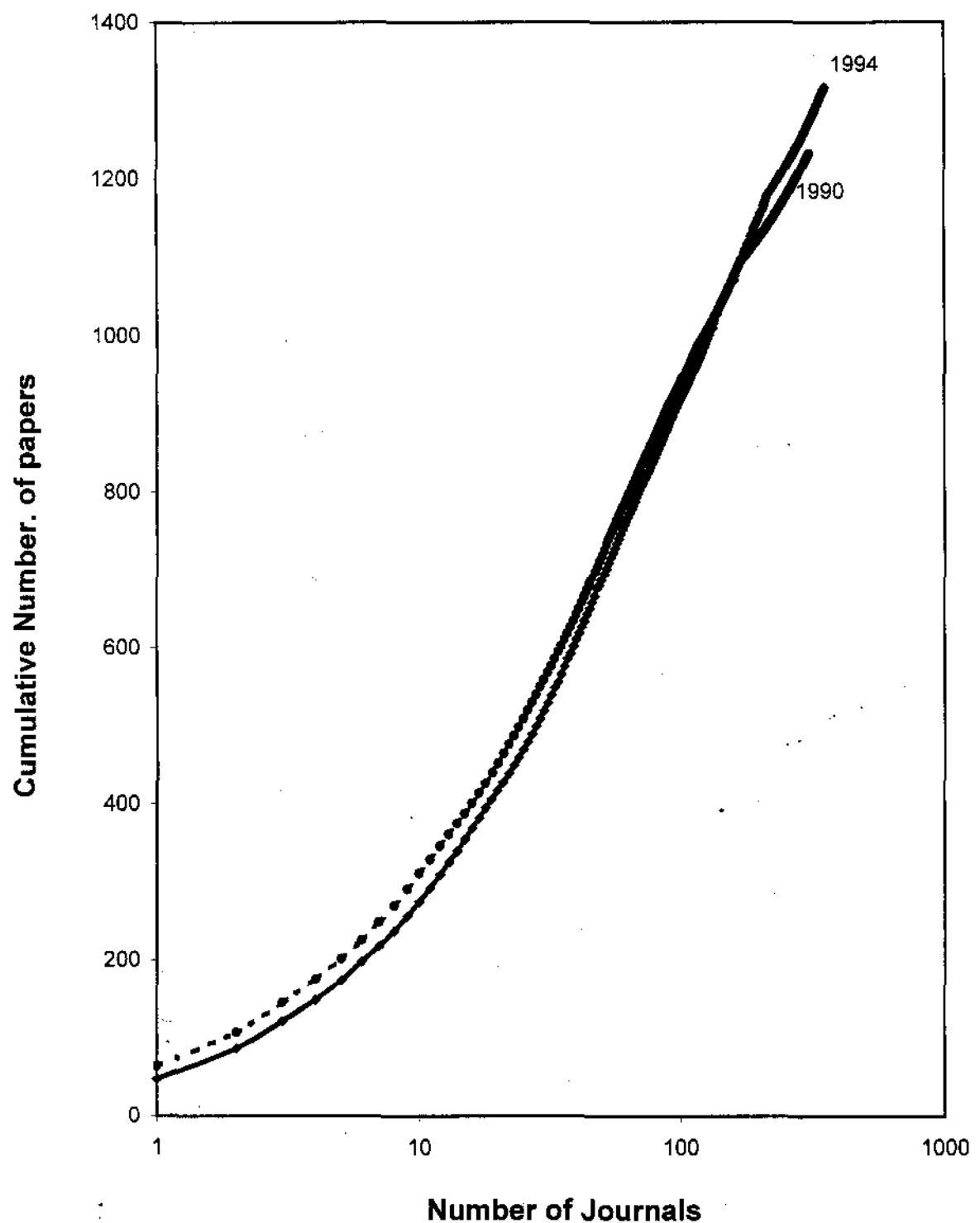
Fig 1: Number of Journals vs. Cumulative Number of Articles
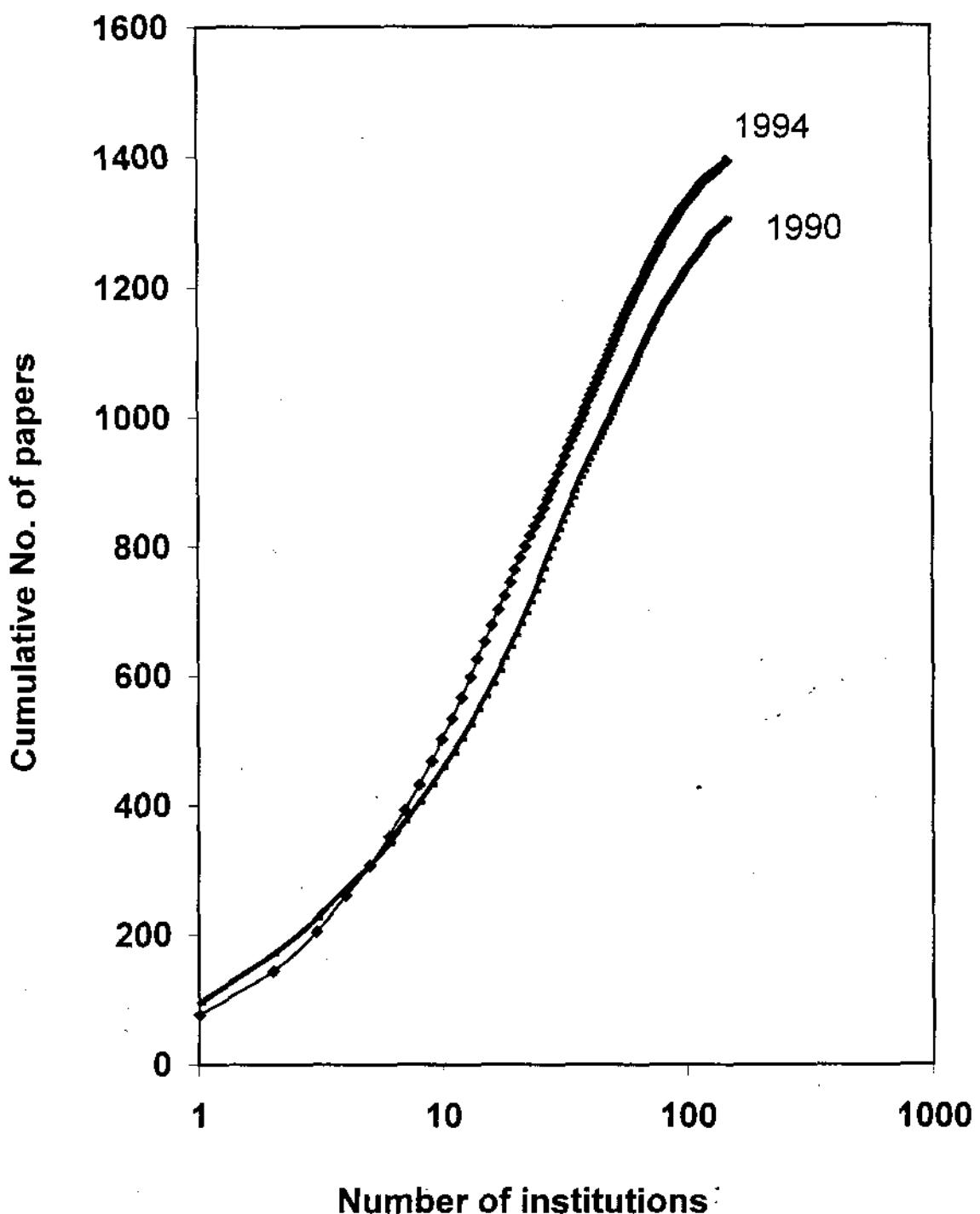
Fig 2: Number of institutions vs. cumulative number of Indian papers

Mathsci 1994

Central
Ministries
9%

Others

Scientific
Agencies
13%

Academic
78%

Mathsci 1990

Central
Ministries
8%

Others

Scientific
Agencies
13%

Academic
79%
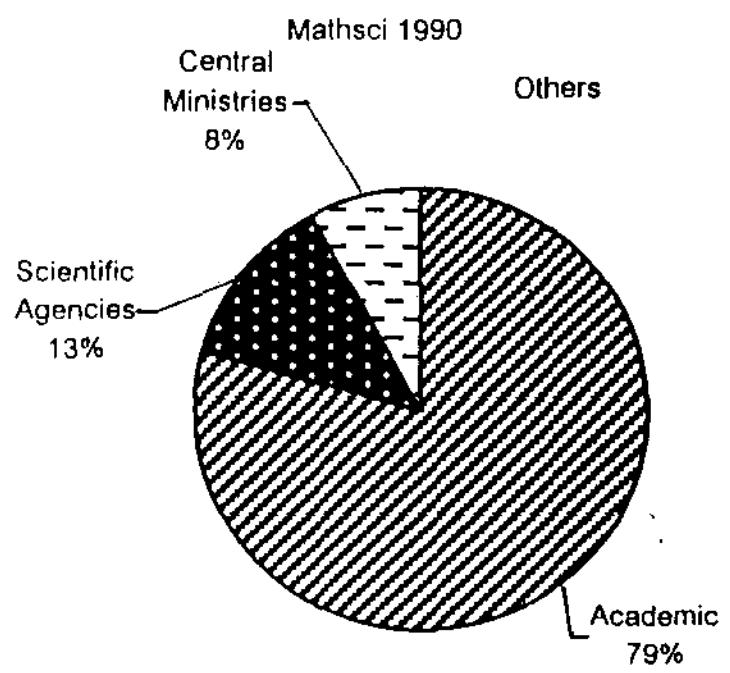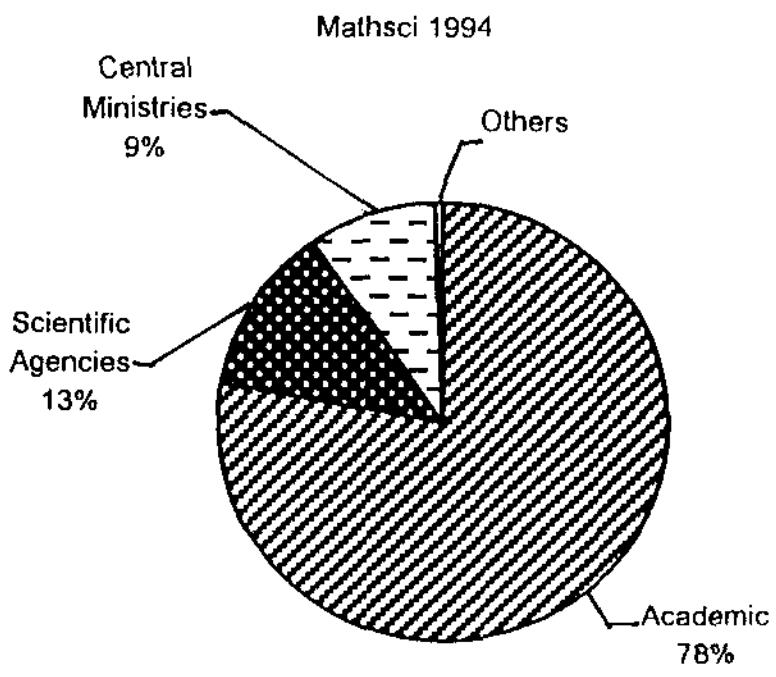
Figure 3. Contributions to mathematical research by
different types of organisations