

# A Productivity Study of Indian Music Using Scientometric Techniques

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## ABSTRACT

This article presents a citation-based mapping such as citation map of data on global scientific activities in the field of Indian Music research using Web of Science Databases. Using different scientometric approaches, a continuous increase of both quantitative and qualitative parameters such as Global and Local Citation Scores. Research published 223 papers with 265 Global Citation Scores and cited 5260 publications in the field of Indian Music by the researchers during 1999-2012.

**Keywords:** Indian Music; Scientometrics; Bibliometrics; Citation Map

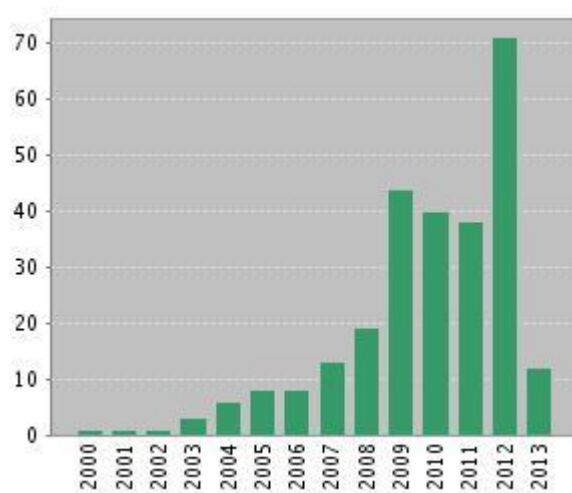
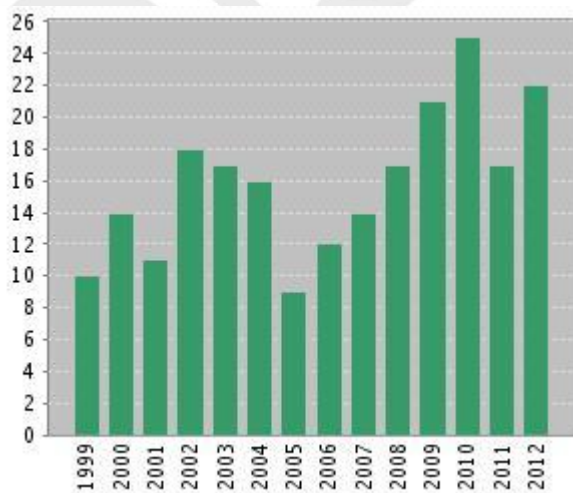
## 1. INTRODUCTION

Scientometrics is a branch of library and information science. Scientometric tools can be used to measure and compare the research activities at various levels of aggregation including document wise distribution of publications, institutions, sectors, provinces and countries. They can also be used to measure research collaborations, to map scientific networks and to monitor the evolution of scientific fields. Scientometrics is concerned with the quantitative features and characteristics of science and scientific research. By keeping this view in mind, the

researcher intends to undertake the study on "Mapping of Indian Music research publications" (Madhan et al. 2010; Rajagopal et al. 2012; Jayashree et al. 2000). This study attempts to analyse the performance of researcher working in the field of Indian Music in terms of scattering of articles in different sources and so on.

## 2. OBJECTIVES

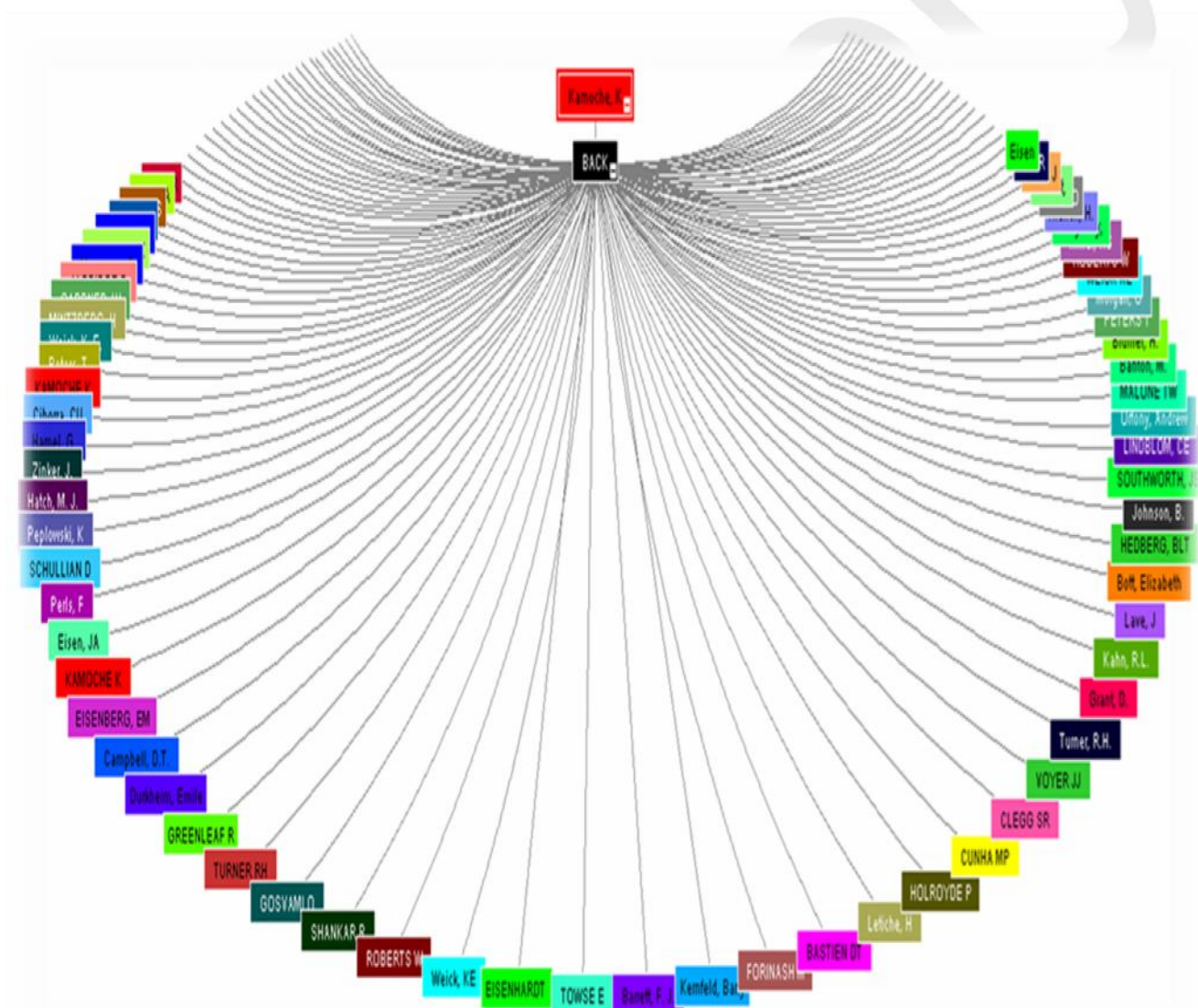
- To determine the authorship pattern
- To identify the Document wise distribution of publications.
- To identify the highly cited papers with Citation Map in the field of Indian Music.



Figures 1 & 2

Published Items in Each Year and Citations in Each Year

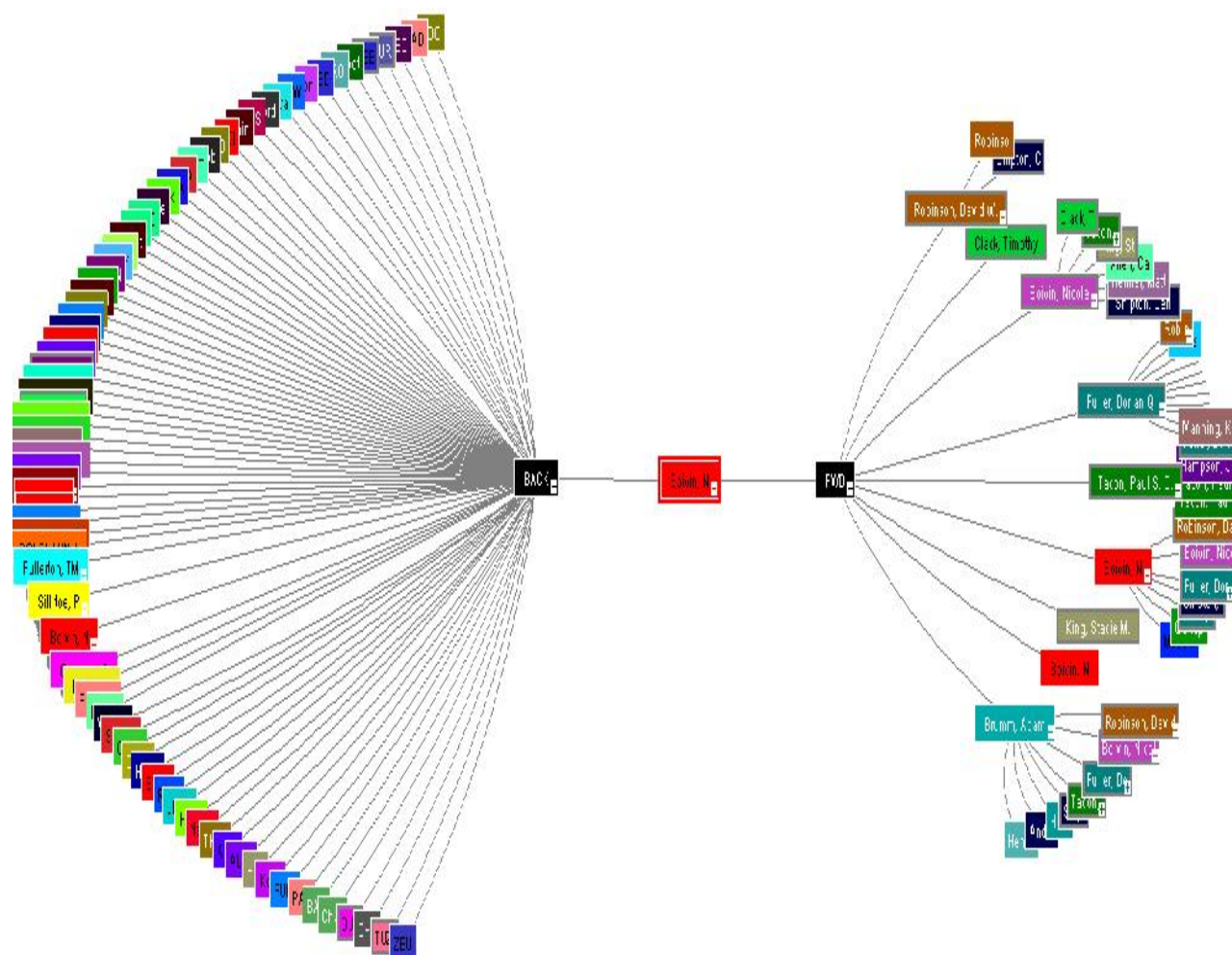
| #  | Year | Publications | %    | TLCS | TGCS |
|----|------|--------------|------|------|------|
| 1  | 1999 | 10           | 4.5  | 1    | 22   |
| 2  | 2000 | 14           | 6.3  | 4    | 12   |
| 3  | 2001 | 11           | 4.9  | 1    | 15   |
| 4  | 2002 | 18           | 8.1  | 1    | 20   |
| 5  | 2003 | 17           | 7.6  | 0    | 57   |
| 6  | 2004 | 16           | 7.2  | 0    | 28   |
| 7  | 2005 | 9            | 4.0  | 0    | 1    |
| 8  | 2006 | 12           | 5.4  | 1    | 5    |
| 9  | 2007 | 14           | 6.3  | 2    | 10   |
| 10 | 2008 | 17           | 7.6  | 1    | 26   |
| 11 | 2009 | 21           | 9.4  | 7    | 42   |
| 12 | 2010 | 25           | 11.2 | 1    | 12   |
| 13 | 2011 | 17           | 7.6  | 0    | 8    |
| 14 | 2012 | 22           | 9.9  | 0    | 7    |



discovery  
Cover the uncovered

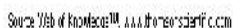
| #  | Document Type              | Publications | %    | TLCS | TGCS |
|----|----------------------------|--------------|------|------|------|
| 1  | Article                    | 122          | 54.7 | 13   | 183  |
| 2  | Book Review                | 61           | 27.4 | 2    | 2    |
| 3  | Record Review              | 9            | 4.0  | 0    | 0    |
| 4  | Article; Proceedings Paper | 8            | 3.6  | 0    | 15   |
| 5  | Review                     | 6            | 2.7  | 4    | 64   |
| 6  | Film Review                | 4            | 1.8  | 0    | 0    |
| 7  | Letter                     | 4            | 1.8  | 0    | 0    |
| 8  | Meeting Abstract           | 4            | 1.8  | 0    | 1    |
| 9  | TV Review, Radio Review    | 2            | 0.9  | 0    | 0    |
| 10 | Bibliography               | 1            | 0.4  | 0    | 0    |
| 11 | Biographical-Item          | 1            | 0.4  | 0    | 0    |
| 12 | Editorial Material         | 1            | 0.4  | 0    | 0    |

| #  | Journal                        | Records | %   | TLCS | TGCS | TLCR |
|----|--------------------------------|---------|-----|------|------|------|
| 1  | ETHNOMUSICOLOGY                | 22      | 9.9 | 8    | 24   | 4    |
| 2  | ASIAN MUSIC                    | 18      | 8.1 | 1    | 10   | 1    |
| 3  | WORLD OF MUSIC                 | 16      | 7.2 | 1    | 13   | 2    |
| 4  | YEARBOOK FOR TRADITIONAL MUSIC | 9       | 4.0 | 0    | 0    | 0    |
| 5  | JOURNAL OF ASIAN STUDIES       | 7       | 3.1 | 0    | 3    | 2    |
| 6  | NOTES                          | 6       | 2.7 | 0    | 0    | 0    |
| 7  | INDIAN JOURNAL OF PEDIATRICS   | 5       | 2.2 | 3    | 4    | 3    |
| 8  | MUSIC PERCEPTION               | 5       | 2.2 | 5    | 25   | 2    |
| 9  | EARLY MUSIC                    | 3       | 1.3 | 0    | 0    | 0    |
| 10 | JOURNAL OF NEW MUSIC RESEARCH  | 3       | 1.3 | 0    | 5    | 0    |



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| #  | Country         | Publications | %    | TLCS | TGCS |
|----|-----------------|--------------|------|------|------|
| 1  | Unknown         | 101          | 45.3 | 4    | 62   |
| 2  | USA             | 45           | 20.2 | 5    | 110  |
| 3  | India           | 24           | 10.8 | 3    | 12   |
| 4  | UK              | 17           | 7.6  | 0    | 43   |
| 5  | Canada          | 9            | 4.0  | 5    | 19   |
| 6  | Australia       | 7            | 3.1  | 1    | 3    |
| 7  | Singapore       | 4            | 1.8  | 0    | 7    |
| 8  | Spain           | 4            | 1.8  | 0    | 1    |
| 9  | Finland         | 3            | 1.3  | 1    | 7    |
| 10 | Peoples R China | 3            | 1.3  | 0    | 34   |
| 11 | Netherlands     | 2            | 0.9  | 0    | 1    |
| 12 | France          | 1            | 0.4  | 0    | 0    |
| 13 | Germany         | 1            | 0.4  | 0    | 1    |
| 14 | Italy           | 1            | 0.4  | 0    | 0    |
| 15 | Jamaica         | 1            | 0.4  | 0    | 0    |
| 16 | Japan           | 1            | 0.4  | 0    | 2    |
| 17 | Malaysia        | 1            | 0.4  | 0    | 7    |
| 18 | New Zealand     | 1            | 0.4  | 0    | 0    |
| 19 | Nigeria         | 1            | 0.4  | 0    | 2    |
| 20 | Slovakia        | 1            | 0.4  | 0    | 1    |
| 21 | Sweden          | 1            | 0.4  | 0    | 0    |
| 22 | Trinid & Tobago | 1            | 0.4  | 0    | 0    |



**Figure 5**  
Highly cited papers of Saldanha A

Table 5 Ranking of Authors

| Author      | Publications | Rank | %   | TLCS | TGCS | TLCR |
|-------------|--------------|------|-----|------|------|------|
| Manuel P    | 6            | 1    | 2.7 | 1    | 3    | 0    |
| Henry EO    | 4            | 2    | 1.8 | 0    | 3    | 0    |
| Slawek S    | 4            | 3    | 1.8 | 2    | 2    | 0    |
| Thompson G  | 4            | 4    | 1.8 | 0    | 0    | 0    |
| Allen M     | 3            | 5    | 1.3 | 0    | 0    | 0    |
| Balan R     | 3            | 6    | 1.3 | 3    | 4    | 1    |
| Bavdekar SB | 3            | 7    | 1.3 | 3    | 4    | 1    |
| Capwell C   | 3            | 8    | 1.3 | 1    | 1    | 0    |
| Margulis EH | 3            | 9    | 1.3 | 2    | 19   | 1    |
| Qureshi RB  | 3            | 10   | 1.3 | 5    | 15   | 0    |

- To identify the Country wise distribution of Publications.

### 3. METHODOLOGY

The required data was collected from Web of Science database for the period 1999-2012. It can be seen that nearly 223 bibliographic records of contribution in field of Indian Music over the period of 14 years. The researcher applied the search strings "Indian Music" that has used for the data extraction from the database of SCI, SSCI and A&HCI (totally fifty six years) to download the records based on the above strings. A total of 223 records were downloaded and analyzed by using Web of Science and Scopus inbuilt software applications as per the objectives of the study. Further based on citation per paper with Citation map, number of high quality papers, are also applied to find out the quality of the research output. The study aims to analyze the thrust areas of research concentration on Indian Music.

## 4. DATA ANALYSIS AND INTERPRETATIONS

### 4.1. Year wise Distribution of Publications

To analyse the year wise publication of research on Green Computing, the data has been presented in below table 1. The table depicts the research output in the comprehensive level. From the table 1, we could clearly see that during the period 1999 - 2012 a total of 223 publications were published and h-index 8. In the present study the research output on Indian Music publication is taken as a tool to evaluate the performance at various levels. The highest publication is 25 in 2010 with 12 Global Citation Scores followed by 22 papers in 2012 with 7 Global Citation Score and 21 papers in 2009 with 42 Global Citation Scores (Figure1 & 2).

### 4.2. Document wise Distribution of publications

It is clear from the analysis that the share of journal articles is the most prominent bibliographic form of publication and it occupies 55% (122) of total publications (Table 2). Book

Review with 61 (27.4%) contributions, Record Review with 9 (4%) contributions, and followed by remaining bibliographic forms.

### 4.3 Journal wise distribution of Publications

As identified in the previous pages of this analysis 55 percentage of the preferred documents by Indian Music research scientists have been journals publishing their investigations. In this analytical period, scientists have produced 223 papers scattered over 121 journals during 1999 to 2012. Out of 121 journals, "ETHNOMUSICOLOGY" has published the highest number of articles 22 (9.9 %); 8 TLCS, 24 TGCS and 4 TLCR scaled (Table 3). It dominates in first place of research output and followed by other journal in the field of Indian Music.

### 4.4. Country wise Distribution of Publications

The table 4 indicates that among the country wise distribution of publications on Indian Music covered by the study the United States of America with 45(20.2%) publications tops followed by India with 24(10.8%), UK with 17(7.6%) in terms of publications.

### 4.5. Ranking of authors (Top 10)

In this analytical period, 264 researchers have produced 223 paper contributions scattered over 121 journals. In accordance to this the researcher has given the ranks according to their highest publication in the field of Indian Music research for top 10 published authors (Table 5).

### 4.6. Highly Cited papers

Out of the total 223 number of publications, author Kamoche (Figure 3) single paper has received 32 Global Citation Scores and cited 115 publications and followed by Boivin N (Figure 4) and Saldanha A (Figure 5) The figures 3, 4 & 5 shows the citation map of highly cited authors (Table 6).

## 5. CONCLUSION

Music effects the brain in many different ways. Schools and

Table 6 Highly cited papers

| #  | Date / Author / Journal                                                                                                                                                                                                    | LCS | GCS | LCR | CR  |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|
| 1  | 69 Kamoche K, Cunha MPE, da Cunha JV<br>Towards a theory of organizational improvisation: Looking beyond the jazz metaphor, JOURNAL OF MANAGEMENT STUDIES. 2003 DEC; 40 (8): 2023-2051                                     | 0   | 32  | 0   | 115 |
| 2  | 68 Gratier M, Expressive timing and interactional synchrony between mothers and infants: cultural similarities, cultural differences, and the immigration experience, COGNITIVE DEVELOPMENT. 2003 OCT-DEC; 18 (4): 533-554 | 0   | 17  | 0   | 80  |
| 3  | 137 Mohr JW, White HC, How to model an institution<br>THEORY AND SOCIETY. 2008 OCT; 37 (5): 485-512                                                                                                                        | 0   | 17  | 0   | 113 |
| 4  | 5 Hesmondhalgh D, Indie: The institutional politics and aesthetics of a popular music genre,<br>CULTURAL STUDIES. 1999 JAN; 13 (1): 34-61                                                                                  | 0   | 14  | 0   | 52  |
| 5  | 78 Boivin N, Rock art and rock music: Petroglyphs of the south Indian Neolithic, ANTIQUITY. 2004 MAR; 78 (299): 38-53                                                                                                      | 0   | 13  | 0   | 80  |
| 6  | 159 Wong PCM, Roy AK, Margulis EH, BIMUSICALISM: THE IMPLICIT DUAL ENCULTURATION<br>OF COGNITIVE AND AFFECTIVE SYSTEMS<br>MUSIC PERCEPTION. 2009 DEC; 27 (2): 81-88                                                        | 2   | 12  | 0   | 48  |
| 7  | 48 Saldanha A, Music, space, identity: Geographies of youth culture in Bangalore, CULTURAL<br>STUDIES. 2002 MAY; 16 (3): 337-350                                                                                           | 0   | 10  | 0   | 31  |
| 8  | 13 Qureshi RB, Confronting the social: Mode of production and the sublime for (Indian) art music<br>ETHNOMUSICOLOGY. 2000 WIN; 44 (1): 15-38                                                                               | 4   | 8   | 0   | 108 |
| 9  | 85 Brown TS, Subcultures, pop music and politics: Skinheads and "Nazi rock" in England and<br>Germany, JOURNAL OF SOCIAL HISTORY. 2004 FAL; 38 (1): 157-+                                                                  | 0   | 8   | 0   | 58  |
| 10 | 9 Diethrich G, Desi music vibes: The performance of Indian youth culture in Chicago<br>ASIAN MUSIC. 1999 FAL-WIN; 31 (1): 35-61                                                                                            | 1   | 7   | 0   | 39  |

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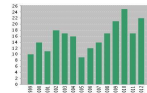
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parents should encourage the students to study while listening to music and should provide music lesson to children at a young age. Through the years scientists have proven music enables the brain to work at a high thinking level. We have to encourage the researcher in the field of Indian Music. Scientometric/bibliometric will help to know the trends of research of research and motivate researchers in above way.

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