

Scientometric Portrait of Prof. S Sreenivasa Murthy

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ABSTRACT

An attempt has been made to highlight the research contribution of Prof. S Sreenivasa Murthy, Fellow of Indian National Academy of Engineering. (INAE), wherein he published 105 articles in scientific journals and 182 articles in conference proceedings. Collaborative authorship in scientific journals is found in the size of 18 single authored, 11 double authored, 40 three authored, 27 four authored and 9 five authored and similarly in conference proceedings, 40 single authored, 26 double authored, 54 three authored, 40 four authored, 18 five authored and 2 six authored. Two and three authored paper publications constitute nearly 48% of the total authorship of his papers while single author papers are nearly 17% of total authorship. His h-index is 15 and received 739 citations for his scholarly research work. Most active researchers in the research group of Prof. S. Sreenivasa Murthy were Bhim Singh, B. P. Singh, C.S. Jha G.J. Berg, G. Bhuvaneshwari and A. K. Tondon.

Keywords: Scientometric study, Srinivasa Murthy, Engineering, Bibliometric study, IEEE

INTRODUCTION

Scientometric study has been a new dimension of research in Library & Information Science of measuring qualitative and quantitative research output of a scientist. This will lead the younger scientists to emulate and thereby improve the research output of the individual, institute being served and help the country in moving towards better accreditation/ranking in the world map.

Prof S. Sreenivasa Murthy has made outstanding contributions in the field of engineering Teaching, Research, curriculum development, laboratory development, sponsored projects, industrial consultancy, continuing education, Institutional/international linkages, technology transfer, administration/management, industry interaction, Alumni interaction and Professional/Corporate/outreach activities. He has proven to be a good institutional builder as he effected visible

turnaround as Director of ERDA Baroda and NIT Surathkal and vice chancellor of Central University of Karnataka. He has published nearly 300 research papers with high citation index in refereed journals and conferences, guided over 100 research scholars and PG Students and completed over 90 sponsored research and industrial consultancy projects dealing with Electrical Machines, drives and energy systems and sponsored by major electrical industries and Govt. agencies. In addition he has 40+ Technical reports, 7 manuals/conference proceedings to his credit. He holds 11 patents on self-excited induction generator and control, renewable energy applications for off-grid power and a novel-braking scheme for motors He is a reviewer and editor of several international journals including IEEE , IEE/IET, Elsevier etc. Prof. Murthy has received many National and International awards and recognitions, notable being- Life Fellow of IEEE (Institution of Electrical and Electronics Engineers-USA), Fellow of Indian National Academy of Engineering (INAE), Fellow of IEE/IET (UK), Life Fellow of the Institution of Engineers,(India), Life Fellow of IETE(Institution of Electronics and Telecommunication Engineers-India), ISTE/Maharashtra Govt. Award for outstanding research, IETE/Bimal Bose Award for contribution in Power Electronics and President of India prize for Best paper published in *Journal of Institution of Engineers*. IEEE/PES : 2007 PES Chapter Outstanding Engineer Award. Recently he was chosen as the global Distinguish Lecturer(DL) of IEEE/IAS for 2014-15.

Prof. Murthy is an acknowledged international expert on Self Excited Induction Generators (SEIG) and Originator of SEIG research in India.His work is a legend with several original contribution and break through on Analysis,modeling, design control and applications for stand-alone power generation using,oil engines, Biomass,small hydro and wind.

Several studies reported in this area of research are V L Kalyaneand B K Sen on“Research Productivity of Tibor Braun”, Kalyane V L and Kalyane S V on“Scientometric Portrait of Vinodini Reddy”, Kademani B S, Kalyane V L and Balakrishnan M R on“Scientometric Portrait of P K Iyengar”, Koley, Susanta and Sen B.K on“A Bibliometric study of Prof. B N Koley”, Ahmed Manjur, Anjum Ahmed Khan and Ahmed Munir, on“Scientometric Portrait of Datta-UR- Rahman”, Satish S Munnolli and V L Kalyane on “Scientometric Portrait of Ram Gopal Rastogi”, Kamble P.S on “Scientometric Portrait of Jayant Vishnu Narlikar”, Sinha S.C. and Dhiman A K on “Bibliometric study on R C Sinha”, Angadi Mallikarjun, Koganurmamath M.M. and Kaddemani B.S. on “Scientometric Portrait of Nobel Laureate Lenald H. Hartwell”.

This is an portrayal of electrical engineer of Indian origin with h-index of 15 with total of 739 citations.

Objectives of the Study

The main objective of the study is to find out the different forms of scholarly research productivity.

1. To find out year-wise growth of publications
2. To identify citation productivity.
3. To identify authorship pattern in his research communications
4. To find out core collaborators of Prof. S. Sreenivasa Murthy in his research career and
5. To identify core communication channels preferred by Prof. S. Sreenivasa Murthy.

Methodology

Scientific publications are the best source to measure the contributions of an individual scientist and therefore the bibliographic data of research publications of Prof. S. Sreenivasa Murthy for the study were downloaded from

(<http://ias.ieee.org/images/files/CMD/201/s.%20sreenivas%20murthy%20resume.pdf>) The data is then transferred to spread sheet to refine and elaborate the desired elements of each record for easy segregation and identification. The present study is limited to 366 publications. Normal count procedure was followed.

Results and Discussion

1) Forms of Scholarly Research Productivity

Prof. S. Sreenivasa Murthy has published 366 research papers in his professional career (with high citation index) types of publications include 105 journal articles (28.7 percent), 182 conference papers (49.7 percent), 11 patents on self-excited induction generator and control (3 percent), 56 books (15.3 percent), and 12 video lecturers (3.3 percent).(Table 1 & Figure 1)

Table 1

| Forms | No. of Papers | Percentage |
|--|---------------|---|
| Scientific Journal Article | 105 | 28.7 |
| Conference Papers | 182 | 49.7 |
| Patents | 11 | 3 |
| Books | 56 | 15.3 |
| Video Lectures | 12 | 3.3 |
| Total | 366 | 100 % |
| H Index :15 (Source: Web of Science) | | Total Citations: 739 (Source: Web of Science) |

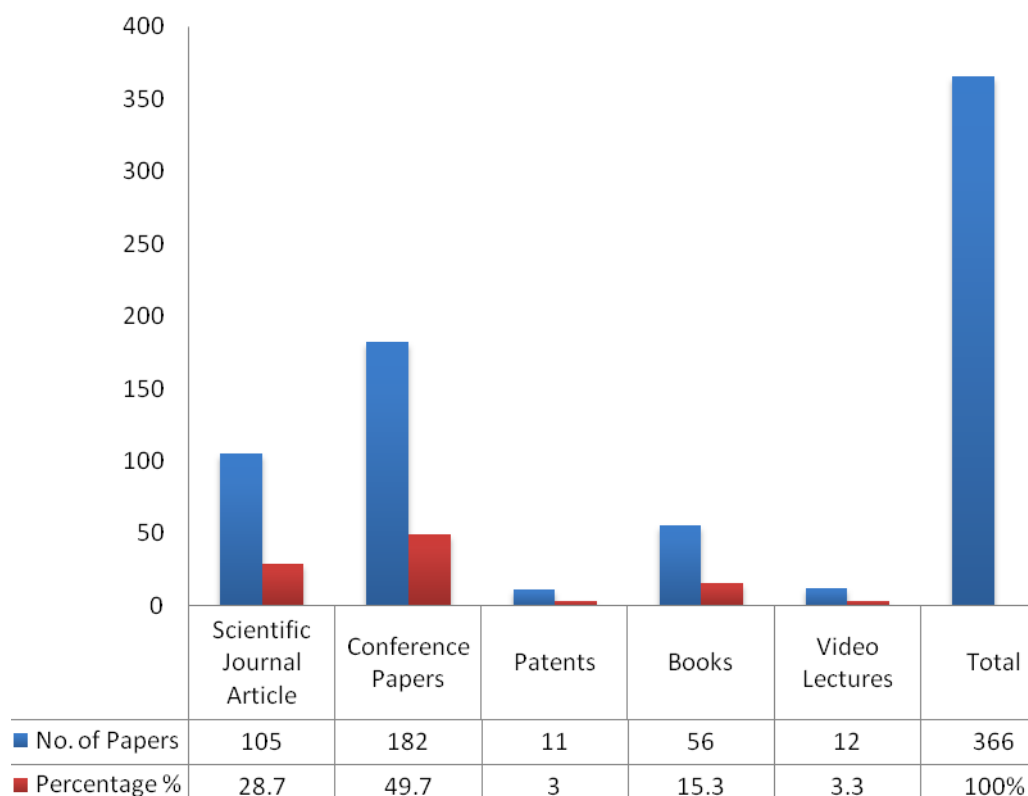


Figure 1

2) Growth of Scientific Articles

Prof. S. Sreenivasa Murthy's most productive years for publishing scientific articles in refereed journals were 1981-85, 1996-2000 and 2001-2005 in which he had published 59 papers(56.2 percent) (Figure 2). And for publishing conference articles were 1991-1995, 1996-2000 and 2006-2010 in which he had published 113 papers (62 percent) During these years he had published minimum 10 papers in each year in both journals and conferences. He had published only 3 papers in 1970-1975

Table 2

| Year | No. of Journal Articles | Percentage | No. of Conference Papers | Percentage |
|-----------|-------------------------|-------------|--------------------------|-------------|
| 1970-1975 | 03 | 2.8 | 01 | 0.5 |
| 1976-1980 | 03 | 2.8 | 04 | 2.1 |
| 1981-1985 | 21 | 20 | 22 | 12.4 |
| 1986-1990 | 10 | 9.5 | 20 | 10.9 |
| 1991-1995 | 14 | 13.4 | 38 | 20.8 |
| 1996-2000 | 14 | 13.4 | 36 | 19.7 |
| 2001-2005 | 24 | 22.9 | 19 | 10.5 |

| | | | | |
|--------------|------------|-------------|------------|-------------|
| 2006-2010 | 10 | 9.5 | 39 | 21.5 |
| 2011-2015 | 06 | 5.7 | 03 | 1.6 |
| Total | 105 | 100% | 182 | 100% |

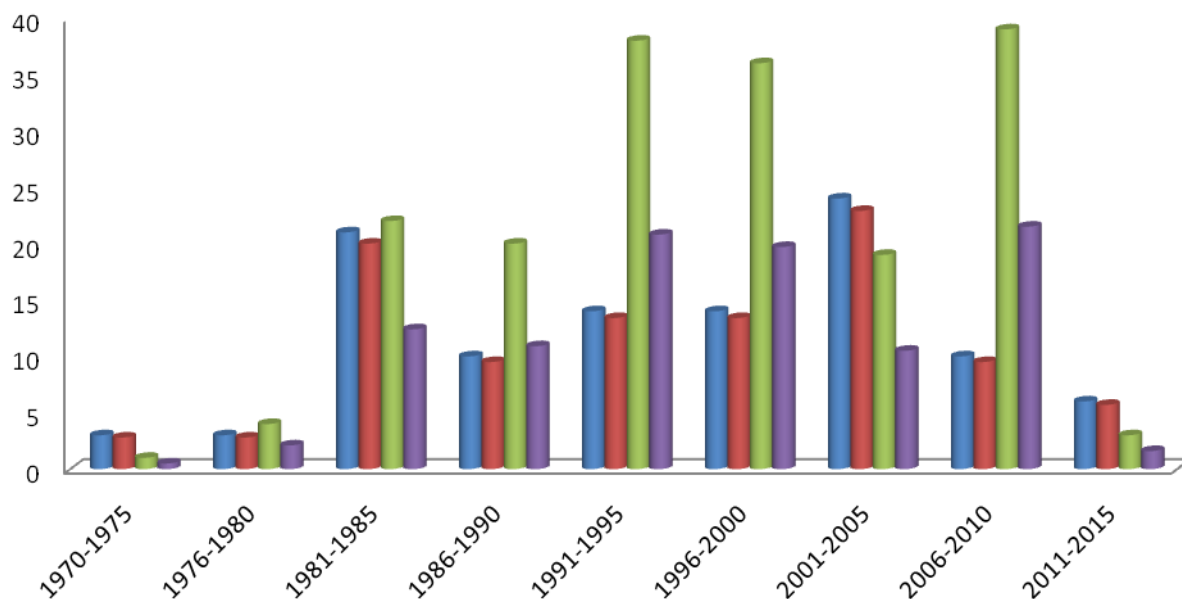


Figure 1

3) Citation Productivity:

As per Web of Science database, Prof. Murthy has received a total citation of 739 for his scholarly works during 2014, he has received his last citations and then during 2015 and 2013 with H-Index of 15 (Figure: 3)

Table 3

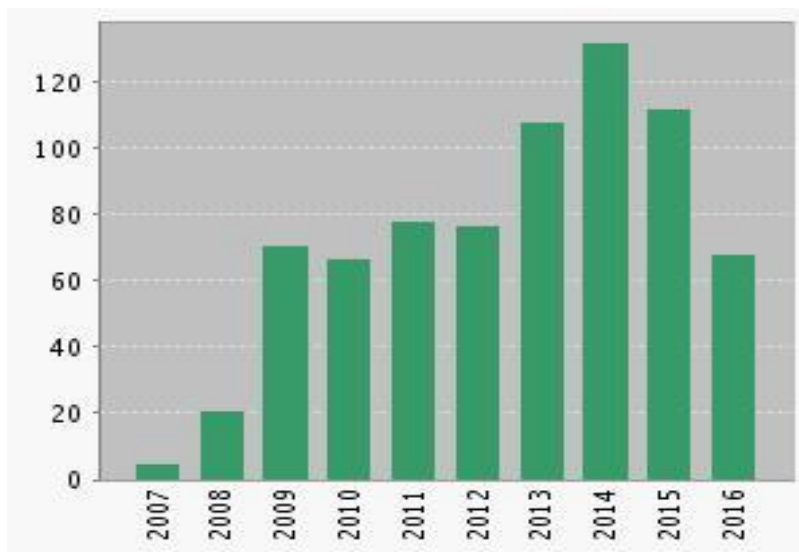


Figure 3 Year wise citations (Total N=739)

4) Authorship Pattern of Journal Articles

Table 4 depicts the authorship pattern of Prof. S. Sreenivasa Murthy in publishing journal articles. He has published total 105 articles in which he published 18 articles as individual, 11 articles with 1 collaborator, 40 articles with 2 collaborators, 27 articles with 3 collaborators, and 9 articles with 4 collaborators. Thus, the collaborated research is found to be dominant with three authors followed by four authors (Figure: 4)

Table 4

| Authorship | Number of Articles | Percentage |
|---------------|--------------------|-------------|
| Single Author | 18 | 17.2 |
| Double Author | 11 | 10.5 |
| Three Author | 40 | 38.1 |
| Four Author | 27 | 25.7 |
| Five Author | 09 | 8.5 |
| Total | 105 | 100% |

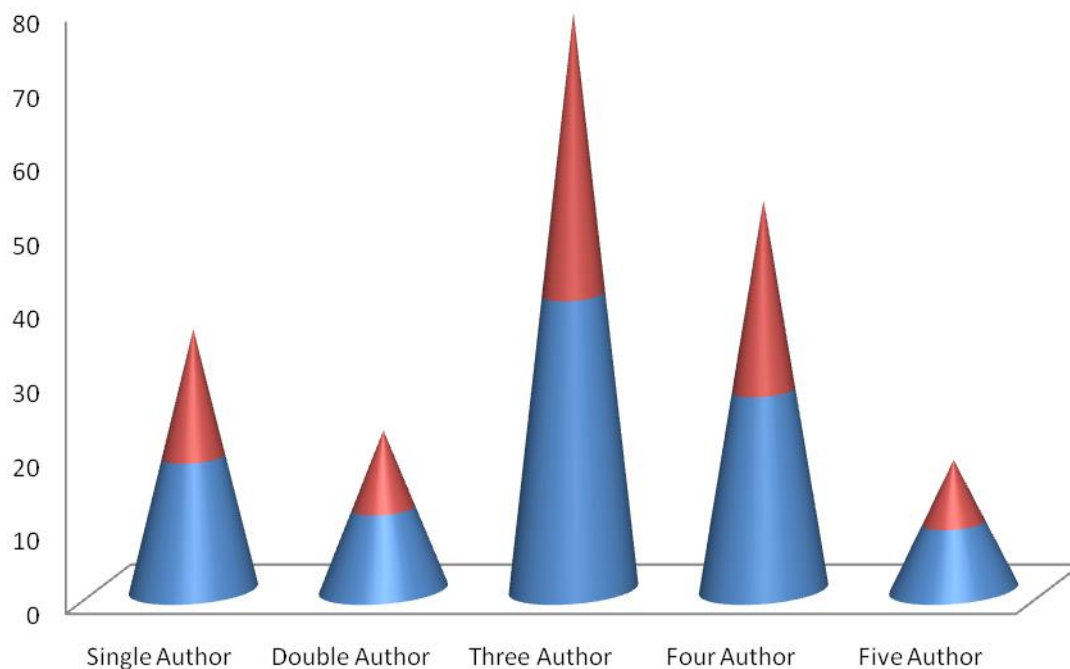


Figure: 4

5) Authorship Pattern of Conference Articles

Table 5 depicts the authorship pattern of Prof. S. Sreenivasa Murthy in publishing conference articles. He has published total 182 articles in which he published 40 articles as individual, 27 articles with 1 collaborator, 54 articles with 2 collaborators, 40 articles with 3 collaborators, 19 articles with 4 collaborators and 2 articles with 5 collaborators. As compared to authorship pattern of journal articles relatively there is a slight increase in single authorship. (Figure: 5)

Table 5:

| Authorship | Number of Articles | Percentage |
|---------------|--------------------|-------------|
| Single Author | 40 | 21.9 |
| Double Author | 27 | 14.8 |
| Three Author | 54 | 29.6 |
| Four Author | 40 | 22.3 |
| Five Author | 19 | 10.4 |
| Six Author | 02 | 1 |
| Total | 182 | 100% |

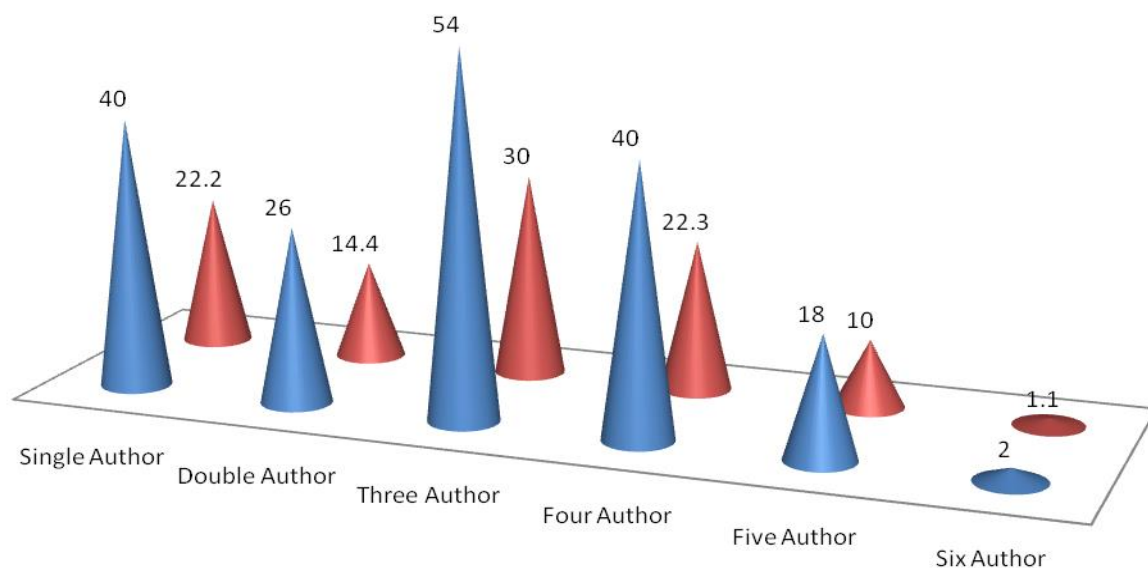


Figure 5

6) Top six (6) collaborators in Journal Article Publications

Table 6 shows most prolific authors associated with Prof. S. Sreenivasa Murthy in journal article publications. The most active authors were Bhim Singh who topped the list with 43 papers followed by B.P. Singh with 24 papers, C. S. Jha with 20 papers, G.J. Berg with 11 papers, A K Tondon with 8 papers and G Bhuvanewari with 6 papers. (Figure: 6)

Table 6

| | Author | II | III | IV | V | Total |
|---|---------------|----|-----|----|--------------|------------|
| 1 | Bhim Singh | | 23 | 13 | 7 | 43 |
| 2 | B P Singh | | 3 | 15 | 6 | 24 |
| 3 | C S Jha | 4 | 4 | 7 | 5 | 20 |
| 4 | G J Berg | 4 | 3 | 2 | 2 | 11 |
| 5 | A K Tondon | | 7 | 1 | | 8 |
| 6 | G Bhuvanewari | | 2 | 4 | | 6 |
| | | | | | Total | 112 |

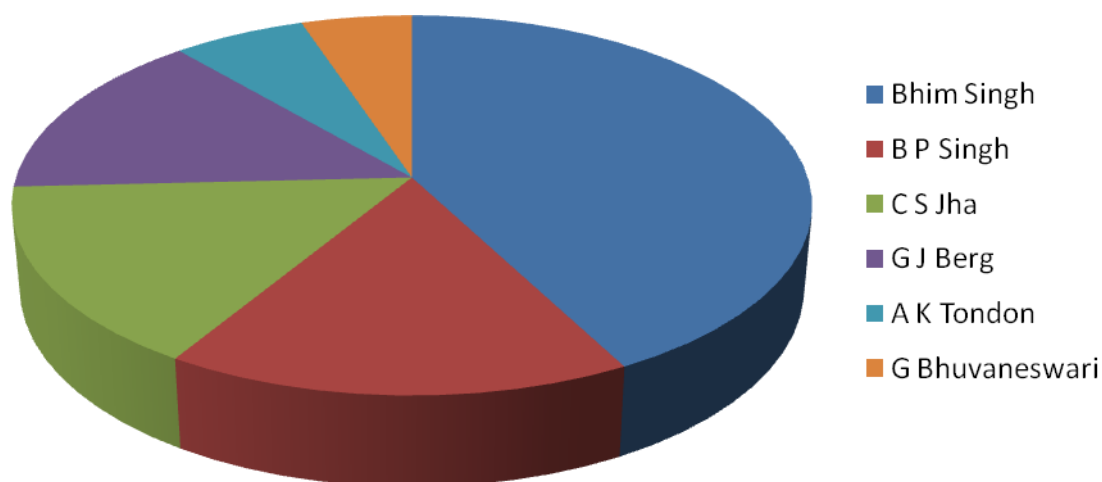


Figure: 6

7) Conference article publication productivity of Prof. S.S. Murthy with top 6 (six) collaborators:

Table 7 shows most prolific authors associated with Prof. S. Sreenivasa Murthy in conference article publications. The most active authors were Bhim Singh who topped the list with 58 papers followed by B.P. Singh with 41 papers, C. S. Jha with 22 papers, A.K. Tondon with 11 papers, H.C. Rai with 9 papers and G J Berg with 8 papers. (Figure: 7)

Table 7

| | Author | II | III | IV | V | VI | Total |
|---|---------------|-----------|------------|-----------|----------|-----------|--------------|
| 1 | Bhim Singh | 3 | 20 | 23 | 12 | | 58 |
| 2 | B P Singh | 1 | 8 | 21 | 9 | 2 | 41 |
| 3 | C S Jha | 1 | 5 | 7 | 7 | 2 | 22 |
| 4 | A K Tondon | 1 | 5 | 2 | 2 | 1 | 11 |
| 5 | H.C. Rai | | 3 | 2 | 3 | 1 | 09 |
| 6 | G J Berg | 3 | 2 | 1 | 2 | | 08 |
| | Total | | | | | | 149 |

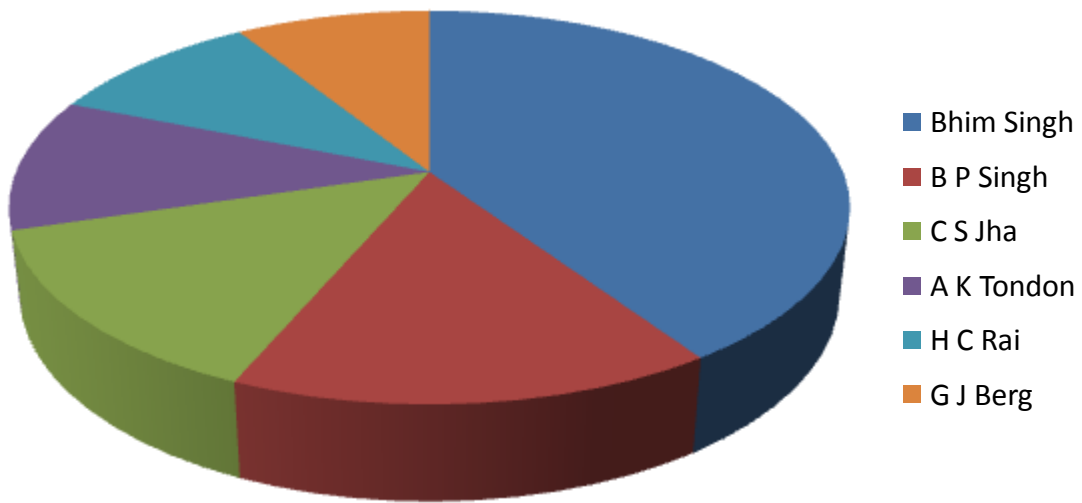


Figure: 7

8) Top five (5) Channels Proffered for Publishing Journal Articles:

Prof. S. Sreenivas Murthy used 161 different scientific channels that include 105 journals (28.7 percent) and 56 in the form of books (15.3 percent). Table 8 shows top 27 channels preferred by Prof. S. Sreenivasa Murthy. His top five preferred journals for publishing research papers were The Institute of Electrical and Electronics Engineers (IEEE) tops the rank list with 27 papers followed by Journal of Institutions of Engineers 12 papers, Institute of Electrical Engineers 8 papers, Indian Journal of Technical Education 7 papers and Journal of Power Electronics 3 papers.

Table 8

| SL. No. | Title | No. of Papers |
|---------|---|---------------|
| 1 | Institute of Electrical and Electronics Engineers | 27 |
| 2 | Journal of Institutions of Engineers | 12 |
| 3 | Institute of Electrical Engineers | 8 |
| 4 | Indian Journal of Technical Education | 7 |
| 5 | Journal of Power Electronics | 3 |
| | | 57 |

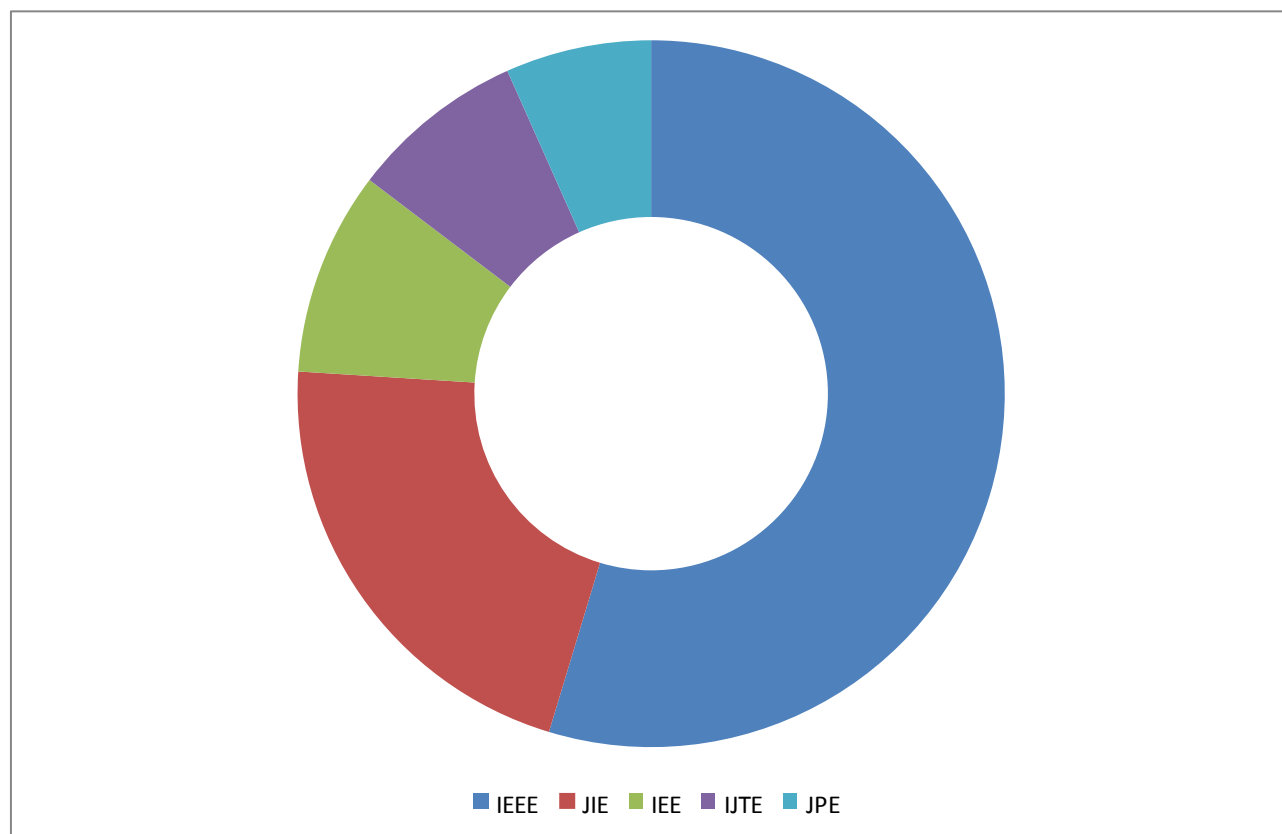


Figure: 8

Conclusion:

Based on the results it can be conferred that Prof. Murthy is one of the highly cited electrical engineer serve as a motivator for younger researchers.

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