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EDITORIAL

INAUGURATION ADDRESS OF CASSIDY R. SUGIMOTO, NEW PRESIDENT OF ISSI

It is my pleasure to present my inaugural message as the newly elected President of the International Society for Scientometrics and Informetrics (ISSI). The last inaugural column was in 2007 when Ronald Rousseau was first elected president. In his address, he wrote of the advances in the society since it began in 1987. Guided by Rousseau and other leading members, the field of scientometrics and informetrics has evolved tremendously since this time. So too, has science. In fact, revolutions and exponential growth periods in science and scholarly communication have been heralded so frequently over the last few decades on wonders whether this has become the modus operandi: a perpetual state of motion bringing both opportunity and anxiety for a field charged with observing, describing, and predicting developments in science. The challenge for our society is responding to—and ideally guiding the direction of—this dynamism: enacting our obligation both to our members and to the larger scientific system. Communication and visibility are critical for fulfilling this responsibility. To this end, I will briefly discuss my vision for the society and how I believe we should

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CASSIDY R. SUGIMOTO

President, International Society for
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Cassidy R. Sugimoto is an Associate Professor in the School of Informatics and Computing at Indiana University Bloomington. She has co-edited, together with Blaise Cronin, two volumes on scientometrics (*Scholarly Metrics Under the Microscope: From citation analysis to academic auditing*, ITI/ASIST; *Beyond Bibliometrics: Harnessing multidimensional indicators of scholarly impact*, MIT Press) and has recently finished a third edited volume—*Theories of Informetrics and Scholarly Communication*—to be published by de Gruyter in February 2016. In addition to her edited work, Sugimoto has authored over 60 journal articles in the domain of scientometrics and scholarly communication—publishing in venues such as *Scientometrics*, *Journal of Informetrics*, *JASIST*, *Science and Public Policy*, *PLOS ONE*, and *Nature*. She serves on the editorial boards of *Scientometrics*, *JASIST*, *Library & Information Science Research*, and *Information Processing & Management*. Sugimoto has an undergraduate degree in music performance, an M.S. in library science, and a Ph.D. in information and library science from the University of North Carolina at Chapel Hill.

move forward to engage more deeply with our immediate community and other relevant stakeholders.

Doctoral students are critical for the vitality of any domain. We must engage more fully in the development, support, and career trajectories of these students. This involves welcoming students into our society early in their careers and providing mentors from among our ranks. The society can do this by providing more scholarships for students and dedicating space within the conference that allows for increased mentorship interactions. We can also make it easier for individuals to join and participate in ISSI by addressing minor logistical constraints (e.g., the ability to pay for membership dues with a credit card) to larger issues in communication of and access to the products of the society.

Our community is hindered, in part, by the lack of curricular infrastructure that typifies and codifies many other disciplines. Our membership is found within many schools, departments, and institutes. This challenge is, in many ways, one of the strengths of the society. We are highly distributed—both geographically and disciplinarily. Given this, we must work harder to demonstrate our cohesion as a field and our unique perspective and expertise in science studies. Yet, this is also a characteristic that enables wider communication: we are not constrained by disciplinary walls, but able to flourish across boundaries. We should leverage our distributed placement to ensure that, wherever and whenever metrics are applied, they are done so rigorously and uphold the standards of our field.

This is not a trivial task. Inappropriate use of metrics abound and cause systemic distortions in knowledge production and measurement. These distortions have been exacerbated by the increasing use of individual-level metrics. As experts in scientometrics, we have a professional obligation to ensure appropriate use of indicators. Developments like the Leiden Manifesto, engendered by discussions at professional

conferences such as ISSI, are a first step in this direction. However, there is much more that needs to be done to mitigate malpractice and to promote standards. Our society should continue to serve as a space for principles to be developed. To advocate with integrity, we must demand the highest levels of professionalism from members of our own field in regards to appropriate publication behavior and use of metrics.

We must be more engaged in the online discourse around issues of importance to the society and field. I would like to suggest that we expand and enhance our current communication channels in order to do this. For example, one might imagine the redesign of the ISSI Newsletter into a blog format that would allow for more timely posts and greater flexibility around the sharing and dissemination of material. The ISSI website should also serve to market our brand as a dynamic society that is deeply engaged in contemporary issues. Expertise is offered from many corners of the web: The Scholarly Kitchen, the LSE Impact Blog, and Research Trends all provide ready commentary on many issues that are relevant to our society (and include contributions from our members). We should be leading the way in these conversations. This requires having the technological infrastructure and web visibility that is expected for a 21st century professional society.

Our conferences are another opportunity for us to brand ourselves. We must maintain high quality management of these events. We have, traditionally, left management to the organizers. I would encourage a stronger relationship between the ISSI board and the organization of the conferences as well as increased benefits for members (e.g., discounted rates). At our conference in Istanbul, the majority of participants were not members. This is positive in that it demonstrated our wide appeal, but is also a cause for some concern. Conferences should serve as a primary gathering space for our members and as an outlet for high quality work in the field. This is incentivized by making

sure that our proceedings are indexed and made readily available to the academic community. Taking these steps is another way to increase the visibility of the intellectual contributions of our society.

The society should be a platform for the voices of its members. Professional societies justify their dues by the value-add to members. Typically, this has been operationalized as the various products or publications that the society produces. I would argue, however, that this has led to the closing of the scholarly communication system as societies restrict access to their material in order to increase its value. This is antithetical to the ideology of our society. Our value-add should not be in products exclusive to members, but rather by providing a platform for the voices of our members to be visible and recognized for their expertise. Amateur bibliometrics, for example, is a flourishing trade with severe implication for science policy and the trajectory of many fields of inquiry. We must ensure the debates on metrics are well-informed and that people turn to our society for this expertise. ISSI must be on the forefront of these conversations and seen as the locus of expertise for all stakeholders, including individual scientists, journal editors, publishers, administrators, research councils, and scholarly societies. Our value is precisely in providing this visibility for our members.

Luckily, I am not alone in these endeavors. I'm delighted to have an active and energetic board beside me, who—demonstrated by the impassioned conversation in Istanbul—are ready and willing to take this society into the next era of its existence. I would like to specifically acknowledge elected board members Kevin Boyack, Vincent Larivière, Birger Larsen, Jacqueline Leta, Grant Lewison, Nees Jan Van Eck, as well as our steadfast Secretary-Treasurer—Wolfgang Glänzel—without whom the society would not function. I look forward to working with these individuals and with all our members as we collectively work to sustain the relevancy and vibrancy of our society.

ESSS 2015: AND THE SUCCESS STORY OF BIBLIOMETRIC EDUCATION CONTINUES

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It was the second time that the KU Leuven hosted the European Summer School for Scientometrics (esss), which took place on 12 – 17 July 2015^(1,2,3,4,5). And, like in the previous years, the six-day event was fully booked (50 persons) within only a few weeks after registration opened.

Traditionally, the esss 2015 started with a tutorial day on Sunday, 12 July, an introductory crash course for esss participants with only basic or no prior knowledge in the field and the tools used for bibliometrics. Thus, attendees could familiarise themselves with the main terms and concepts of bibliometrics based on presentations and discussions with members of the esss steering committee Wolfgang Glänzel (KU Leuven), Sybille Hinze (iFQ) and Juan Gorraiz (University of Vienna).

The theoretical part of the crash course was followed by an introduction on the most renowned citation databases, Web of Science Core Collection (WoS CC) and Scopus, given by representatives of Thomson Reuters and Elsevier respectively. Tihomir Tsenkulovski informed about the new available features in WoS CC, while Floortje Flippo guided the audience through the most recent version of Scopus.

On Monday, 13 July, Wolfgang Glänzel officially opened the esss 2015 and gave a warm welcome to the attendees of this year's event in Leuven. This first lectures day, dedicated to "Bibliometric Concepts, Indicators and Data Sources", was subsequently started by Stefan Hornbostel (iFQ) with a concise overview of the history, institutionalisation



Picture 1. Bibliometric Crash Course with Wolfgang Glänzel

and concepts of bibliometrics, followed by Wolfgang Glänzel and Juan Gorraiz, who gave a brief introduction to the most important bibliometric data sources.

Sybille Hinze shed light on the most relevant scientometric indicators, their construction and potential applications. In his very original and Dantesque presentation, Stephan Gauch (iFQ) illustrated how the relevance of classifications and how they can shape bibliometric analyses. He provided a deeper and more informed insight into the real meaning of using classifications.

The afternoon session reflected the esss tradition of bringing together a very internationalised and prestigious group of speakers who impressively illustrated how bibliometrics can be put into practice. Linda Butler (The Australian National University) demonstrated, how institutions are assessed in the context of ERA, the Excellence in Research for Australia initiative. The role of citation- and concept-networks as a basis for the construction of performance indicators and science maps was the central topic of Anthony van Raan's talk, founder of CWTS at Leiden University (Nether-

lands) one of the first institutions focusing on bibliometrics. Afterwards, Koenraad Debackere (KU Leuven) demonstrated how modern science policies is making use of bibliometric data and indicators to assess the scientific performance of research institutions, research groups and even individual researchers. Finally, Evangelia Lipitakis (Research Analytics Consultant, Thomson Reuters), who gave insight into "Assessing Research Performance Using Thomson Reuters Analytics Solutions".

The following two seminars days were characterised by lectures in the morning sessions and hands-on sessions with practical exercises in the afternoon. Tuesday, July 14, dedicated to "Data Handling", was started by Matthias Winterhager (Bielefeld University, Germany). He explained the cumbersome and crucial task of Data Cleaning and Processing, which is an essential precondition for bibliometric analyses.

Wolfgang Glänzel discussed the necessities, challenges and options of "Author Identification". He reported on results of his research and experiences from real life exercises. Wolfgang Glänzel also introduced the



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Picture 2. Stefan Hornbostel

issues of “Subject Normalisation” as a fundamental requirement for citation analysis in a multidisciplinary environment due to discipline specific publication and citation behaviour. He explained the two fundamental approaches, the so-called source- and citing-side normalisation, or, using another terminology, the *a priori* and *a posteriori* normalisation and discussed advantages and disadvantages of both methods.

The morning session closed with “Journal Impact Measures”, jointly presented by Wolfgang Glänzel, focusing on the strengths and weaknesses of the best known and most controversial “Journal Impact Factor” and Juan Gorraiz, who introduced alternative impact measures like Eigenfactor metrics, SJR and SNIP.

The exercises in the afternoon reflected these issues and participants had the opportunity to transfer the knowledge they acquired into practice. For example exer-

cises dealing with data cleaning, retrieving journal impact measures, calculating indicators based on different databases offered the possibility to turn knowledge into skills.

“Collaboration and Networks” were in the center of lectures, seminars and practical exercises on Wednesday. Bart Thijs (Centre for R&D Monitoring, KU Leuven, Belgium), shed light on applications of network analysis in science studies to uncover relations, structures and developments among different actors in science. Wolfgang Glänzel focused on co-authorship, which is used as a proxy for research collaboration in the case of institutional or international collaboration. He thereby revealed important information about main actors and their role in the network of scholarly communication.

“Structures in Science and Options for their Visualisation”, an important and emerging trend in the field, was the cen-



Picture 3: Audience at the esss in Leuven

terpiece of all following sessions introducing relevant tools like Gephi, Bibexcel and Pajek. Again, esss attendees were given the opportunity to practice the newly acquired knowledge and create maps on their own by using the different visualisation tools supported by Wolfgang Gläzel, Bart Thijs and Sarah Heeffer (Centre for R&D Monitoring, KU Leuven) and Juan Gorraiz and Nicola De Bellis (Medical Library, University of Modena and Reggio Emilia, Italy)..

As in the previous years also the 2015 edition of the esss had a specific focus topic. This year one day was specifically devoted to one of the “hot” topics in the context of assessments “Individual Evaluation”.

Invited speakers shed light on the options, challenges, limitations and problems around the assessment of individuals, not only focusing on bibliometrics in a very narrow sense but also looking beyond the bibliometricians toolset. Rodrigo Costas (CWTS, Leiden University, Netherlands) gave a brief introduction by highlighting the most important aspects that bibliometric practitioners need to take into account when performing individual-level analysis. Hans Dieter Daniel (ETH Zürich, Switzerland) reported on peer review as the most

important mechanism for quality control in science, and Martin Reinhard (iFQ), discussed popular ways of (quantitatively) assessing individual researchers and asked, whether bibliometric tools are reasonable predictors for future success or not. Finally, Juan Gorraiz focused on the academic point of view, based on his expertise as head of the Bibliometrics and Publication Strategies Department at the University of Vienna. He presented the tailor-made Viennese services for both, academic and administrative university staff, particularly considering professorial appointments.

In the afternoon session, Giles Radford (ÜberResearch GmbH, Germany) introduced a tool developed by ÜberResearch that supports the selection of experts for Peer Review procedures. In his presentation he gave examples of how automated natural language process approaches can be used and support peer selection based on thematic similarities. Concluding this day's lectures, Ulrike Felt (University of Vienna) delivered a thought-provoking talk addressing the proliferation of rankings and indicators in academia as well as ethical aspects. She prepared the ground for the “bibliometric agora”, a discussion forum that has

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SEPTEMBER 4–9
2016
GRANADA

news

Thanks to the wonderful students and lecturers as well as the fabulous local organising team, we all had a great time in Leuven.

Looking forward seeing you in summer 2016 in Granada / Spain!

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Picture 4: Announcement of the esss 2016, Granada (screenshot, esss homepage)

become a highly appreciated feature of the esss course structure within the last years.

Moderated by Juan Gorraiz, the agora in Leuven featuring Ulrike Felt and Hans Dieter Daniel quickly evolved into a lively, vivid and controversial dispute among the panelists but also with the audience on questions like: In which form and under which conditions can bibliometrics be an enhancement of the peer review process? What are ideal preconditions for an “informed peer reviewer”? How can bibliometric practices distort established publication cultures? Furthermore the Leiden Manifesto and its call for more standards in metric based assessments were debated.

On the last day of the esss, Gunnar Sivertsen (NIFU, Oslo, Norway) grabbed the audience's attention by talking about

specific requirements when it comes to applying bibliometrics in the Social Sciences and Humanities (SSH). He explained the specificities of the publication and citation behaviour, the coverage of the SSH in bibliographic databases and the consequences for using bibliometrics for individual evaluations. He also introduced the solution implemented in Norway to tackle the problems he described. Dealing with Google Scholar (GS), Nicolas Robinson-Garcia (EC3Metrics spin-off, Universidad de Granada, Spain) discussed usefulness of GS as a tool for evaluation purposes. Last, but not least, Éric Archambault (Science-Metrix, Canada), dealt with the development toward Open Access (OA) publishing and the potential relevance and consequences for bibliometric analysis. His presentation examined the

results of recent studies assessing the free availability of scholarly publications. Finally, best practice recommendations for institutional repository management were provided, taking into account the challenges to be faced by OA models.

To conclude, this year's esss active participation of the participants was called for in just another practical hands-on exercise. Participants were given the task to step-by-step carry out their own bibliometric analysis. They were presented with various tasks and asked to present their results to the audience. Wolfgang Glänzel, Bart Thijs, Sarah Heeffer, Pei-Shan Chi, Mariëtte Du Plessis, Lin Zhang, Sybille Hinze, Linda Butler and Juan Gorraiz permanently supported the group works.

Finally in a Q&A session the organisers were happy to answer questions that remained open after a demanding week before officially closing the event in the late afternoon.

esss 2015 was once again an international event beyond European borders with participants from 22 countries from four continents including Australia, Austria, Belgium, Brazil, Czech Republic, Denmark, Estonia, Germany, Lithuania, Netherlands, Norway, Poland, Portugal, Russia, Slovakia, South Korea, Spain, Sweden, Switzerland, Taiwan, United Kingdom and the United States.

The overall feedback gained from personal encounters and conversations as well as resulting from the evaluation of a survey among participants, was very positive and inspiring. Besides the pleasant and stimulating atmosphere throughout the whole course and the high quality of all lectures, the participants particularly enjoyed the social events: The Leuven Guided Tour, where we were given the opportunity to stroll through the medieval part of the city and the Beguinage, the famous historical quarter and UNESCO World Heritage site, as well as a delightful conference dinner in the Faculty Club, located at the former hospital and farm buildings of the Beguinage. The esss organisers are therefore encouraged to

maintain and continuously improve this learning opportunity, which seems to be high in demand even after six years.

The organisers are already looking forward to next year's event, which will be held at the University of Granada in Spain, September 4-9. Participants can expect a varied mix of theory and hands-on training adapted to our focus topic "New Metrics".

As usual further announcements will be made via the esss website (www.scientometrics-school.eu) and via the esss mailing list (to register please send an informal email to office@scientometrics-school.eu).

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RONALD ROUSSEAU IS AWARDED AN HONORARY PROFESSORSHIP BY ZHEJIANG UNIVERSITY

A REPORT BY XIAOJUN HU

ZHEJIANG UNIVERSITY, SCHOOL OF MEDICINE, HANGZHOU, CHINA

On October 15, 2015, former President of ISSI, Ronald Rousseau, received an Honorary Professorship at Zhejiang University.

At Zhejiang University, one of the top 5 universities in China, an Honorary Professorship is the highest honorary academic title awarded to scientists. Each year just a few scholars receive this award. Recent awardees include Michael Levitt (2013 Nobel laureate in Chemistry), Robert Engle (2003 Nobel Laureate in Economics), and Sumio Iijima (the inventor of carbon nanotubes).

Ronald Rousseau is a widely recognized scholar in information science and scientometrics. He is well-known for his collaborations with Chinese colleagues, pushing them to make more progress and become internationally visible. In the past ten years he, particularly, performed a lot of meaningful research with colleagues of Zhejiang University and this not only in scientometrics and informetrics, but also in the field of innovative management, biomedicine, and interdisciplinary research.

On October 15, 2015, more than one hundred teachers and students came together to attend the ceremony during which Vice President Prof. Luo Jianhong, awarded the certificate of Honorary Professorship to Ronald Rousseau on behalf of the univer-

sity. As part of the ceremony Ronald Rousseau was invited to wear red-and-white badge of Zhejiang University.

Vice-president Luo formulated the wish that dr. Ronald Rousseau, as the university's new Honorary Professor, would further contribute to the achievements of the university's scientific community.

After the awarding ceremony, professor Rousseau gave two presentations for post-graduates of Zhejiang University.



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THE TIP OF THE CHINESE PUBLICATION ICEBERG



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ABSTRACT

It is shown that the large majority of Chinese publications is not included in western databases. It is estimated that there are about 6,000 Chinese academic journals. We further estimate that Chinese scientists published two million articles in the year 2014. About 1.5 million of these were written in Chinese.

INTRODUCTION

China's scientific growth over the latest two decades is well-documented (Leydesdorff & Zhou, 2005; Gläzel et al., 2008; Rousseau, 2008; Leydesdorff & Wagner, 2009; Gao et al., 2011; Zhou, 2013). Most of these studies are based on Web of Science (WoS) or Scopus data. Nowadays, almost 15% of all articles and reviews in the SCI are (co-)authored by Chinese scientists, which puts China in the second place after the USA. Using the 2014 edition of the JCR, the WoS covers 173 Chinese journals in its SCIE database and 13 in its SSCI database (4 are also in the SCIE; hence 9 are

unique for the SSCI). SCOPUS covers 594 Chinese journals (SCImago data). As an information scientist I regret that neither of the two databases includes a Chinese journal in the Information and Library Science category.

HOW MANY SCIENTIFIC JOURNALS ARE PUBLISHED IN CHINA?

This is a rather difficult question, not only for China but for any country, as many journals appear irregularly. Moreover, it is sometimes difficult to say if a journal can be

WOS		CHINESE DATABASES
Journal articles published by Chinese scientists (in SCI-Exp., SSCI, A&HCI)	270,600	1,617,800
In Chinese WOS journals, i.e. with a Chinese publisher	27,700	27,700
In other WOS journals	242,900	
Other contributions by Chinese scientists in the WoS	60,000	

Table 1. Articles by Chinese scientists: Summary table for 2014

	WOS	CHINESE DATABASES
Chinese language	7,100	$1,589,800 - 80,000 = 1,509,800$
English language	323,500	$28,000 + 80,000 = 108,000$

Table 2. Articles by Chinese scientists according to language Summary table for 2014

considered a scientific journal or is a journal for hobbyists, for the general public or published by a university department without any form of peer review. Admitting this uncertainty, we may say that there are at least 8,000 Chinese journals. The Annual Report for Chinese Academic Journal Impact Factors (Xiao, 2015) includes 5,696 academic journals. Among these 3,758 are classified as science and technology journals, while 2,048 are classified as social sciences or arts & humanities journals (with some overlapping). Thus we see that about 3% of Chinese academic journals are covered by the WoS; the corresponding number for Scopus is about 10%. Among these 5,696 academic journals 258 are completely published in English, which is a significant increase with respect to the 187 in 2002 as mentioned in (Ren and Rousseau, 2004). These English language journals are largely in the natural sciences.

HOW MANY SCIENTIFIC PAPERS ARE PUBLISHED BY CHINESE COLLEAGUES?

Based on data from the “China National Knowledge Infrastructure Database” (CNKI, <http://www.cnki.net>), we estimate the number of Chinese journal papers published in 2014 at about 1,617,800. About 27,700 are published in Chinese journals covered in the WoS. Yet, Chinese authors also publish in non-Chinese WoS journals. We estimate

this number to be about 242,900. This brings the estimated number of journal papers published by Chinese colleagues to a total of $1,617,800 + 242,900 = 1,860,700$. This number suggests that about 14.5% of all journal articles published by Chinese scientists are covered by the WoS. Yet, another 60,000 publications by Chinese scientist are included in the WoS, mainly contributions in conference proceedings, not published as articles in journals. Adding these publications to the journal publications brings us to a total of 1,920,700 Chinese publications in one year. To this number an unknown number of contributions published in conference proceedings, not included in the WoS, as well as contributions in edited books should be added. This surely leads to a total of more than two million publications by Chinese scientists in one year. A summary table is provided in Table 1.

As articles published in Chinese are mostly out of the reach of western scientists we also tried to make a division into English and Chinese language publications. The Chinese English-language journals published about 28,000 articles in 2014. Other Chinese journals rarely publish English-language articles. We estimate these at 5% or less. Table 2 provides a summary table according to language where we used an estimate of 80,000 English-language articles in predominantly Chinese-language journals. We conclude from these estimates that more than 1.5 million articles were published in Chinese in the year 2014.

IMPACT

From 2005 to 2015, Chinese scientists published 1,581,100 SCI papers. These articles received a total of 12,876,000 citations during the same period, which places China at rank 4. Hence, the number of citations per publication is 8.14. As the world average over the same period is 11.29, the impact of Chinese-authored publications in the SCI is still lower than world average. Yet, China's increase in citations is faster than for any other country.

THE TIP OF THE ICEBERG

One might conclude from these numbers that if the choices made by Thomson Reuters and Scopus are generally well-done a relatively small percentage of interesting articles would be missed. However, no one can honestly believe that the 87% of articles published by Chinese authors and not included in the WoS, are all of no importance or of low quality. Surely some of these articles, largely unknown in the West, must be real gems.

As an illustration, and admitting that her main work was performed many years ago, we note that Nobel Prize winner Youyou Tu published about 43 articles (list available from the author) of which only four articles were published in journals covered by the WoS.

CONCLUSION

Although Zhou (2013) claims that the increase in the number of Chinese publications in the WoS might slow down, it seems that there is still a large potential for further increase. Finally we like to point out that our contribution is not in any way meant to imply that the western databases do not cover a fair share of Chinese journals. Coverage should be based on quality and usefulness to the scientific community. Our main purpose is to inform the readers about a large amount of scientific knowledge whose existence is probably unknown to them.

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