

# **Proceedings of WIS 2008**

*Fourth International Conference on  
Webometrics, Informetrics and Scientometrics  
& Ninth COLLNET Meeting*  
Humboldt-Universität zu Berlin

edited by

Hildrun Kretschmer & Frank Havemann

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# Greeting

by Prof. Dr. Dr. h.c. CHRISTOPH MARKSCHIES,

President of Humboldt-Universität zu Berlin<sup>1</sup>

Dear colleagues,

It was the contemporary American Philosopher George Santanya who pointed out quite accurately: “Those who speak most of progress measure it by quantity and not by quality”. The temptation to do just that is so great because it is much easier to measure quantity than it is to measure quality. If we want to determine quantity, all we need is be able to count—but I don’t think that anyone here in this room could, if pressed, answer the question: how do we measure quality?

The definitely not contemporary Philosopher Aristotle informed us why we have such serious difficulties to measure quality: quality, he said, is not a static thing that, once it has been reached, exists for all eternity. Rather, it tends to occur suddenly and frequently in bursts, and has a tendency to vanish just as unexpectedly. I am sure we can all recount examples of individuals who blew us away with an idea, so much so that we elevated them above all others. And then, quite suddenly, the spark disappeared and they became normal and mediocre again, which left us looking down on the previous genius with great derision because of their mediocrity, which we can forgive them much less than everyone else around us. But I digress. As a second point, Aristotle argued that only some qualities can be taught and learned, while others are inherent—you either have them or you don’t. Often the result, Aristotle continues to point out, is that quality is accompanied by many sentiments with negative connotations such as pride, fear or envy. Finally, Aristotle’s categories teach us that quality can only remain an external phenomenon that has no depth.

Aristotle’s thoughts on the matter are still highly topical and shared by many university scientists today. This does not mean, however, that we need to say no more on the matter. If, thus aided by Aristotle, we concede that quality is difficult, almost impossible to grasp, does this mean that we should abandon our quest to measure it at all? It will not surprise you that I intend to answer this question

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<sup>1</sup>The President gave his greeting to the conference on July 28th 2008 in the Hall of Senate (*Senatssaal*).

by saying, no, of course not. If I were to say yes to my question, then I would be saying to you all, go home, don't bother attending this conference. And this would be a great mistake, not only would I have failed at my job—it is my job, after all, to welcome you to this university and to wish you an enjoyable time with fruitful discussions—no, it would be a great mistake because you have made the effort to come here and engage in an important debate whose results I am greatly looking forward to.

The answer, then, is no: we should never abandon our scientific quest for tools to measure quality. We need to be able to say with some certainty: this idea is truly good, or beware of this particular prophet of empty words. And indeed, we can hardly claim to have abandoned the search for quality, quite the contrary. There is a whole new branch of university development called “quality management”—in itself a contradiction in terms, for how do you manage the unmanageable?—a branch that each research institution is developing in order to ensure that it can succeed in the competitive environment of the scientific community. The aim of each institution is to overtake the others in the many rankings that we subject ourselves to—internal and external rankings, regional, national and international ones, rankings in single research fields and rankings for whole universities. In short, measuring quality is becoming a business. But how? How do we measure quality? This, ladies and gentlemen, is where the topic of this conference becomes highly relevant. The subject of bibliometrics has been introduced to set certain standards for measuring quality. Certain tools have been developed for doing so: the number of publications, citation analyses, third-party funds and awards have been classified as good indicators for quality, and surely they are. I am sure I do not need to tell you, however, that these tools have not wholly managed to solve the question “how do we measure quality?”. My dear colleague Hubert Markl, the former president of the Max-Planck-Gesellschaft, some weeks ago said, that in some ways, bibliometrics are in danger of repeating the principle of TV viewing rates, which take the numbers of those who view certain programs as an indicator for the program's quality. And only a few days ago, a prominent journalist of one of our leading German newspapers, Jürgen Kaube, published an article with the meaningful title “die bibliometrische Verblendung”, the blindness of bibliometrics—an article in which he did not present as with protests from the conservative wing of the dusty old German academic ivory tower, but with wise caveats against certain trendy practises, which have become a little bit too self-evident in our universities and scientific institutions. In many respects, our hands are tied, however. In the humanities in particular, you will find that academics can tell that something is of high quality, but they can rarely tell you why, or rather, they are unable to answer the question “what the hell is quality?”. If you think that I am about to tell you, please remember that my own field of expertise lies in the humanities. I don't know, it's as simple as that—but I do know that we can and should find an answer if we keep on looking. In autumn last year, Elisabeth Lack, research manager at this university, organised a conference at Humboldt-Universität in the framework of the “year of the arts and humanities” that was proclaimed by the ministry of education and research. The

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conference occupied itself with the question of how to determine standards in the human sciences and how to measure the quality of the academic product in these fields of research. Even at this conference we were unable to reach a final conclusion, but some interesting results have transpired. We saw that we are hugely dependent on the tools that bibliometrics offer us, but realised that we need to combine them with other tools, in particular in the arts and humanities, where we have much less quantifiable results than in the natural sciences. Peer reviews, for example, coupled with figures and numbers are an extremely useful combination. They are expensive to conduct of course, but that in itself is often taken as a sign of quality. We need to walk a tightrope therefore: we need to follow new developments, but we have to be careful not to fall for all new trends. We can be successful if we are in dialogue with each other—each academic has to be alert to on-going debates over and above his or her own field of research, and in turn, the peers have to conduct honest and thorough examinations of each other to separate the wheat from the chaff.—The papers of our conference will be published in October and I recommend them to all of you. In Berlin, we have of course, more and other things on offer than mere conferences and their published results—I would like to mention here the “Institut zur Qualitätsentwicklung im Bildungswesen”, whose director Stefan Hornbostel—I see with great pleasure that he is among us—is a professor at Humboldt-Universität and could undoubtedly make a much more knowledgeable contribution than a professor for ancient church history; I would also like to mention the evaluation research conducted at the Wissenschaftszentrum Berlin and the Max-Planck-Institute for Human Development. You can rest assured that Humboldt-Universität will invest further in this field to make a profound a contribution to this focal point of Berlin’s research community, and we will therefore pay careful attention to the results of this conference.

Before I close, let me make a final point about quality by drawing on a particular example: even when we are able to recognise an idea of high quality, we don’t always know the effects it will ultimately have. I would like to talk about Otto Hahn at this stage, who was professor at this university and won the Nobel Prize for Chemistry in 1944. Today is the 40th anniversary of his death, which is why I would like to draw on him in particular. He was awarded the Nobel Prize for his discovery of the nuclear fission of uranium. The Nobel Prize was well deserved, for the discovery was indeed one of high quality. But it was also a stepping stone to the creation of the atomic bomb. The idea itself was, therefore, Nobel Prize worthy, but the effects were destructive and dangerous. Quality can, therefore, bring with it some very problematic results.

Ladies and gentlemen, I have the easy job now: I have posed all the difficult questions and now leave the floor to others to answer them. But I do so with the best wishes for a fruitful and, of course, high-quality discussion, which I am sure you will provide.



# Foreword

We are glad that Prof. Dr. Dr. h.c. Christoph Marksches, President of Humboldt-Universität zu Berlin, gave his greeting to the conference at the Welcome on Monday, July 28, 2008. We thank him very much for hosting the conference and for allowing us to publish the text of his greeting.

The predecessors of the *Fourth International Conference on Webometrics, Informetrics and Scientometrics & Ninth COLLNET Meeting* were all initiated by COLLNET, the global interdisciplinary research network of scholars who are concerned to study aspects of collaboration in science and in technology.

COLLNET was established in January 2000 in Berlin with Hiltrun Kretschmer as coordinator (<http://www.collnet.de>). Since 2000, there have been eight COLLNET meetings: the first in Berlin, September 2000, the 2<sup>nd</sup> in New Delhi, February 2001 and the 3<sup>rd</sup> in Sydney (in association with the 8<sup>th</sup> ISSI Conference), July 2001.<sup>2</sup> The 4<sup>th</sup> COLLNET Meeting took place on August 29<sup>th</sup> in 2003 in Beijing in conjunction with the 9<sup>th</sup> International ISSI Conference, the International Workshop on Webometrics, Informetrics and Scientometrics and 5<sup>th</sup> COLLNET Meeting in Roorkee, India, in March 2004. The 6<sup>th</sup> COLLNET Meeting took place in association with the 10<sup>th</sup> ISSI Conference in Stockholm, Sweden, in July 2005 and the International Workshop on Webometrics, Informetrics and Scientometrics and 7<sup>th</sup> COLLNET Meeting in Nancy, France, in May 2006. The Third International Conference on Webometrics, Informetrics, Scientometrics and Science and Society & Eighth COLLNET Meeting took place in New Delhi, India, in March 2007 (<http://www.collnet-delhi.de>).

We are glad to present in the Proceedings many of the papers submitted to our conference.

For ecological (and also financial) reasons we decided to publish the WIS-Proceedings as an e-book. The reader can choose the papers that he/she is interested in and print them out. Some of the papers presented in Berlin are also published in the printed *COLLNET Journal of Scientometrics and Information Management*. We provide a list of them with volume and page numbers on page 11.

The alphabetical *List of Contents* (p. 21) is clickable (only in the electronic version, of course). If you touch the paper's title with the cursor the PDF of the paper will appear on your screen. We also tried to classify the papers into topics (p. 13).

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<sup>2</sup>ISSI, the *International Society for Scientometrics and Informetrics*, was founded in Berlin in 1993, with Hiltrun Kretschmer as the first president (<http://www.issi-society.info>).

Some papers appear under several headings. Here you have to click on the authors' names to get the title of the paper.

We thank all authors who with their contributions enabled us to publish these Proceedings. Especially we thank authors for bringing their papers in good form by using one of our templates. We also thank all those peoples and organisations who helped to make the *Fourth International Conference on Webometrics, Informetrics and Scientometrics* a successful meeting of scholars coming from more than 25 countries on all five continents. The conference was sponsored by *Deutsche Forschungsgemeinschaft* (DFG), by *Humboldt-Universität zu Berlin*, by *Ovid Technologies*, by *Thomson Reuters*, and by *Elsevier*.

A special thank we want to give to Prof. Dr. Michael Seadle, the head of the *Institut für Bibliotheks- und Informationswissenschaft* (IBI) at *Humboldt-Universität zu Berlin* where the conference took place.<sup>3</sup>

Last but not least we all have to thank the Organising Chair of the conference, our colleague Michael Heinz, who was supported by hard-working students. He also built and maintained the conference website (<http://www.collnet-berlin.de>).

Berlin, September, 2008

Hildrun Kretschmer & Frank Havemann

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<sup>3</sup>In our announcements and the papers we used the English name *Institute for Library and Information Science* which now has changed to *Berlin School for Library and Information Science*.

# Opening Remarks

by Donald deB. Beaver<sup>4</sup>

On the occasion of the Fourth International Conference on Webometrics, Informetrics and Scientometrics & Ninth COLLNET meeting, it is a great pleasure to see so many familiar faces, as well as so many new ones, here in Berlin, the city which gave birth to both ISSI in 1993 and COLLNET in 2000. In both births, Dr. Hildrun Kretschmer played a major role. In eight years, this is the ninth time COLLNET has met. I don't know if you've noticed that tonight's program features short breaks with Chinese music, Indian folk dance, and German music—a most welcome tribute to the originators of COLLNET: Liang Liming, Ramesh Kundra, and Hildrun Kretschmer.

We owe a great debt of gratitude to the organizing committee for this conference, co-chaired by Dr. Kretschmer and Dr. Frank Havemann, and aided by Michael Heinz, Divya Srivastava, and the program committee.

As of June 13, we had for the joint conference 111 papers representing 184 unique authors from 22 different countries. Those papers had 2.18 authors on average. 35 papers were singly authored. Of the 242 times authors' names appeared, China had the most, 67, with Iran and India close together with 45 and 41 authorships respectively. Germany, Spain, and Belgium came next with 18, 16, and 12 authorships. Mexico outpaced the USA by 10 to 7. We also have contributions from Bangladesh, Bulgaria, and Ukraine.

It is remarkable that China, Iran, and India are so productive, accounting for 63% of the authorships, and signaling a shift in the center of productivity away from the West towards the Near and Far East.

According to the COLLNET program, we had 22 posters accepted, from 42 unique authors, with 2.23 authors on average. 8 of the 22 are by single presenters. In this case, India led with 15 authorships, and China and Iran each had 14 and 13 authorships. Here the dominance of China, India, and Iran is even more marked than with the papers. The three countries together account for 86% nearly 7/8ths of the authorships!

One measure of our healthy state is that in about four days we somehow have to take in about 133 papers and posters. It's a good thing that we have a proceedings volume to follow and take home with us.

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In the world of collaboration, webometrics, informetrics, and scientometrics, there's such an enormous amount of activity that it's become no longer possible to keep up with all the different fields. Nonetheless we all have in common our commitment to quantitative measurements of scientific activity, today more important than ever before. We are producing new measures and indicators of activity and productivity in science and technology and even venturing to construct predictors of future value. The great variety of approaches to our subjects continues to expand, and academia, industry, and government increasingly look to it for useful tools and making successful policy. Our keynote speakers exemplify that diversity of methods and approaches, and will help us focus on current and future possibilities.

With our growing success in mind, the proceedings of this conference should be regarded as a celebratory milestone, and an occasion to build even more connections amongst ourselves.

(first published in Special Conference Issue of *COLLNET Journal of Scientometrics and Information Management*, Volume 2, Number 1, June 2008, pp. iii–iv)

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**Conference papers published in  
*COLLNET Journal of Scientometrics  
and Information Management:***

**Volume 2, No. 1, June 2008**

Donald deB. Beaver (USA): **Opening Remarks** (pp. iii–iv, see p. 9 here)

Ronald Rousseau (Belgium, keynote speaker)

**Reflections on recent developments of the h-index and h-type indices.**  
(pp. 1–8)

Wolfgang Glänzel (Belgium, keynote speaker)

**Seven Myths in Bibliometrics.**

**About facts and fiction in quantitative science studies.** (pp. 9–17)

Robert Tijssen (The Netherlands, keynote speaker)

**Are we moving towards an integrated European Research Area?**

**Some macro-level bibliometric perspectives.** (pp. 19–25)

I. K. Ravichandra Rao and Sahoo Bibhuti Bhusan

(India, keynote speakers, cf. Rao and Bhusan with new title in List of Contents)

**Distributions of Multiple Authors:**

**A Case Study of two Journals (JASIST and Scientometrics)** (pp. 27–36)

Farideh Osareh (Iran) and Katherine W. McCain (USA)

(original journal article by Osareh and McCain in List of Contents)

**Visualizing the structure of Iranian chemistry in SciSearch using author  
co-citation technique.** (pp. 37–43)

Hildrun Kretschmer and Theo Kretschmer (China, Germany)

(cf. Kretschmer and Kretschmer in List of Contents)

**Varying Shapes of Co-author Pairs' Distributions** (pp. 45–61)

Ramesh Kundra (India), Donald deB. Beaver (USA),

Hildrun Kretschmer (Germany, China), and Theo Kretschmer (Germany)

(cf. Kundra et al. in List of Contents)

**Co-author pairs' frequencies distribution in journals of gender studies.**  
(pp. 63–71)

Guo Hanning (China), Hildrun Kretschmer (Germany, China), Liu Zeyuan (China)

(cf. Guo et al. in List of Contents)

**Distribution of Co-Author Pairs' Frequencies**

**of the Journal of Information Technology.** (pp. 73–81)



# Topics

## Citation Analysis

1. Afshar, Abdulmajid, and Danesh
2. Ball, Mittermaier, and Tunger
3. Borrego, Barrios, Villarroya, Frías, and Ollé
4. Chai, Hua, Rousseau, and Wan
5. Glänzel and Gupta
6. Kousha
7. Larsen, Maye, and von Ins
8. Liang, Liu, Yang, and Wang
9. Mahbuba and Rousseau
10. Marshakova-Shaikevich
11. Mitesser, Heinz, Havemann, and Gläser
12. Nourmohammadi, Noroozichakoli, and Hassanzadeh
13. Osareh and McCain
14. Rousseau
15. Wang, Chen, and Liu
16. Yin, Yang, Liu, and Zhao
17. Zhang and Glänzel
18. Zhu and Chen
19. Zhu, Hou, and Chen

**Collaboration**

1. Afshar, Abdulmajid, and Danesh
2. Glänzel and Gupta
3. Guo, Kretschmer, and Liu
4. Haidari, Zareh, Osareh, and Farajpahlou
5. Hou, Liu, Qu, and Kretschmer
6. Jahn
7. Knyazeva and Slashcheva
8. Kretschmer and Kretschmer
9. Krishnamoorthy, Amudhavalli, and Balu
10. Kundra, deB. Beaver, Kretschmer, and Kretschmer
11. Kumar and Kumar
12. Larsen and von Ins
13. Liberman and Olmedo
14. Mahbuba and Rousseau
15. Manuelraj and Amudhavalli
16. Markscheffel and Thomas
17. Markusova and Aversa
18. Must
19. Perianes-Rodríguez, Olmeda-Gómez, and Moya-Anegón
20. Rao and Bhusan
21. Russell, Madera-Jaramillo, Hernández-García, and Ainsworth
22. Sangam and Smt. Meera
23. Srivastava and Diwakar
24. Wang, Liu, Chen, and Zhu
25. Zhu and Chen

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## Evaluative Informetrics

1. Ball, Mittermaier, and Tunger
2. Boell, Wilson, and Cole
3. Borrego, Barrios, Villarroya, Frías, and Ollé
4. Dees
5. Jowkar and Beglou
6. Lewison
7. Marshakova-Shaikevich
8. Marshakova-Shaikevich and Heinz
9. Noroozichakoli, Hassanzadeh, and Nourmohammadi
10. Nouri and Danesh
11. Panigrahi, Mukherjee, and Srivastava
12. Singh and Ullah
13. Srivastava, Kundra, and Diwakar
14. Vaughan
15. Wadhwa, Tewari, Walke, Yadav, and Dhawan

## h-Index

1. Burrell
2. Chai, Hua, Rousseau, and Wan
3. Mahbuba and Rousseau
4. Rousseau

## Informetric Laws and Distributions

1. Guo, Kretschmer, and Liu
2. Kretschmer and Kretschmer
3. Kundra, deB. Beaver, Kretschmer, and Kretschmer
4. Larsen and von Ins
5. Mayr

## Mapping of Science and Visualisation

1. Berendt and Subašić
2. Dees
3. Hou, Liu, Qu, and Kretschmer
4. Hou, Zhang, and Wang
5. Jiang, Du, and Li
6. Li, Jiang, and Du
7. Liang, Liu, Yang, and Wang
8. Osareh and McCain
9. Sun and Morris
10. Wang, Chen, and Liu
11. Wang, Liu, Chen, and Zhu
12. Yin, Yang, Liu, and Zhao
13. Zhang, Liu, and Zhao
14. Zhu, Hou, and Chen

## Methodology

1. Cavaller
2. Cavaller
3. Glänzel
4. Ivancheva
5. Jahn
6. Mayr
7. Mitesser, Heinz, Havemann, and Gläser
8. Vaughan
9. Wang, Liu, Chen, and Zhu

---

## Network Analysis

1. Hou, Liu, Qu, and Kretschmer
2. Jahn
3. Kousha
4. Mitesser, Heinz, Havemann, and Gläser
5. Ortega and Aguillo
6. Osareh and McCain
7. Russell, Madera-Jaramillo, Hernández-García, and Ainsworth
8. Zhang and Glänzel
9. Zhu, Hou, and Chen

## Open Access

1. Kousha

## Patents

1. Biglu
2. Lo
3. Luan, Chen, and Bai
4. Sun and Morris
5. Yang, Liu, and Liu
6. Yin, Yang, Liu, and Zhao
7. Zhu and Chen

## Science & Technology Indicators of Countries

1. Borrego, Barrios, Villarroya, Frías, and Ollé
2. Glänzel and Gupta
3. Hassanzadeh, Nourmohammadi, and Noroozichakoli
4. Hérubel
5. Hou, Liu, Qu, and Kretschmer

6. Jain
7. Larsen, Maye, and von Ins
8. Li, Jiang, and Du
9. Luan, Chen, and Bai
10. Ma, Yuan, Su, Hu, Yu, Pan, and Wu
11. Mahbuba and Rousseau
12. Markusova and Aversa
13. Noroozichakoli, Hassanzadeh, and Nourmohammadi
14. Pang, Wang, Cao, and Yu
15. Russell, Madera-Jaramillo, Hernández-García, and Ainsworth
16. Sangam and Smt. Meera
17. Srivastava and Diwakar
18. Sun, Kakinuma, Negishi, and Nisizawa
19. Tijssen
20. Zhu and Chen

### **Science & Technology Indicators of Specialties and Disciplines**

1. Biglu
2. Dees
3. Hou, Zhang, and Wang
4. Li, Jiang, and Du
5. Jain
6. Mitesser, Heinz, Havemann, and Gläser
7. Panigrahi, Mukherjee, and Srivastava
8. Rao and Bhusan
9. Ruschenburg
10. Sangam and Smt. Meera

11. Tavakolizadeh-Ravari
12. Zhu, Hou, and Chen

### **Webometrics**

1. Boell, Wilson, and Cole
2. Danesh, Soheili, and Shafiei
3. Haidari, Zareh, Osareh, and Farajpahlou
4. Jowkar and Beglou
5. Kousha
6. Ortega and Aguillo
7. Ruschenburg
8. Shah, Goswami, and Sharma
9. Vaughan
10. Zahedi



# List of Contents

- Afshar, M., A. H. Abdulmajid, and F. Danesh.  
**Survey on authors' collaboration rate and citation behaviors in JRMS articles during 2004–2006.**
- Ball, R., B. Mittermaier, and D. Tunger.  
**Creation of Journal-Based Publication Profiles of Scientific Institutions – A Methodology for the Interdisciplinary Comparison of Scientific Research Based on the *J* Factor.**
- Berendt, B. and I. Subašić.  
**Identifying, measuring and visualising the evolution of a story: A Web mining approach.**
- Biglu, M. H.  
**Scientometric study of patent literature in medicine.**
- Boell, S. K., C. S. Wilson, and F. T. H. Cole.  
**A Webometric Analysis of Australian Universities using Staff and Size dependent Web Impact Factors (WIF).**
- Borrego, A., M. Barrios, A. Villarroya, A. Frías, and C. Ollé.  
**Research Output of Spanish Postdoctoral Scientists: Does Gender Matter?**
- Burrell, Q. L.  
**The publication / citation process at the micro level: A case study.**
- Cavaller, V.  
**Datametrics? About the architecture of the metric disciplines.**
- Cavaller, V.  
**Matrix Indicator System.**
- Chai, J.-C., P.-H. Hua, R. Rousseau, and J.-K. Wan.  
**The Adapted Pure *h*-Index.**
- Danesh, F., F. Soheili, and A. Shafiei.  
**Hyperlink analysis of Iranian ministries websites.**
- Dees, W.  
**Innovative Scientometric Methods for a Continuous Monitoring of Research Activities in Educational Science.**

- Glänzel, W.  
**Seven Myths in Bibliometrics.**  
**About facts and fiction in quantitative science studies.**
- Glänzel, W. and B. M. Gupta.  
**Science in India. A bibliometric study of national and institutional research performance in 1991–2006.**
- Guo, H., H. Kretschmer, and Z. Liu.  
**Distribution of Co-Author Pairs' Frequencies of the Journal of Information Technology.**
- Haidari, G., F. Zareh, F. Osareh, and A. H. Farajpahlou.  
**Collaboration among Library and Information Science websites of Associations and Societies (LISAS), using webometric methods.**
- Hassanzadeh, M., H. Nourmohammadi, and A. Noroozichakoli.  
**Organization of Science in Iran: a Holistic Review.**
- Hou, H., Z. Liu, T. Qu, and H. Kretschmer.  
**International Collaboration Networks of Chinese Scientometrics.**
- Hou, J., C. Zhang, and X. Wang.  
**The information visualization analysis of the study in international S&T policy.**
- Hérubel, J.-P. V. M.  
**French Dissertations in a Period of Transition, 1971–1990: Historical and General Observations for Philosophy, Information and Communication Sciences (SIC), and Art and Archaeology.**
- Ivancheva, L.  
**Scientometrics Today: A Methodological Overview.**
- Jahn, N.  
**The methodological status of co-authorship networks.**
- Jain, N. C.  
**Growing visibility of Indian biomedicine and life sciences journals in global alerting services.**
- Jiang, C., W. Du, and J. Li.  
**Economy Papers Map of Co-occurrence Analysis Based on CSSCI.**
- Jowkar, A. and R. R. Beglou.  
**Study of the Relationship Between World University Rankings and Count of Links to Them: Based on Shanghai University Ranking and Times Higher Education.**
- Knyazeva, S. and N. Slashcheva.  
**Bibliometric analysis of Russia–EU co-publications.**

- 
- Kousha, K.  
**Characteristics of Open Access Web Citation Network:  
A Multidisciplinary Study.**
- Kretschmer, H. and T. Kretschmer.  
**Varying Shapes of Co-author Pairs' Distributions.**
- Krishnamoorthy, G., A. Amudhavalli, and K. Balu.  
**S&T Collaboration: A Quantitative Study.**
- Kumar, S. and S. Kumar.  
**Collaboration in Research Productivity  
in Oil Seed Research Institutes of India.**
- Kundra, R., D. deB. Beaver, H. Kretschmer, and T. Kretschmer.  
**Co-author pairs' frequencies distribution  
in journals of gender studies.**
- Larsen, P. O., I. Maye, and M. von Ins.  
**Scientific Output and Impact:  
Relative Positions of China, Europe, India, Japan and the USA.**
- Larsen, P. O. and M. von Ins.  
**Lotka's Law, Co-authorship and Interdisciplinary Publishing.**
- Lewis, G.  
**Who writes reviews? Can they be used to evaluate research?**
- Li, J., C. Jiang, and W. Du.  
**Visualization study of management hotspots  
based on CSSCI in China.**
- Liang, Y., Z. Liu, Z. Yang, and X. Wang.  
**Knowledge Mapping of Citation Analysis Domains.**
- Lieberman, S. and R. L. Olmedo.  
**Scientist's semantic meaning of the concept of 'coauthorship'.**
- Lo, S.  
**Scientific Linkage of Public Research and Technology Development.**
- Luan, C., Y. Chen, and T. Bai.  
**Patentometric Study of Global Academies.**
- Ma, Z., J. Yuan, C. Su, Z. Hu, Z. Yu, Y. Pan, and Y. Wu.  
**Using Lorenz Curve and Gini Coefficient to Reflect the Inequality  
Degree of S&T Publications: An Examination of the Institutional  
Distribution of Publications in China and other Countries.**
- Mahbuba, D. and R. Rousseau.  
**Scientific research in Bangladesh  
and a comparison with India and Pakistan.**
- Manuelraj, P. and A. Amudhavalli.  
**Collaboration Pattern amongst Health Care Professionals in India.**

- Markscheffel, B. and H. Thomas.  
**COLDLib – A concept for a global knowledge space for the COLLNET community.**
- Markusova, V. and E. Aversa.  
**Trends in Research Performance and International Collaboration in Central Asia in the PostSoviet Period.**
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