

REPORT OF THE FIRST NATIONAL CONFERENCE ON SCIENTOMETRICS

Organizer: Department of Studies and Research in Library and Information Science,
Tumkur University, Tumkur in association with “Institute of Scientometrics”

Date: September 7, 2012

Inaugural Session

Ms. Madhuri rendered the invocation song. Prof. D. Shivalingaiah, Hon'ble Registrar of Tumkur University welcomed the dignitaries, delegates of the conference and invitees.

Prof. B.C. Sharma, Hon'ble Vice-Chancellor of Tumkur University delivered the inaugural address. He appreciated the efforts of the Department of Library and Information Science particularly contributions of Prof. Shivalingaiah in organizing the conference. He took analogy of a case in mechanical engineering and highlighted the importance of Bibliometrics Citation Studies and H-Index. He remembered the contribution of Dr. E. Garfield especially in the area of citation indexing resulting into a discipline by itself, the Scientometrics. He also mentioned that the prestigious S.S. Bhatnagar Award in Science and Technology uses the citation based indices.

Prof. S.L. Sangam, Director of the Conference introduced different concepts related to Scientometrics including Citation Analysis, Impact Factor, H-Index, Ranking of Universities etc. He announced that very recently a group of LIS professionals who met in Tumkur University took the initiative to set up a new institute viz., the Institute of Scientometrics. He highlighted the vision and objectives of this newly formed Institute. He announced that the next conference of Scientometrics would be held in Kittur Rani Channamma University, Belgaum or Karnatak University Dharwad. On this occasion Prof. S.L. Sangam was felicitated by the dignitaries on the Dias.

Prof. I.K. Ravichandra Rao, Retired Professor and Director of DRTC, Indian Statistical Institute delivered the Keynote Address. He compared the process of peering with Scientometrics Indices for assessing quality of research output. He traced the developments from Bibliometrics to Scientometrics to Webometrics. He opined that Web Impact Factor basically indicates the visibility more in terms of in-links and does not indicate the quality of the Websites, unlike the stronger impact factor.

Prof. Ashok Asundi, Retired Professor, DLIS, Bangalore University released the Volume of Papers of the Conference and expressed his appreciation.

Prof. P. Sadashivamurthy, in his presidential remarks mentioned that Scientometrics gaining impotence in scientific organization in evaluation of scientific productivity of individual and institution. Further he mentioned that the conference is the need of the

hour. He appreciated the efforts of his colleagues both in the Library and in the Department for the efforts put in making the conference a success.

Dr. B.T. Sampath Kumar gave the formal vote of thanks to dignitaries, delegates and other colleagues who had put hard work in making the conference a success.

Technical Sessions

Dr. I.R.N. Goudar, Visiting Professor and Library Adviser, University of Mysore worked as Rapporteur General for all the Technical Sessions. Out of 31 papers chosen and included in the Conference Volume, 18 papers were presented in 3 Technical Sessions as below.

Technical Session 1:

Chair: Dr. Ram Raj Urs
University Librarian
RGUHS, Bangalore

Co-Chair: Dr. Parvathamma
Professor, DLIS
Gulbarga University

Paper 1 : Bibliometric Distributions and other related topics.
Prof. I.K. Ravichandra Rao

Dr. Ravichandra Rao enumerated along with necessary interpretations the three bibliometric laws viz. Zipf's Law, Lotka's Law and Bradfords Law, often referred to as bibliometric distributions. He explained the concepts journal productivity, author productivity and quantitative analysis of science. He mentioned the problems of methods of counting, characteristics of bibliometrics distribution and ranking of size frequency. He mentioned about International Society for Informetrics and Scientometrics that was set up in 1993 and its contributions to the field through various conferences conducted and the journals it publishes. He opined that further research is required for assessing the scientific productivity and other measures more accurately.

Dr. Goudar clarified that there is no policy in CSIR institutions to give authorship to HODs because of their position as opined by the author.

Paper 2 : Bibliometric Analysis of Literature on Library Buildings (1968-2011).
Prof. Lalitha Aswath and N.M. Anjaneya Reddy.

Dr. Lalitha presented their study on the growth of literature in the field of 'Library buildings' from 1968 to 2011 covered in LISA and Web of Science databases. The distribution of 3573 items collected include authorship pattern, country wise, document type, language and study identifies the core list of journals publishing literature on library buildings. She mentioned that USA is the major contributor and 76 % publications are single authored.

Dr. Siddamalliah enquired why there was a sudden decrease in the literature on library buildings during the recent six years. Dr. Lalitha attributed it to the increase in E-resources.

Paper 3: Exploring Research on Renewable Energy using Compendex Data Base: Scientometric Analysis

Prof. K.C. Shindhe, Prof. Mallinath Kumbar and Dr. V.M. Bankapur

Prof. Shindhe presented the findings of the study on use of scientometric analysis on the growth of literature on renewable energy as covered by Compendex during 1973-2010, their distribution country wise, language wise and continent wise. The sudden increase in growth of literature during 2003-2010 accounting to 67.33% indicates that the renewable energy gained significant importance in the research front for energy. United States topped the list of countries contributing countries with a maximum research in renewable energy accounting to 24.33% of total output of sixty listed countries. European countries accounted for 24.64 publications and rest being shared by other continents. English has been the preferred language for publishing renewable energy literature with 96.21% share.

Dr. Goudar complemented Dr. Shindhe, Engineering faculty by profession for taking interest in carrying research in bibliometric and scientometric areas.

Paper 4: Mapping of Social Science Literature: A System Approach

Shivaranjini S Mogali and Dr. S.L. Sangam

Ms. Shivaranjini presented their study on mapping of social science literature aimed at understanding the positions of its various subfields and their relative position using different schemes of classification systems namely DDC, CC, UDC, and Web of Science. She observed that Colon Classification gives the exact class number to each subject though limited and the other two systems have scope to accommodate the new special subjects that emerge. The major and minor codes denoted to various subjects in OECD are the basis for arrangement of subjects in Web of Science.

Prof. Asundi questioned the mapping method for the Social science. Prof. Sangam clarified the question.

Paper 5: Scientometric Studies related to India (2000-2012): A Review

Prof. N. Parvathamma

Prof. Parvathamma presented the review of bibliometric / scientometric studies related to India covering science areas, published during 2000-2012. She observed that Indian Science literature constitutes less than 2% of the world scientific literature. After a downward trend in the middle of 1990s, it recovered after 2000. While academic

institutions are major contributors, majority of Indian Literature is published in low IF value journals and U.S.A. is the most preferred country for research collaboration.

Paper 6: A Bibliometric Analysis of Library and Information Science Literature
Dr. Gavisiddappa Anandhalli

Dr. Anandhalli discussed his findings on the research productivity in the field of library and information science for the period 2001-2010. His study covered distribution of papers year wise, state wise and institution wise and throws a light on authorship pattern and collaboration, relative growth and doubling time for LIS literature as indicated by the sample selected for the study.

Paper 7: Aerospace Engineering Journals in SCImago: A Scientometric study
S. Aswathy and Dr. A. Gopikuttan

Ms. Aswathy presented SCImago based study of aerospace engineering data for a period of 2005 to 2011. Her findings show that SJR indicator and h-index vary from year to year and journal to journal. Bradford's law is fit for the data set selected for the study. She presented the analysis of the country-wise distribution of papers compared citable vs. non-citable Documents.

Technical Session 2:

Chair- Dr. H.S. Siddamalliah
Principal Information Officer, NIMHANS

Co-Chair- Dr. Lalitha Ashwath,
Professor, Dept. of LIS, Bangalore University

Paper 8: Mapping of Intra and Inter relationships of Subjects by Citation and Content Analysis of Ph.D. Theses: A Study of Agricultural Entomology and Plant Pathology
Prof. A.Y. Asundi

Prof. Asundi in his presentation showed how citation and content analysis , semantic/graphic, tabular and structured mapping could be used to demonstrate the intra and inter relationships among the broad subjects as well among their sub-topics and relation can be used to deriving metadata elements, in information retrieval process by designing suitable algorithms in the context. He has used titles of theses and dissertations to show that the list structure and the tabular presentations could be used in the formulation of search process algorithms in different planes – linear, two dimensional and multidimensional. It is also useful in the formulation of searching on multidisciplinary databases

Paper 9: Orthopedic Literature: A Cityation Analysis
Dr. O. Maranna

Dr. Maranna presented findings of his study on citation analysis of 2939 references cited by 69 masters degree dissertations in Orthopedics. Apart from discussing authorship pattern, distribution by type of documents and language, his findings showed that 47.19% of the journals cited are available in the institutional library concerned.

Paper 10: Indian Journal of Biotechnology: A Scientometric Analysis
Dr. H. Adithya Kumari and Hydarali

Mr. Hyderali presented the findings of their scientometric analysis of papers published in Indian Journal of Biotechnology during 2000-2011. The study covered authorship pattern with maximum of 4 authorship papers, geographical distribution with maximum papers by Tamilnadu and 25 countries contributed papers to Indian Journal of Biotechnology.

Paper 11: Bibliometric Analysis of Endosulfan Literature, 2000-2011
T.K. Savithry and Dr. A. Gopikuttan

Ms. Savithry presented finding of their study on bibliometric analysis of endosulfan literature. 1594 papers published in about 429 sources including conference papers published during 2000-2011 were analysed. She observed that distribution of papers did not confirm Bradford's Law.

Technical Session 3:

Chair- Prof. T.D. *Kemparaju*
Dept. of LIS, University of Mysore

Co-Chair- Prof. Mallinath Kumbar
Dept. of LIS, University of Mysore

Paper 12: Scaling H-Index of Nobel Laureates in Physics
Prof. D. Shivalingaiah, Dr. Keshava and Hemavathi B N

Dr. Keshav presented the findings of the scientometric study of papers of 12 Physics Nobel Laureates analyzing the number of citations, h-index and collaborative research. F. Wilczek received highest (17238) number of citations to his followed by D J Gross (14952) citations for his 245 articles; Masatoshi Koshiaba (10256) citations for his 309 articles. The highest h-index found is 69 for Wilczek, F followed 56 for D.J. Gross and 55 for R. Giacconi.

Paper 13: Scientometric Portrait of H.S. Yathirajan
Prof.Mallinath Kumbar and Dr. N.S. Harinarayana

Dr. Sunil M.V. presented the findings of the Scientometric Portrait of H.S. Yathirajan, the most productive chemistry professor from University of Mysore. His 360 papers published till March 2009 were used for study. His main area of research is X-ray Crystallography publishing maximum of 237 (65.83%) papers in *Acta Crystallographica E: Structure Reports Online*. The most productive Quinquennial period of Yathirajan is 2003-2008. While 108 authors have collaborated for his publications, the highest collaboration goes to B. Narayana of Mangalore University with 197 papers followed by M. Bolte of Germany with 119 papers. Bibliograph of the individual scientist, Yathirajan, does not follow Bradford's law.

Paper14: Scientometric Portrait of G. Thanikaimoni: A Palynologist of High Repute
G. Saravaman and S. Prasad

Saravaman presented the findings of study on Scientometric Portrait of G. Thanikaimoni, a Palynologist covering 56 papers he published out of which 35 are solo authored papers. The distribution of papers year wise, source journals, authorship pattern and publication productivity were presented. With 58.94 % of total authorship credit Thanikaimoni collaborated with C. Caratini in publishing 8 papers.

Paper 15: Scientometric Portrait of Prof. S.C. Sharma as seen through the Web of Science (WoS)
N. Vasantharaju, Dr. N.S. Harinarayana and M.V. Sunil

Vasantharaju presented finding of the study on Scientometric Portrait of Prof. S.C. Sharma, the Vice Chancellor of the Conference host organization. Analysis and distribution studies of Sharma's 110 papers covered in Web of Science shows all productivity and impact indicators are notable ones. Although from engineering discipline, his papers published in high impact factor value journals have received sizeable citations resulting in h-index of 13. His papers have been coauthored by many authors from prestigious universities and national research institutions. The worth noting fact is that he has published 14 research papers in 2012, highest number of papers published in his entire research career. This is an indication of the direction in which the new University which he is heading is moving.

Paper 16: Scientometric Portrait of Eugene Garfield: A Citation Analysis
Dr. Kiran P. Savanur

Dr. Savanur presented the findings of his study on scientometric analysis 1537 publications by Eugene Garfield. Of these papers 307 have received 6,968 citations and a total of 21,757 synchronous references have been cited in 1390 publications. The domain wise distribution of citations include Biographical & autobiographical Notes; Citation Analysis; Citation Indexing; Impact Factor; Information Retrieval; Institute for

Scientific Information (ISI); Library and Services; Nobel Prize and Science Essays. He also presented the Bradford-Zipf Citograph for Publication of Eugene Garfield.

Paper 17: Ranking of NACC Accredited Indian Universities

V.T. Bagalkoti and Dr. S. L. Sangam

Mr. Bagalakoti presented findings of the study on ranking of NAAC accredited top 50 universities based of publication and citation analysis. These universities contributed 1, 08,666 papers and received 3, 36,027 citations during 2001-10, with the average citation per paper 3.09. Out of the universities studied 17 had scored more than the average output with Jadhavpur University topping the list with 6.01 %. Papers of 27 universities scored more than average citations per paper with the Utkal University being topper with 9.23 citations. Anna University topped the list with 7.22 % international collaborative papers. University of Jammu topped the list with h-index as 45. The study found no relations of NAAC CGPA rating /grade with research output indices of many universities.

Paper 18: HTTP Page Not Found: Recovery of Vanished Web Citations

Dr. B.T. Sampath Kumar, Prof. B.S. Biradar and B.N. Thimmai

Mr. Thimmai presented the findings of the study on 857 web citations cited in 219 articles published in two journals—1. *Journal of Computer Science & Information Systems* and 2. *Webology for the years 2007-11*. Analysis of distribution of articles, citations and web citations using various parameters like year wise, domain, subject and file format was discussed. He said that 77.37% of URL citations were accessible. The Wayback machine could retrieve only 64.43% of the missing web pages out of missing 22.63% of web citations. Use of Wayback machine in conjunction with various national-based Web preservation initiatives could yield more number of missing web citations.

Concluding Session

Chair: Prof. T.D. Kemparaju

Dr. Goudar, Rapporteur presented the conference report and highlights of the event. He expressed his happiness that Tumkur University is headed by an Engineer, who continues his publications activity much more rigorously even after occupying the Vice Chancellors position. He stressed the need for senior professionals and faculty for encouraging the youngsters for writing and presenting the papers in such conferences instead of finding the faults, even if one does so, it should not discourage them. Prof. Sangam thanked all Chair persons, co-chairs of different sessions, the rapporteur general, paper presenters and the delegates of the conference. Prof. Sadasivamurthy expressed his happiness for making the conference a success and thanked Prof. Sangam for putting hard work as the Director of the conference. Prof. Kemparaju gave

his presidential remarks. Dr. A. Rupesh Kumar proposed formal vote of thanks. The conference came to an end with sweet memory both in terms of fruitful presentations, discussions and good arrangements.