

Scientometric Analysis of Open Source Library Software

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Abstract- This paper deals with the scientometric analysis of open source library software. The data is taken from the IEEE database by giving the keyword “open source library software” for search. This study was based on 223 articles. The paper illustrates authorship Pattern, Growth of Publications, Source wise distribution, country wise distribution etc.

Keywords: Scientometrics, bibliometrics, open source library software.

I.INTRODUCTION

Scientometrics is the science of measuring and analyzing science. Scientometric techniques are being used for a variety of purpose like determination of various scientific indicators, evaluation of scientific output, selection of journals for libraries and even forecasting the potential of a particular field.

II. OBJECTIVES

The main objectives of present studies are

1. To examine the growth of Open source library software during 1994-2010.
2. To identify and analyze the country wise distribution.
3. To measure the source the publications.

III. SCOPE AND METHODOLOGY

We extracted the data from the IEEE database for the period 17 years from 1994 to 2010. The data is taken from the database by giving the keyword open source library software for search. They are totally 223 article published during the above period. I have considered paper published in the conferences and journals of IEEE for scientometric analysis. The collected data has been classified by using MS Access.

IV.DATA ANALYSIS

TABLE 1 GROWTH OF PUBLICATIONS

Year	Total No of Articles	Percentage
2010	19	8.52
2009	46	20.63
2008	38	17.04
2007	30	13.45
2006	18	8.07
2005	26	11.66
2004	12	5.38
2003	12	5.38
2002	10	4.48
2001	6	2.69
2000	2	0.90
1999	1	0.45
1996	1	0.45
1995	1	0.45
1994	1	0.45
Total	223	100

Table 1 shows the growth of publications in open source library software. It is evident that during the period 1994 - 2010, a total of 223 articles were published at the International level. There is an increasing trend in terms of

number of publications. In the year 1997 and 1998 have no articles published. The year 2009 has recorded highest number of articles 46 (20.63%) followed by 38 (17.04%). The growth of publications in is depicted in Graph-1.

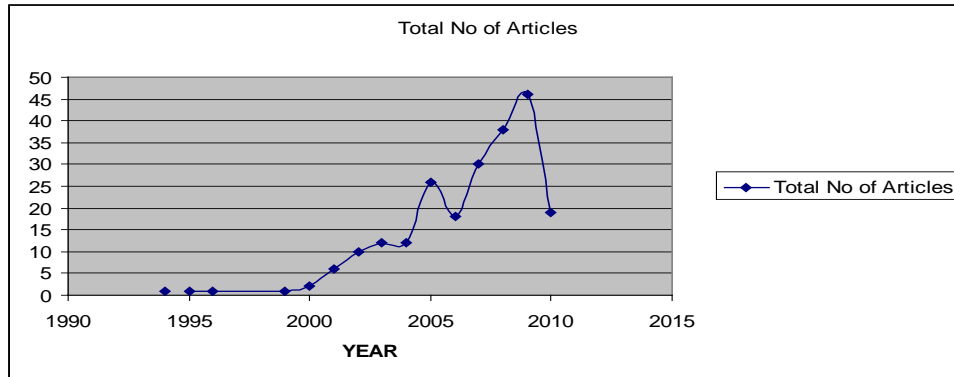


Fig.1 Growth of publication

TABLE 2 DISTRIBUTIONS OF ARTICLES BY BIBLIOGRAPHIC FORM

S. No	Form	Total	Percentage
1.	Journals	37	16.60
2.	Conference Proceedings	186	83.40
	Total	223	100

Table 2 shows that maximum number of articles 186 (83.40%) are published in the conference proceedings. The journal articles are published in 37 (16.60%). It is found that

only the IEEE Conference publications are in more number than IEEE Journals.

TABLE 3 PAGE-WISE DISTRIBUTION OF ARTICLES

No. of Pages	No. of Articles	Percentage
One	4	1.79
Two	5	2.24
Three	8	3.59
Four	37	16.59
Five	42	18.83
Six	59	26.46
Seven	23	10.31
Eight	19	8.52
Nine	9	4.03
Ten	17	7.62
Total	223	100

From the above table-3 we can infer the following points. Articles with 6 pages had been published in highest number 59, percentage of 26.46%. Articles with 5 pages and 4 pages follow in the order with 18.83% and 16.59% respectively. One page articles are in least number with just 1.79% of total articles considered

Table 4 shows that the country wise distribution of the articles and reveals that 102 (45.74%) of the total articles were contributed by the authors from USA, followed by Japan 52 (23.32%), Brazil 22 (9.87%), Germany 15 (6.73%) and Canada 10 (4.48%). India contributed only 1 (0.45%) article.

TABLE 4 COUNTRY WISE DISTRIBUTIONS OF PUBLICATIONS

S.No	Country	No of Publications	Percentage
1	United States	102	45.74
2	Japan	52	23.32
3	Brazil	22	9.87
4	Germany	15	6.73
5	Canada	10	4.48
6	United kingdom	8	3.59
7	China	3	1.35
8	Australia	3	1.35
9	Singapore	2	0.90
10	Taiwan	2	0.90
11	India	1	0.45
12	Spain	1	0.45
13	Iran	1	0.45
14	Netherland	1	0.45
		223	100

TABLE 5 AUTHORSHIP PATTERN

No.of Authors	No.of Articles 2008	Percentage
Single	41	18.39
Two	50	22.41
Three	54	24.22
Four	33	14.80
Five	21	9.42
Six	3	1.35
Seven	4	1.79
Eight	9	4.04
Nine	1	0.44
Ten	6	2.70
11 & above	1	0.44
	223	100

Table 5 reveals that multi-authorship contributions dominate this field of research. Maximum number of papers published by three authors 54 (24.22%), followed by two authors 50(22.41%) and single author 41 (18.39%). An analysis of the authorship pattern shows that there is a decreasing trend when six and more authors jointly published the research articles..

V. CONCLUSION

The study observes that U.S.A is the country with maximum number of articles published. The total number of articles taken for the survey is 223. In the year 1997 and 1998 have no articles published. Multi-authorship contributions dominate this field of research. One page articles are in least number with just 1.79% of total articles considered. It is

found that only the IEEE Conference publications are in more number than IEEE Journals

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