



JULY 23 – 28
2018
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programme

Monday, July 23rd

09.00-09.15	Welcome and Opening Remarks
09.15-10.00	Bibliometrics Reviewed: History, Institutionalization, and Concepts Stefan Hornbostel, German Centre for Higher Education Research and Science Studies (DZHW), Germany
10.00-10.30	Introduction to Bibliometric Data Sources Part 1 Wolfgang Glänzel, Centre for R&D Monitoring (ECOOM) & Dept. MSI, KU Leuven, Belgium
10.30-11.00	Coffee break
11.00-11.30	Introduction to Bibliometric Data Sources Part 2 Juan Gorraiz, Bibliometrics and Publication Strategies, University of Vienna, Austria
11.30-12.15	Scientometric Indicators in Use: an Overview Sybille Hinze, German Centre for Higher Education Research and Science Studies (DZHW), Germany / Wolfgang Glänzel, Centre for R&D Monitoring (ECOOM) & Dept. MSI, KU Leuven, Belgium
12.15-13.15	Lunch break
13.15-14.00	Subject Classification in Bibliometrics – Theory, Approaches & Limitations Stephan Gauch, German Centre for Higher Education Research and Science Studies (DZHW) & Humboldt Universität zu Berlin, Germany
14.00-14.45	Bibliometric Methods in Subject Delineation Wolfgang Glänzel, Centre for R&D Monitoring (ECOOM) & Dept. MSI, KU Leuven, Belgium
14.45-15.15	Coffee break
15.15-16.00	The Evolution of Citation Databases with Focus on New Developments Jeff Clovis, Clarivate Analytics

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16.00-17.00 **Q&A Session Databases (based on previous Webinars)**
Jeff Clovis, Clarivate Analytics / Tomasz Asmussen, Elsevier / Daniel Hook, Digital Science
Moderation: Juan Gorraiz, Bibliometrics and Publication Strategies, University of Vienna, Austria

17.00-18.00 **Welcome Reception**

Tuesday, July 24th

09.00-09.45 **Designing Effective Queries for Document Retrieval**
Stephan Gauch, German Centre for Higher Education Research and Science Studies (DZHW) & Humboldt Universität zu Berlin, Germany

09.45-10.30 **Data Cleaning and Processing**
Christine Rimmert, Institute for Interdisciplinary Studies of Science – AG Bibliometrie, Bielefeld University, Germany

10.30-11.00 **Coffee break**

11.00-11.30 **Journal Impact Measures Part 1**
Wolfgang Glänzel, Centre for R&D Monitoring (ECOOM) & Dept. MSI, KU Leuven, Belgium

11.30-12.00 **Journal Impact Measures Part 2**
Juan Gorraiz, Bibliometrics and Publication Strategies, University of Vienna, Austria

12.00-12.45 **Subject Normalization for Citation Analysis**
Wolfgang Glänzel, Centre for R&D Monitoring (ECOOM) & Dept. MSI, KU Leuven, Belgium

12.45-13.45 **Lunch break**

13.45-15.00	Project Work: Part 1
15.00-15.30	Coffee break
15.30-17.00	Project Work: Part 2
17.00- 17.30	InCites – Clarivate Analytics Jeff Clovis, Clarivate Analytics
18.00-20.00	Social Event Vienna Ring Tram Tour

Wednesday, July 25th

Best Practices in Bibliometrics

09.00-09.45	Measuring Science: Evaluation and Mapping of Scientific Research Ton van Raan, Centre for Science and Technology Studies (CWTS), Leiden University, The Netherlands
09.45-10.15	Bibliometric Services at the University of Vienna Juan Gorraiz, Bibliometrics and Publication Strategies, University of Vienna, Austria
10.15-10.45	Policy Use of Bibliometric Evaluation and its Repercussions on the Scientific Community with Focus on Research, Technology, Patents, Development and Knowledge Transfer Koenraad Debackere, KU Leuven, Belgium
10.45-11.15	Coffee break
11.15-11.45	Research Impact Assessment Across Domains – Combining Standards and Bibliometrics Data Stephan Gauch, German Centre for Higher Education Research and Science Studies (DZHW) & Humboldt Universität zu Berlin, Germany

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11.45-12.15	Bibliometrics in Practice: How to Generate Reports for Institutions Daniel Torres-Salinas, Universidad de Granada (EC3metrics, Research Evaluation Unit), Spain
12.15-13.15	Lunch break
13.15-14.00	The Application Context of Research Assessment Methodologies Henk F. Moed, Independent researcher and scientific advisor
14.00-15.30	Project Work: Part 1
15.30-16.00	Coffee break
16.00- 17.00	Project Work: Part 2
17.00-17.30	Topic Prominence in Science – a new bibliometric approach to identify high-dynamic research topics Tomasz Asmussen, Costumer Consultant, Elsevier
17.30-18.00	Dimensions – Linking Publications and Citations with Grants, Patents and Clinical Trials to Widen the View Tom Lickiss, Senior Research Consultant, ÜberResearch

Thursday, July 26th

09.00-09.45	The Application of Network Analysis in Science Studies: Common Theoretical Background for Broad Applications Bart Thijs, Centre for R&D Monitoring (ECO0M), KU Leuven, Belgium
09.45-10.30	Research Collaboration Measured by Co-Authorship Wolfgang Glänzel, Centre for R&D Monitoring (ECO0M) & Dept. MSI, KU Leuven, Belgium
10.30-11.00	Coffee break

11.00-12.30	Parallel sessions: Data Analysis using iGraph Bart Thijs, Centre for R&D Monitoring (ECOOM), KU Leuven, Belgium / Wolfgang Glänzel, Centre for R&D Monitoring (ECOOM) & Dept. MSI, KU Leuven, Belgium Data Analysis using BibExcel and Pajek Nicola De Bellis, Bibliometric Office (CSBA) – University of Modena and Reggio Emilia, Italy / Juan Gorraiz, Bibliometrics and Publication Strategies, University of Vienna, Austria
12.30-13.30	Lunch break
13.30-15.00	Project Work: Part 1
15.00- 15.30	Coffee break
15.30-17.00	Project Work: Part 2
17.00-17.30	Technology maturity – using bibliometric methods to assess technology readiness Maria de Kleijn-Lloyd, SVP Analytical Services, Elsevier
18.30-22.00	Imperial Dinner at Kunsthistorisches Museum (Art History Museum)

Friday, July 27th

Focus Topic Day: Bibliometrics & Open Access

09.00-09.45	The Different Flavours of Open Access Bernhard Schubert, Open Access Office, University of Vienna, Austria
09.45-10.30	Open Access and Publication Practices in Astronomy and Mathematics Niels Taubert, Bielefeld University, Germany
10.30-11.00	Coffee break

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11.00-11.45	Bibliometrics and Open Access Eric Archambault, 1science & Science-Metrix, Canada
11.45- 12.30	Disentangling Gold Open Access: Disciplinary and Country Effect Nicolas Robinson-Garcia, INGENIO (CSIC-UPV), Universitat Politècnica de València, Universidad de Granada (EC3metrics), Spain / Daniel Torres-Salinas, Universidad de Granada (EC3metrics, Research Evaluation Unit), Spain
12.30-13.30	Lunch break
13.30-16.00	Project Work
16.00- 16.30	Coffee break
16.30-18.00	Bibliometric Agora: Open Access Panelists: Eric Archambault, 1science & Science-Metrix, Canada / Henk F. Moed, Independent researcher and scientific advisor / Isabella Peters, Leibniz-Informationszentrum Wirtschaft (ZBW), Germany Moderation: Christian Gumpenberger, Bibliometrics and Publication Strategies, University of Vienna, Austria

Saturday, July 28th

09.00-09.45	Altmetrics: State of the Art and Future Work Isabella Peters, Leibniz-Informationszentrum Wirtschaft (ZBW), Germany
9.45-10.30	Practical Applications of Altmetrics Nicolas Robinson-Garcia, INGENIO (CSIC-UPV), Universitat Politècnica de València, Universidad de Granada (EC3metrics), Spain
10.30-11.00	Coffee break
11.00-13.00	Project Presentations and Q&A
13.00-14.00	Closing Ceremony & Farewell

abstracts

Monday, July 23rd

Bibliometrics Reviewed: History, Institutionalization, and Concepts

Stefan Hornbostel, German Centre for Higher Education Research and Science Studies (DZHW), Germany

The emergence of bibliometrics is closely linked to the growth of scientific information in the 20th century and to what de Solla Price called the evolution from “little science to big science”. Initially, bibliometrics and its early concepts were oriented towards library access, bibliographic databases, and information services. However, since the 1960s other disciplines, especially the sociology of science, inspired the development of a new and interdisciplinary understanding of bibliometrics. In the 1970s and 1980s the increasing information needs on behalf of science policymakers boosted the institutionalization of bibliometrics as an own field of research, while at the same time this new application context necessitated new concepts. Little by little, a specific bibliometric methodology aiming to be suitable for today’s applications such as formula-based funding systems, assessments, evaluations etc. came into being. The lecture will present this development process and, thereby, demonstrate common concepts of bibliometrics.

Introduction to Bibliometric Data Sources (Part 1 and Part 2)

Wolfgang Glänzel, Centre for R&D Monitoring (ECOOM) & Dept. MSI, KU Leuven, Belgium

Juan Gorraiz, Bibliometrics and Publication Strategies, University of Vienna, Austria

This talk is about the specific requirements for bibliographical data sources to be met in regard to their suitability for bibliometric application. Furthermore relevant issues like coverage, representativeness and selection criteria are considered.

Any appropriate bibliography can potentially serve as data source for bibliometric purposes, however, comparative studies and large-scale analyses require large standardized data sources like bibliographic databases.

After providing some background information, the main features of bibliographic databases are discussed with special focus on the question, which of them are useful, essential or even indispensable for bibliometric use (most databases are rather designed for information retrieval). In particular, the pros and cons of the three major multidisciplinary data sources – Web of Science, SCOPUS and Google Scholar – are discussed.

Focus points of the second part are: a) to show that the selection of the data sources will determine the outcome of your bibliometric analysis; b) how to check and enrich your data in order to extend the data pool for bibliometric analysis; and c) to consider that data sources are continuously changing

their structure (number of indexed sources). Some basic database features are also introduced exemplarily from different products. A distinction is made between subject-specific and multidisciplinary databases. In addition, subject-specific databases (e.g. "MathSciNet", "SciFinder", ADS), patent databases (e.g. "Derwent Innovations Index", Espacenet (PATSTAT)) or pilot projects for citation indexing on the web (e.g. "BASE", "CiteseerX" – all based on open access archives) are presented and examined critically regarding their data enrichment potential in bibliometric analyses. Some final recommendations on data validation, on the importance of unique identifiers and on the use of „subjective“ data sources like CRIS will close this talk.

Scientometric Indicators in Use: an Overview

Sybille Hinze, German Centre for Higher Education Research and Science Studies (DZHW), Germany

Wolfgang Glänzel, Centre for R&D Monitoring (ECOOM) & Dept. MSI, KU Leuven, Belgium

The use of scientometric indicators dates back to the 1960s and 1970s in the United States where the first Science Indicators report was published in 1973. Since then a variety of indicators emerged aiming at reflecting various aspects of science and technology and their development. The presentation will give an overview of relevant indicators and their use in science policy and related realms. The specific focus

will be on indicators used in the context of research evaluation. In particular indicators applied to measuring research performance at the various levels of aggregation i.e. the macro, meso and micro level will be introduced. A range of aspects reflecting research performance will be addressed such as research productivity and its dynamic development, the impact of research, collaboration, and thematic specialization. Options and limitations of the indicators introduced will be discussed.

Subject Classification in Bibliometrics – Theory, Approaches & Limitations

Stephan Gauch, German Centre for Higher Education Research and Science Studies (DZHW) & Humboldt Universität zu Berlin, Germany

Classifications shape the ways we perceive both the objects classified as well as differences between objects. Naturally, they shape bibliometric analyses, especially so when replication and consistency are key necessities. They also are, to no small extent, a product of discourse and therefore a special form of convention that can both be enabling as well as limiting. In the course of this session we will approach classifications from a theoretical as well as practical perspective. Among the questions addressed are "What does it mean to classify?", "How can we determine what makes a *good* classification?", "What to do if an object can be classified to multiple classes?" etc. The session aims at providing a deeper and more informed insight to participants about

what it really means to use classifications, encouraging both a critical mindset as well as providing practical advice.

Bibliometric Methods in Subject Delineation

Wolfgang Glänzel, Centre for R&D Monitoring (ECOOM) & Dept. MSI, KU Leuven, Belgium

Subject delimitation has become a central issue in so-called “domain studies”. Science policy addresses new emerging or complex interdisciplinary topics the delineation of which is particularly difficult. The delineation of these topics or domains is, on one hand, strongly related with information retrieval since often rather traditional “search strategies” using core journals, keywords and phrases can be applied but, on the other hand, goals and methods of advanced subject delineation essentially differ from those of usual retrieval.

Proper subject delineation is also necessary to find correct reference standards for benchmarking the research performance of the actors in the topic under study.

The first part of the lecture will focus traditional techniques that can easily be developed for and used in the online versions of bibliographic databases.

The second part will introduce “bibliometrics-aided” retrieval. One of the main methodological characteristics of bibliometrics-aided retrieval is that bibliometrics allows including ‘metric’ components in search strategies. In the course of the lecture it will be shown how lexical and citation-based

components can be used to gradually extend the original core (or seed) of surely relevant documents previously obtained from traditional literature searches.

The Web of Science offers the option of related records (based on bibliographic coupling) while Scopus uses keywords.

Results can be filtered by their relevance and additional related documents can be added to the core set using thresholds.

The application of direct citation links or more advanced textual similarities is again reserved for a rather small group of users with access to custom data. In this case, too, thresholds can be set to filter noise and to control precision and granularity.

The Evolution of Citation Databases with Focus on New Developments

Jeff Clovis, Clarivate Analytics

In 1955, Eugene Garfield published a paper in Science entitled “Citation Indexes for Science: A New Dimension in Documentation through Association of Ideas.” Today, Dr. Garfield stands as a pioneer in the field of bibliometrics, and his legacy of a multidisciplinary, citation database has grown over the years to encompass new technologies not envisioned 58 years ago. These new technologies have moved citation data from print to electronic format, and ultimately into a Web-based environment of hypernavigation, optimistic and context-sensitive linking, and beyond. This paper will review the way in which the citation indexes have evolved to become part of the Web of Science platform – an integrated platform

of networked resources utilized by 9,400 research libraries, government agencies and corporations worldwide. Starting with the importance of Dr. Garfield's efforts in bibliometrics that ultimately led to the development of the ISI platform, this paper will then focus on three critical areas: how the platform meets the growing need for access to multidisciplinary content in today's research environment; the development of our foundation, subject specialty and regional indexes that allow cross-content searching; and new technologies – the authentication, access, and routing management systems integrated into Web of Science.

Tuesday, July 24th

Designing Effective Queries for Document Retrieval

Stephan Gauch, German Centre for Higher Education Research and Science Studies (DZHW) & Humboldt Universität zu Berlin, Germany

The quality of bibliometric approaches, both explorative as well as evaluative, is strongly influenced by the way search queries to bibliometric databases are constructed. This becomes apparent when beginning scholars and practitioners of bibliometrics are shocked when they learn that the scientific field or topic they thought could be covered by a simple search term is far better covered by pages and pages of carefully selected and intricate combinations of search terms, journal sets and clas-

sifications. In this session we will explore good practice examples to design "effective queries". Participants will be shown how to get the most from expert knowledge, how to iteratively optimize queries, how to carefully use truncating techniques of terms to cover more ground and how to avoid pitfalls such as over-optimization or queries that are "too fuzzy around the edges".

Data Cleaning and Processing

Christine Rimmert, Institute for Interdisciplinary Studies of Science – AG Bibliometrie, Bielefeld University, Germany

The quality of bibliometric analyses is heavily depending on appropriated handling of the relevant raw data fields. Depending on the level of aggregation and the target objects under study, various issues of accuracy can come up with citation links and several data elements (document type, author, institution, country, journal, field and discipline). We will have a close look at the relevant data fields in modern citation databases like Web of Science or Scopus to see if they are "ready to use" for doing all kinds of bibliometric studies. Main problems of data quality will be shown and major types of errors and their consequences will be discussed. Standardisation, verification and the introduction of identifiers can help to overcome problems of data quality. Data processing approaches of the German competence centre for bibliometrics will be demonstrated.

Journal Impact Measures (Part 1 and Part 2)

Wolfgang Glänzel, Centre for R&D Monitoring (ECOOM) & Dept. MSI, KU Leuven, Belgium

Juan Gorraiz, Bibliometrics and Publication Strategies, University of Vienna, Austria

The seminar on impact measures will first shed light on the best known and most controversial indicator, namely Garfield's Journal Impact Factor. Its strengths and weaknesses as well as its correct use will be discussed thoroughly. Moreover the corresponding analytical tool, Thomson Reuter's Journal Citation Reports will be demonstrated.

Alternative impact measures like Eigenfactor metrics, SJR and SNIP have been introduced within the last years and will be presented in the second part of this talk to complete the picture.

Subject Normalization for Citation Analysis

Wolfgang Glänzel, Centre for R&D Monitoring (ECOOM) & Dept. MSI, KU Leuven, Belgium

Subject normalisation for citation analysis is a fundamental requirement for citation analysis in a multidisciplinary environment. Recently two fundamental approaches exist, the so-called source- and citingside normalisation, or, using another terminology, the a priori and a posteriori normalisation. Both methods will be introduced and described. Although the a priori normalisation

represents a more advanced methodology, its application is reserved for a rather small group of users. The reason is the access to and the processing of the complete database (Web of Science or SCOPUS) since in this approach citations have to be normalised before they are counted. Knowledge about this normalisation technique is, however, important because this future-oriented methodology is already applied by larger bibliometric centres. The second method is rather conservative, but can be applied by any user who has access to the online version of the Web of Science or SCOPUS. The main characteristic of a posteriori normalisation is that citation counts are normalised after counting on the basis of proper reference values. Advantages and disadvantages of both methods are discussed and examples for the second approach are calculated.

Product Presentation: InCites

Jeff Clovis, Clarivate Analytics

InCites is a citation-based evaluation tool for academic and government administrators to analyze institutional productivity and benchmark output against peers and aspirational peers in a national or international context. With customized citation data, global metrics, and multidimensional profiles on the leading research institutions, over 9,000 sites globally, you'll get comprehensive insight into your performance.

Built on the foundation of Web of Science, InCites uses the most thorough, accurate, and objective data available. In this short tutorial we will focus on a quick

tour highlighting European institutions. All attendees will receive complimentary access for the ESSS sessions.

Wednesday, July 25th Best Practices in Bibliometrics

Measuring Science: Evaluation and Mapping of Scientific Research
Ton van Raan, Centre for Science and Technology Studies (CWTS), Leiden University, The Netherlands

We present an overview of the latest developments in 'measuring science' based on bibliometric methods. Our central topic is the role of citation- and concept-networks and their combination as a natural basis for both the construction of performance indicators as well as the construction of science maps. We present real-life examples of practical applications of advanced bibliometric methods in the evaluation and mapping of universities, departments and institutes. These applications also offer individual scientists instruments to explore their own research field. We explain how cluster-based normalization is used to tackle the problem of the large differences in citation density within fields. The strategic potential of science mapping based on new bibliometric instruments such as the VoS-viewer and CitNetExplorer is shown by recent work on Sleeping Beauties. Finally we discuss the new version of the Leiden Ranking in comparison with other prominent university rankings.

Bibliometric Services at the University of Vienna

Juan Gorraiz, Bibliometrics and Publication Strategies, University of Vienna, Austria

Bibliometrics is ideal for librarians to develop and provide innovative services for both academic and administrative university staff. The Bibliometrics and Publication Strategies Department in Vienna has been implemented within the Library and Archive Services of the University of Vienna. It can serve as a role model for other academic librarians who wish to become more engaged in this field or even plan to implement according services. This presentation gives an overview of all bibliometric services offered by the department and will then focus on those related to individual evaluation and particularly to professorial appointments. The Vienna University bibliometric approach relies on a variety of basic, simple indicators and further control parameters in order to address the multi-dimensionality of the problem and to foster comprehensibility. Our "top counts approach" allows an appointment committee to pick and choose from a portfolio of indicators according to the actual strategic alignment. Furthermore, control and additional data help to understand disciplinary publication habits, to unveil concealed aspects and to identify individual publication strategies of the candidates or individual researchers to be evaluated. Bibliometrics only shines a light on quantitative aspects and should never be applied irrespective of the given qualitative context.

Policy Use of Bibliometric Evaluation and its Repercussions on the Scientific Community with Focus on Research, Technology, Patents, Development and Knowledge Transfer

Koenraad Debackere, KU Leuven, Belgium

Modern science policy firmly relies on bibliometric data & indicators to assess the scientific performance of research institutions, research groups and even individual researchers. In addition, benchmarking the scientific performance of countries and regions is another item on the agenda of evaluative science policy. During the presentation, the repercussions of this policy use of bibliometric evaluation will be dealt with along three lines of thought and reflection. First, recent trends and insights into data and indicator use for evaluative science policy will be highlighted.

Second, an overview of current policy frameworks will be presented, taking into account the recent trend to link scientific performance to so-called smart specialization policies.

Third, we will reflect upon the multifaceted impact those trends have (or may have) on the scientific community and (in the limit) the behavior of individual scientists.

Research Impact Assessment Across Domains – Combining Standards and Bibliometrics Data

Stephan Gauch, German Centre for Higher Education Research and Science Studies (DZHW) & Humboldt Universität zu Berlin, Germany

There exists a long-standing tradition of linking bibliometric data to other types of sources, e.g. patent documents to “link science to innovation”. With the advent of alternative metrics there has been a surge of such expansive activities. In some cases, unique identifiers and APIs are in place to make the life of a researcher (relatively) easy. Everything is neat and clean. At least on the surface – but that’s a different issue. In other cases, all there is is ugly, dirty and messy data – and sometimes not even that. It is these cases, a researcher needs to use a wider array of tools. But wait... there’s more. The task to unlock such new data sources is not limited to the realm of the technical. If indicators are built on top of this linked data, there remains the challenge to construct/uncover meaning and relevance of such numbers. A task as easily overlooked and neglected, as it is fundamental. In this session, you will get a walkthrough of such a challenge using the example of technical standards as new data source. There are a number of questions to the link between standards and publications: How much science is there in technical standards? Are there feedback effects to being cited in standards? Maybe you get more citations from this! What is the meaning of this type

of citation counts? Just to name a few. You will be presented with an array of tools to make your life easier, how to plan research designs beyond bibliometrics to uncover the meaning of such counts, why it is important to understand the domain-specific citation cultures and practices, typical pitfalls in opening up new data sources, and, en passant, learn something about the inner workings of technical standards and the standardisation system.

Bibliometrics in Practice: How to Generate Reports for Institutions

Daniel Torres-Salinas, *Universidad de Granada (EC3metrics, Research Evaluation Unit), Spain*

In an institutional context and at a professional level, one of our main tasks is to carry out bibliometric reports. These studies are essential because they are used by managers to make decisions (distribution of funds, recruitment of personnel, planning of research lines, etc.). In this talk we will explain how to make a global bibliometric report of an institution, we use as a case study the University of Granada. We focus on these topics: 1) General considerations: target, selection of indicators, objectives, etc.); 2) what sources of information can be used; 3) How to contextualize and interpret the indicators; 4) How to compare the results with other institutions (Benchmarking); 5) How to make graphs and tables; and 6) Dissemination of results and data.

The Application Context of Research Assessment Methodologies

Henk F. Moed, *Independent researcher and scientific advisor*

The lecture presents a series of key notions from the speaker's new monograph "Applied Evaluative Informetrics (Springer, 2017)". First, an analytical distinction is made between four domains of intellectual activity in a research assessment process: the domains of policy, evaluation, analytics, and data collection. Next, the lecture defends the idea of a multi-paradigmatic, value-free informetrics, and argues that, although evaluative assumptions ("values") on what constitutes research performance play a crucial role in research assessment, this role often remains implicit, and such values are extra-informetric, in the sense that their validity cannot be grounded in informetric research. A series of examples illustrates how the choice of indicators in an assessment process is influenced by policy objectives, and how technical indicator concepts fit into the developers' wider – social, cultural and historical – context. It is further argued that evaluative frameworks are indispensable but often missing in research assessment. Finally, the lecture critically reflects on the assumptions underlying current practices in the use of informetric indicators in research assessment, and proposes a series of alternative approaches, indicating their pros and cons.

Topic Prominence in Science – a New Bibliometric Approach to Identify High-Dynamic Research Topics

Tomasz Asmussen, Customer Consultant, Elsevier

As research is becoming increasingly interdisciplinary and international it becomes more difficult to identify existing research strength and uncover new emerging research fields with a high relevancy globally. Elsevier and SciTech Strategies have partnered to develop a scientifically founded and yet practical bibliometric approach to identify research Topics using direct citation analysis and further assigning a Prominence indicator to determine its momentum. By applying this bibliometric approach to the full Scopus data set since 1996 roughly 97,000 stable research topics have been identified and assigned a Prominence indicator by weighing 3 metrics (citation count, views count, journal impact) for papers clustered in a Topic to determine its momentum. The fact that a Topic's Prominence highly correlates with funding makes it highly relevant for research managers and researchers alike and thus Prominence provides a data-driven indication into which research topics are the best to invest time and efforts in. Topic Prominence in Science is available in SciVal and can be applied to countries, universities, researchers or groups of researchers for more than 8,500 research institutions globally to run a full research portfolio analysis, in seconds.

Dimensions – Linking Publications and Citations with Grants, Patents and Clinical Trials to Widen the View

Tom Lickiss – Senior Research Consultant, ÜberResearch

Publications and their associated citations are a good proxy to measure the impact from and within the scientific community, but this is only one facet of a much larger picture. Dimensions has been realised to address this issue, and to provide greater and more openly available insights across the research lifecycle. By integrating more content types (like grants to capture project based funding, clinical trials for translation into clinical cures, patents to provide the commercial translation of research activities and even policy documents to reflect where research results made it into policies) we can change the ways in which we access and understand the scholarly landscape. Dimensions does not just put more documents in a database, it also links them consistently together to allow a 'trajectory view' at the institutional, researcher or topic level, enabling users to gather a broader and more qualitative understanding of the associated research activity. Taking this broader approach to research information also provides the opportunity to develop new scientometric approaches, using a more multifaceted view to analyse input, results and impact from various angles. In the presentation we will explain the basic concepts and use cases of Dimensions, and discuss how researchers who are interested to work with or build on our data can do so.

Thursday, July 26th

The Application of Network Analysis in Science Studies: Common Theoretical Background for Broad Applications

Bart Thijs, Centre for R&D Monitoring (ECOOM), KU Leuven, Belgium

Network analysis in scientometrics provides a powerful set of tools and techniques to uncover the relations, structure and development among different actors in science. It is often referred to as Mapping of Science and can be applied to all entities associated with science like disciplines, journals, institutions and researchers. This lecture will focus mainly on different measures of relations between entities tackling both on the classical approaches as on the new techniques of network analysis in an application-oriented approach within a solid theoretical framework. Relations based on citations and references include bibliographic coupling, co- and cross-citation. Other direct links between entities include co-authorship, institutional collaboration or international collaboration. Also lexical approaches like co-word analysis and text mining will be tackled. Each of these measures has their own properties which can have strong implications on the applicability of the analytical techniques. In order to improve the distinctive capabilities of these measures new hybrid approaches have been proposed.

The lecture will also deal with several analytical tools and visualization techniques

that are suitable for capturing the underlying structure. Clustering techniques like k-means or Ward's hierarchical clustering are proven techniques to classify the entities modularity clustering has become a popular alternative.

Research Collaboration Measured by Co-Authorship

Wolfgang Glänzel, Centre for R&D Monitoring (ECOOM) & Dept. MSI, KU Leuven, Belgium

Co-authorship can be used as a proxy for research collaboration at higher levels of aggregation, e.g., in the case of institutional or international collaboration. But even at the level of research teams and individual scientists, co-authorship patterns reveal important information about main actors and their role in the network of scholarly communication. In the first part of the lecture the analysis of co-authorship networks at the micro, meso and macro level is described. The strength of co-authorship links among individual scientists, institutions or countries can preferably be determined using appropriate similarity measures. Co-authorship networks can readily be visualised applying suitable software that is available and free for non-commercial use. In the second part, bibliometric indicators for the analysis of research collaboration at the meso and macro level will be introduced. It will be shown how indicators and similarity measures can be calculated using the "analyse results" and "citation report" tool in the online version of the Web of Science.

Technology Maturity – Using Bibliometric Methods to Assess Technology Readiness

Maria de Kleijn-Lloyd, SVP Analytical Services, Elsevier

Governments and research funders are increasingly trying to ensure research they sponsor leads to economic impact and technology break-throughs. Instead of thinking in terms of research disciplines, they reframe the question to ‘grand challenges’ or to technologies like nanotechnologies, artificial intelligence or robotics. And on top of the usual ‘where is the excellence and who collaborates with who’, questions are asked on the maturity or technology readiness. We will present a method and case study using bibliometrics to investigate research in technologies and assess technology readiness.

Friday, July 27th

Focus Topic Day:

Bibliometrics & Open Access

The Different Flavours of Open Access

Bernhard Schubert, Open Access Office, University of Vienna, Austria

This presentation introduces the concept of Open Access to scholarly publications and the various “roads” leading towards it. We will also be looking at transformational business models from Closed to Open Access and at services institutions can offer to support this development.

Open Access and Publication Practices in Astronomy and Mathematics

Niels Taubert, Bielefeld University, Germany

In astronomy and mathematics a large share of publications is freely accessible online via disciplinary or subject-specific repositories. Referring to an empirical study of including bibliometric analysis and in-depth interviews, the contribution examines the role of self-archived manuscripts in the communication system of the two disciplines. The analysis shows that repositories act as a second channel of disseminating research in addition to journals. Moreover, it reconstructs how repositories are being used by authors and readers. In both fields authors even-handedly self-archive their manuscripts in part not only before the publication appears in a journal but even before peer review is completed. This happens for different reasons, including the improvement of accessibility, the protection of priority, and to increase the chances of getting the research published in a journal. Early self-archiving before completion of peer review de facto bypasses the evaluation procedure which is a precondition for trust in published research. Therefore, it is asked whether readers deal with such pre-prints in a specific way, taking their potential non-peer-reviewed nature into account. The reconstruction shows that the usability of self-archived manuscripts results from specific routines among the readers: They interpret contextual information of pre-prints, undertake tests of plausibility, use the author name as a proxy for trust, limit

the citation of pre-prints, and distinguish between trustworthy and non-trustworthy components of a pre-print. Thus, the routines of the readers are complementary to the routines of authors and are – to some extent – shaped by epistemic characteristics of the particular field.

Bibliometrics and Open Access

Eric Archambault, *1science & Science-Metrix, Canada*

Academics have been examining the Open Access (OA) model for scientific publications for years. Though it has been noted repeatedly that OA availability is rising steadily, current measurement is often limited by vague definitions and existing bibliographic databases. One of the challenges is to distinguish more clearly between different types of availability (e.g. gold or green), while accounting for, but not conflating, other important dimensions such as time to availability, transiency and license type. Another major challenge lies in measurement per se. Measuring open access availability can involve computing the total number of available articles and the percentage of available papers. This presentation will examine current means of retrieving open access articles (the numerator in the percentage) and the databases currently being used to count the total number of available papers (the percentage's denominator). Advocates of OA have been arguing that by increasing accessibility, OA would enhance the impact of research. This presentation will review current evidence on the OA

citation advantage including the arguments raised by its detractors.

Disentangling Gold Open Access: Disciplinary and Country Effect

Nicolas Robinson-Garcia, *INGENIO (CSIC-UPV), Universitat Politècnica de València, Spain; Universidad de Granada (EC3metrics), Spain / Daniel Torres-Salinas*, *Universidad de Granada (EC3metrics, Research Evaluation Unit), Spain*

In this seminar we will discuss current publication trends in gold Open Access (OA). The purpose is to develop a full understanding on country patterns, OA journals characteristics and citation differences between gold OA and non-gold OA publications. For this, we will first review current literature regarding Open Access and its relation with its so-called citation advantage. Starting with a chronological perspective we will describe its development, how different countries are promoting OA publishing, and its effects on the journal publishing industry. We will deepen the analysis by investigating the research output produced by different units. First, we will focus on the production of countries with a special emphasis on citation and disciplinary differences. Gold OA publishing is being encouraged in many countries as opposed to Green OA. We will discuss how this affects researchers' publication patterns and whether it ensures an alleged citation advantage as opposed to non-gold OA publications.

Saturday, July 28th

Altmetrics: State of the Art and Future Work

Isabella Peters, Leibniz-Informationszentrum Wirtschaft (ZBW), Germany

The lecture will present the current state of the art of altmetrics research and its major findings. It will particularly focus on studies on the coverage and intensity of altmetrics as well as on the theories and models trying to establish a theoretical background of altmetrics. Research gaps will be identified and current developments and initiatives that aim at bringing altmetrics into practice (e.g., NISO, EU, LIBER) will be presented.

Practical Applications of Altmetrics

Nicolas Robinson-Garcia, INGENIO (CSIC-UPV), Universitat Politècnica de València, Spain; Universidad de Granada (EC3metrics), Spain

This talk addresses practical issues, limitations and problems we might encounter when retrieving and processing altmetric data. We will explore what it is what the indicators provided by the main altmetric providers offer and how these can be used in a meaningful way to make informative and sensible analyses which offer could offer an added value to our institutions. The first part of the talk will focus on the discussion of the peculiarities and technicalities related to how altmetric data is provided to the user.

The second part will provide examples and show empirical approaches that can be applied to inform on the social media attention of researchers' activity.

lecturers

Éric Archambault

1science & Science-Metrix, Canada



Éric Archambault is CEO of 1science and Science-Metrix. He has been a passionate student, analyst, researcher and entrepreneur in science, technology, and innovation evaluation

and measurement for 30 years. Since 2014 he has been leading a software development and data science team at 1science, where he has overseen the development of 1findr, currently the world's most comprehensive curated bibliographic database of articles published in academic and scientific journals. As president of Science-Metrix between 2002 and 2015, Dr. Archambault directed S&T evaluation-, measurement- and policy-related activities, a function now held by Grégoire Côté, who co-founded the company with Éric in 2002. Éric graduated in Science, technologie et société from the Université du Québec à Montréal (UQAM) and obtained an M.Sc. in Science, Technology, and Industrialisation, and a D.Phil. in S&T Policy Studies at the Science Policy Research Unit (SPRU, University of Sussex, UK).

Tomasz Asmussen

Customer Consultant, Elsevier



Tomasz Asmussen is a Customer Consultant for Research Management solutions for the DACH region at Elsevier. In his role he is working closely with Elsevier's academic,

governmental (A&G) and corporate customers in Germany, Switzerland and Austria and supports them to leverage Elsevier's Research Intelligence solutions with its rich data assets and analytics tools to inform strategic research planning, grant applications, research evaluation and benchmarking (rankings), as well as international collaboration. Tomasz has a professional background in market and media research, business information and data analytics solutions. He has been working as an account manager and consultant with corporate, academic and governmental institutions for the past 10 years, focused on the improvement of operational steering and strategic planning through data analytics tools and custom analytics. Previous career stations include The Nielsen Company, NM Incite and IHS Markit where he was advising corporate strategy and R&D departments across EMEA, with a focus on business information and analytics solutions. Tomasz holds a M.Sc. in Sport Management degree from German Sport University Cologne (DSHS).

Nicola De Bellis

Bibliometric Office (CSBA) – University of Modena and Reggio Emilia, Italy



Graduated in philosophy at the University of Bari, Italy, De Bellis obtained a PhD in history of science in 1998 with a doctoral dissertation on Renaissance natural history. Seven years

later, that job provided the background for an Italian prize-winning manuscript on the role of bibliographic citations in the scientific communication system. Having joined a medical library in 2002, he has been working since then on the boundary line between information science, history and philosophy of science. He is currently contract professor of information science for the Department of Education and Humanities and runs a full time bibliometric office supporting research evaluation activities at the University of Modena and Reggio Emilia.

Jeff Clovis

Sr. Director, Solutions Specialists & Customer Education, North America & Europe, Clarivate Analytics



Trained as a biologist in the United States and then a Germanic language specialist and translator in the USA and Germany, Jeff Clovis has been working in the field of Information Sci-

ences for the past thirty-seven years at Clarivate Analytics (formerly ISI and Thomson Reuters). He has held a variety of positions for this period, in Editorial Development, Product Production, Business and Technology Planning, Product Development, Business Development and finally Head of Global Solutions Support & Customer Education. He was jointly responsible for: the design of the Image based editorial production system used in processing all journals, conference proceedings, and scholarly books, the development of the Web of Science Core Collection and the Derwent Innovations Index, as well as responsible for the addition and development of BIOSIS resources, CAB Abstracts from CABI Publishing and Inspec from IET. All of these were developed for the Web of Science platform.

He is currently Director, Customer Success/Education, and in this position is responsible for supporting Research & Discovery and Research Analytics platforms and custom analytics projects in North America and Europe.

Koenraad Debackere

KU Leuven, Belgium



Koenraad Debackere has been with KU Leuven since 1995. He obtained his Ph.D. in Management with an ICM-fellowship at the University of Gent after stays as an ICM-fellow and an ICRMOT research assistant at MIT Sloan School of Management. He was a Fulbright-

lecturers

Hays post-doctoral fellow at MIT in 1991-1992. In 1995 he became professor at KU Leuven. His research has focused on the area of technology and innovation management and policy, the development of indicators for measuring the linkage between science and technology, the design and use of bibliometric indicators for science policy purposes and the role of entrepreneurial universities in economic development. He is coordinator of the Centre for R&D Monitoring (ECOOM) of the Flemish government. He is also actively engaged in technology transfer activity as managing director of KU Leuven Research & Development and Chairman of the Gemma Frisius Fonds (the venture fund) of the KU Leuven.

Stephan Gauch

German Centre for Higher Education Research and Science Studies – DZHW & Humboldt Universität zu Berlin, Germany



Stephan Gauch studied social science at the University of Mannheim majoring in statistics and methods of empirical social research in fall of 2003.

From 2004 to 2008 Stephan Gauch was a researcher in the department of Innovation Systems and Policy at Fraunhofer ISI. Between 2009 and 2014 he has been working at the Berlin Technical University at the Chair of Innovation Economics. From 2012 to 2014 Stephan Gauch was affiliated to Fraunhofer FOKUS working on a number of economics- and innovation-related topics

in the ICT field such as Big and Open Data Analytics, policy analysis in the ICT sector, standardization foresight, as well as standardization strategies. Stephan Gauch finished his PHD in 2011 on the topic of the interlinkage between research and standardization and the division of labor between formal and informal standardization in ICT. His thesis was awarded the “Sonderpreis Wissenschaft 2012” of the German Institute for Standardization (DIN). Since 2014 Stephan Gauch is affiliated to DZHW and Humboldt University of Berlin. Since 2017 he is head of a research group working on reflexive bibliometrics aiming to link bibliometrics to the sociology of quantification and (e)valuation.

Daniel Hook

Managing Director, Digital Science



Daniel has been CEO of Digital Science since 2015. He previously held the role of Director of Research Metrics at Digital Science, where he was responsible for Altmetric, Figshare,

Symplectic and UberResearch. During his tenure at Digital Science Daniel has focused on strategy development for all parts of the group.

He was also responsible for creating Digital Science’s Consultancy Group, oversaw the creation of the GRID organisational identifier database, brought together the institutional sales team and served as Figshare’s COO for an 18 month period. Prior to joining Digital Science, Daniel was a founder of Symplectic

and served as its Managing Director from its foundation in 2003 until 2013. During his time at Symplectic, Daniel played an active role in the UK research community, helping to shape the research information management space through working with universities and with government. He spent significant time building Symplectic's commercial capability and took the company's products to Australia, New Zealand and the United States.

Daniel holds a PhD in Theoretical Physics from Imperial College London. He is a co-author of more than published 30 scholarly articles, reports and popular pieces as well as a book. Daniel continues to collaborate and publish research articles today. He is a Fellow of the Royal Society of Arts, a Fellow of the Institute of Physics and holds visiting positions at Imperial College London and an honorary professorship at Washington University in St Louis. Daniel serves as a board member of ORCID.

Wolfgang Glänzel

Centre for R&D Monitoring (ECOOM) & Dept. MSI, KU Leuven, Belgium



Wolfgang Glänzel is Director of the Centre for R&D Monitoring (ECOOM) and Full Professor at KU Leuven (Belgium). He is also affiliated with the Dept. Science Policy & Scien-

tometrics at the Library of the Hungarian Academy of Sciences in Budapest (Hungary). Wolfgang Glänzel studied mathematics at

the Eötvös Lorand University (ELTE) in Budapest. He holds a doctorate in mathematics from ELTE obtained in 1984 as well as a PhD in the Social Sciences obtained from Leiden University (Netherlands) in 1997. He worked about twenty years at the Library of the Hungarian Academy of Sciences before he moved to Leuven (Belgium) in 2002, where he works and lives at present. He is also Guest Professor at several Universities in China and the UK.

His research activities comprise probability theory and mathematical statistics, quantitative science studies and research policy. In the field of probability theory he has published on the characterisation of probability distributions, in quantitative science studies and research policy his research is mainly focussed on models of scientific communication, the development of scientometric indicators, the analysis of co-authorship patterns and research collaboration, the structural-cognitive mapping of science, bibliometrics-aided retrieval and the measurement of research performance at various levels of aggregation. Wolfgang Glänzel has published numerous journal articles, proceedings, and book chapters and co-authored/co-edited several books. He was Alexander von Humboldt Fellow for two years in Germany. In 1999 he received the international Derek deSolla Price Award for outstanding contributions to the quantitative studies of science.

He is Secretary-Treasurer of the International Society for Scientometrics and Informetrics (ISSI) and Editor-in-Chief of the Society's Newsletter. Wolfgang Glänzel is Editor-in-Chief of the international journal

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Scientometrics since 2014 and Academic Editor of the multidisciplinary OA journal PLoS ONE since 2013.

Juan Gorraiz

Bibliometrics and Publication Strategies, University of Vienna, Austria



Juan Gorraiz studied physics at the University of Madrid and at the University of Vienna, where he obtained his Doctor's degree. He is Head of the Bibliometrics and Publica-

tion Strategies Department of the Library and Archive Services, University of Vienna, which is specialized on supporting both researchers and decision-makers in research administration. He has been engaged in bibliometric analyses and studies since 2001. Moreover, he has been teaching information retrieval and bibliometrics at the university course „Library and Information Studies“ since 1992. Apart from his ongoing commitment to the esss he rendered outstanding services to the scientometric community as an organizer and programme chair of the „10th International Conference on Science & Technical Indicators“ 2008 in Vienna as well as an organizer of the “14th International Society of Scientometrics and Informetrics Conference” 2013 in Vienna.

Stefan Hornbostel

German Centre for Higher Education Research and Science Studies (DZHW), Germany



Prof. Dr. Stefan Hornbostel studied Social Sciences at the University of Göttingen. In 1995, he received his PhD from Freie Universität Berlin. He worked at the Universities of Kassel, Co-

logne, Jena and Dortmund, as well as at the Center of Higher Education Development (CHE – Centrum für Hochschulentwicklung). Stefan Hornbostel served as Director of the Institute for Research Information and Quality Assurance (IFQ) from 2005 to 2015. He was appointed Professor at the Humboldt-Universität zu Berlin, Department of Social Sciences (Science Studies) in 2005. Since 2016, he is head of the research area “Research System and Science Dynamics” at the German Centre for Higher Education Research and Science Studies (DZHW). He is a member of the advisory board of the Saxon State and University Library Dresden (SLUB), and member of the advisory board for the Centre for Research Quality and Policy Impact Studies (R-Quest), Oslo. His research interests lie in the field of science studies, bibliometrics, and elite sociology.

Sybille Hinze

German Centre for Higher Education
Research and Science Studies (DZHW),
Germany



Sybille Hinze graduated in 'Management of Science' from Humboldt-University, Berlin. From 1990 to 1997 she worked as a research fellow at the Fraunhofer Institute for Systems and

Innovation Research. She got her PhD from Leiden University, Centre for Science and Technology Studies (CWTS), the Netherlands in 1997. From 1997-1999 she was a postdoctoral fellow at the Research Evaluation and Policy Project, Australian National University, Canberra. From 1999 to 2008 she held a senior researcher position at Fraunhofer ISI, where she was also deputy head of the competence centre "Policy and Regions". From March 2005 to August 2006 she was seconded to the European Commission, DG Research, Unit Programming, Monitoring, and Evaluation. From August 2008 to December 2015 she was deputy director of the Institute for Research Information and Quality (iFQ) Assurance. With the merger between iFQ and the German Center for Higher education Research and Science studies (DZHW) in 2016 she became deputy director of the DZHW's Department 2 "Research System and Science Dynamics". Sybille Hinze is a member of the steering committee of the European Summer School for Scientometrics, European editor of the Journal "Science and Public Policy". In Sep-

tember 2013 she was elected as secretary of the European Network of Indicator Designers (ENID) and in November 2014 as chair of the German Competence Centre for Bibliometrics. Since March 2017 Sybille Hinze is a member of COST's Scientific Committee.

Maria de Kleijn-Lloyd

SVP Analytical Services, Elsevier



Ir. Maria de Kleijn-Lloyd MBA is Senior Vice President Analytical Services for Elsevier. In this role she is responsible for bespoke analytical services to universities, funding bodies

and governments worldwide, advising them on research performance, international collaboration, gender in research and research impact. Prior to joining Elsevier, Maria has worked for McKinsey and Company, for the Dutch government, and in the power and gas sector, in various analytical roles to combining big data to inform decisions. Maria holds a master's degree with distinction in Applied Physics from Delft University of Technology, and an MBA with distinction from Oxford University.

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Tom Lickiss

Senior Research Consultant, ÜberResearch



Tom Lickiss is Senior Research Consultant at Digital Science portfolio company ÜberResearch. Before joining ÜberResearch in 2015, Tom was a postdoc researcher in the

fields of developmental neuroscience and stem cell biology. After finishing undergraduate and Masters degrees in Neuroscience at University College London and Oxford University, he obtained his PhD from Oxford examining the development of the cerebral cortex and the role of long noncoding RNA molecules in this process. He continued this work as a postdoc before moving to Germany in 2013 to work at the Institute of Reconstructive Neurobiology in Bonn, where he explored in vitro models of cerebral cortical development using human induced pluripotent stem cells. As part of his scientific research career, Tom has published and reviewed numerous journal articles in the field of developmental neuroscience and has written and submitted grant applications to several funding bodies which are ÜberResearch development partners.

Henk F. Moed

Independent researcher and scientific advisor



Between 1981 and 2010 Henk F. Moed was a senior staff member at the Centre for Science and Technology Studies (CWTS) at Leiden University. During 2010-2014 he was a senior

scientific advisor with Elsevier, Amsterdam, The Netherlands. He obtained a Ph.D. degree in Science Studies at the University of Leiden in 1989. He has been active in numerous research topics, including the development of bibliometric databases and indicators for the assessment of research performance and scholarly journals; the effects of 'Open Access' upon research impact; 'usage' (downloading) behaviour; development of a new journal impact measure (SNIP); bibliometric studies of international scientific migration and collaboration; comparisons of Web of Science, Scopus and Google Scholar; multi-dimensional assessment of research impact; the potential of altmetrics; and ontology-based bibliometric data management. He published over 100 research articles in international, peer reviewed journals, and is editorial board member of several journals in his field. He is a winner of the Derek de Solta Price Award in 1999. Jointly with W. Glanzel and U. Schmoch, he edited in 2004 the Handbook on Quantitative Science and Technology Research (Kluwer, 800 pp), and published in 2005 a monograph, Citation Analysis in

Research Evaluation (Springer, 346 pp.), which is one of the very few textbooks in the field, and in 2017 a second monograph, Applied Evaluative Informetrics (Springer, 312 pp.) He is currently an independent scientific advisor, and visiting professor at the Sapienza University of Rome and University of Granada.

Isabella Peters

Leibniz-Informationszentrum Wirtschaft (ZBW), Germany



Isabella Peters is Professor of Web Science at ZBW Leibniz Information Centre for Economics and head of the Web Science research group at Kiel University. She received her

PhD in Information Science at the Heinrich Heine University in Düsseldorf. Her research focusses on user-generated content and its potential for scholarly communication on the social web, e.g. altmetrics. Professor Peters is active in the Association for Information Science and Technology (in particular European Chapter and SIGMetrics) and in the Leibniz Research Alliance Science 2.0. She was member of the European Expert Group on Altmetrics and she co-chaired the LIBER Working Group on Metrics.

Christine Rimmert

Institute for Interdisciplinary Studies of Science / AG Bibliometrie, Bielefeld University, Germany

Christine Rimmert studied Mathematics and Psychology at Bielefeld University. In 2010 she joined the project team working on bibliometrics at Bielefeld University (AG Bibliometrie, Institute for Interdisciplinary Studies of Science – ISOS). She is currently working on clearing and processing tasks concerning data in citation databases.

Nicolas Robinson-Garcia

INGENIO (CSIC-UPV), Universitat Politècnica de València, Universidad de Granada (EC3metrics), Spain



Nicolas Robinson-Garcia is a researcher in the field of bibliometrics and research evaluation. He currently holds a postdoctoral grant at INGENIO (CSIC-UPV), Universitat Politècnica de València. He has also worked at the School of Public Policy at Georgia Institute of Technology as a postdoctoral researcher. He holds a PhD on Social Sciences at the University of Granada. He collaborates with EC3metrics SL as an external independent consultant. He has published over 40 articles and book chapters in the field of bibliometrics and research evaluation, including in elite journals like Nature, Science or Plos One. His research interests are 1) the analysis

lecturers

of altmetrics to track societal engagement of scientists, the internationalization of the scientific workforce and its effect on national research systems, and 3) the misuse of bibliometric indicators in research evaluation with a special focus on the case of Spain.

Bernhard Schubert

Open Access Office, University of Vienna, Austria



Bernhard Schubert holds degrees in English and German Literature and in Library and Information Studies from the University of Vienna. He joined the Vienna University Library

in 2011 in a metadata entry capacity. Apart from metadata management he also teaches cataloguing theory and practice. In 2015 he was asked to join the Open Access Office part-time, where he is responsible for the publishing fund, the institutional repository u:scholar as well as the local Open Journal Systems installation.

Niels Taubert

Bielefeld University, Germany



Head of the working group bibliometrics (I2SOS | University Library, Bielefeld University) 2017 – present; Project leader FID Sociology (University of Cologne) 2016; Scientific Coordina-

tor of the working group ‘Future of scholarly publishing’ (Berlin-Brandenburg-Academy of Science) 2013-2015; Project leader “Open Access in Astronomy and Mathematics” (DFG TA-720 1/1, IWT, Bielefeld University) 2009–2012; Researcher (IWT, Bielefeld University) 2004–2008; Stipendiary (DFG Graduate School “Genese, Strukturen und Folgen von Wissenschaft und Technik” Bielefeld University) 2000–2003

Bart Thijs

Centre for R&D Monitoring (ECO0M), KU Leuven, Belgium



Bart Thijs is a research expert in bibliometrics at the Centre for R&D Monitoring (ECO0M) at KU Leuven. His main research focusses on mapping of science through the application of network

analysis techniques. In 1999 he graduated at the same university in Psychology with a specialization in Statistics. He spent several years in industry as a statistical consultant, there he gained experience in the application of automated data analysis. In 2002 he joined the newly created policy research centre on R&D statistics at the KU Leuven. In 2010 he received his PhD from the Leiden University. He co-authored more than 60 journal and conference contributions on a broad range of topics in scientometrics. Along his research he also teaches a course on large scale network analysis at the Master of Artificial Intelligence program at KU Leuven.

Daniel Torres-Salinas

Universidad de Granada (EC3metrics, Research Evaluation Unit), Spain



Daniel Torres-Salinas holds a PhD in scientific documentation. He currently works as bibliometrician at the Research Evaluation Unit (University of Granada). He is researcher

in EC3 Research Group (Evaluación de la Ciencia y de la Comunicación Científica) about bibliometric topics. Also he is CEO of the EC3metrics spin-off and coordinator of the Digital Science Section in Medialab UGR. He is co-author of evaluation tools such as Científicacvn, Rankings I-UGR de Universidades, Clasificación CIRC, Bipublishers o UGRinvestiga. He have published more than 60 scientific publications in journals indexed in the Web of Science (Clarivate Analytics). He teaches courses on scholarly communication, altmetrics, scientific career, etc... He is teacher in the European Summer School for Scientometrics (ESSS) and in the Master in Science Communication at the University of Granada.

Ton van Raan

Centre for Science and Technology Studies (CWTS), Leiden University, The Netherlands



Ton (Anthony F.J.) van Raan is Professor of Quantitative Studies of Science. Founder and until 2010 Director of the Centre for Science and Technology Studies (CWTS), Leiden University,

Netherlands. After his retirement as Director of CWTS, he remained research professor. He studied mathematics, physics and astronomy at Utrecht University. PhD in Physics, Utrecht (1973). Post-doctoral fellow (1973-1977) at the University of Bielefeld, visiting scientist in the US, UK, and France. Work in atomic physics, laser-physics, astrophysics, and in science policy and research management. From 1977 research fellow physics in Leiden, in 1985 'field switch' from physics to science and technology studies, 1991 Professor. His research focuses on design, construction and application of quantitative indicators of important aspects of scientific research and on mapping of research fields. Long standing and broad experience in the practical application of bibliometric methods in contract research for governments, the European Commission, research organizations, universities and research institutions all over the world, and the business sector, particularly publishers. In 1995 he received together with the American sociologist Robert K. Merton, the Derek de Solla Price Award, the highest international award in the field of quantitative studies of science. Main research interests:

social events

application of bibliometric indicators in research evaluation; science as a self-organizing cognitive ecosystem, statistical and in particular scaling properties of bibliometric indicators, ranking and benchmarking of universities, mapping of science. Next to research he set up successful international teaching activities such as the CWTS Graduate Course on Measuring Science. Prof. van Raan set up a small spin-off company for advice on research evaluation and science policy issues. From 2013 he is adviser of the Netherlands Minister of Internal Affairs on urban policy of knowledge-intensive cities. In 2014-2015 he was adviser of the European Research Council (ERC) in the Expert Group for Program Monitoring and Evaluation. He published (as author and co-author) around thirty articles in physics and two hundred in science and technology studies. He is editor of the Handbook of Quantitative Studies of Science and Technology (Elsevier) and member of the editorial board of the international journals *Scientometrics*, *Research Evaluation*, and *Journal of Informetrics*. In 2014 he was listed amongst the Thomson Reuters Highly Cited Scientists. On the occasion of his retirement as CWTS director he was awarded by the Queen of the Netherlands with the royal distinction of Knight in the Order of the Dutch Lion.



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Tuesday, July 24th **Vienna Ring Tram Tour**

The Vienna Ring is an Austrian World Heritage Site. The majestic boulevard was laid out in the mid-19th century around the centre of the city, replacing the old city wall and the glacis. Ornate buildings such as the state opera, parliament buildings, city hall, Burgtheater, stock exchange and numerous palaces were erected along the resulting boulevard. All of these sights can be viewed from the Vienna Ring Tram, irrespective of the weather. Explanations in English. Drinks & Snacks will be served.

Meeting Point:
Schwedenplatz
18.00–20.00
Price: 25 Euro



Thursday, July 26th
Imperial Dinner at Kunsthistorisches
Museum (Art History Museum)

The Kunsthistorisches Museum (Art History Museum) was built in 1891 near the Imperial Palace to house the extensive collections of the imperial family. With its vast array of eminent works and the largest Bruegel collection, it is considered one of the most eminent museums in the world. Located at the heart of the Kunsthistorisches Museum, the Cupola Hall on the first floor is the architectural highlight of the magnificent building. It is decorated with precious materials, differently coloured types of granite and marble, and outstanding stucco work. Enjoy a whole range of delicacies from an extensive buffet and stroll through the unique rooms of the museum as you savour the opportunity to view one of the most important collections in the world. Your table always remains reserved exclusively for you.



Kunsthistorisches Museum Wien
Maria-Theresien-Platz
1010 Vienna
18.30–22.00
Price: 70 Euro

location information

A

Lectures & Project Work

University of Vienna

Faculty of Business, Economics and Statistics

Oskar-Morgenstern-Platz 1
1090 Vienna

Entrance: Türkenstraße or Berggasse

B

Lectures

Sky Lounge

DG (12th floor/top floor)

C

Project Work

PC 02 & PC 03

1. Kellergeschoss / 1st basement

How to get there

Subway

U2, U4 (Schottenring)

U4 (Roßauer Lände)

Tramway

D (Schlickgasse)

31 (Schottenring)

71, 1 (Börse)

Social Events

D

Meeting Point Vienna Ring Tram Tour

Tuesday, July 24th

18.00

Schwedenplatz

1010 Vienna

E

**Imperial Dinner at Kunsthistorisches
Museum (Art History Museum)**

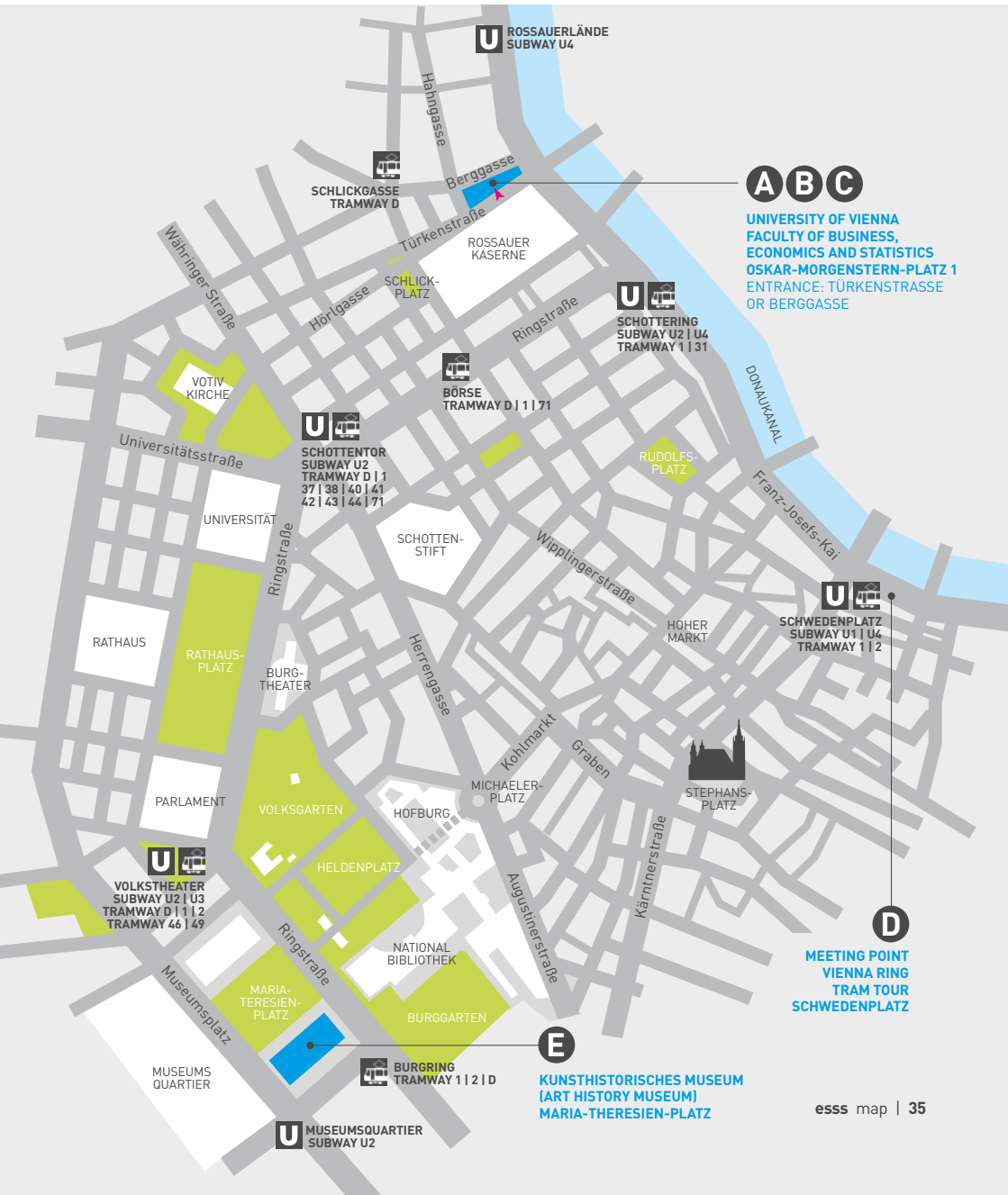
Thursday, July 26th

18.30

Maria-Theresien-Platz

1010 Vienna

map



A B C

UNIVERSITY OF VIENNA
FACULTY OF BUSINESS,
ECONOMICS AND STATISTICS
OSKAR-MORGENSTERN-PLATZ 1
ENTRANCE: TÜRKENSTRASSE
OR BERGGASSE

D

MEETING POINT
VIENNA RING
TRAM TOUR
SCHWEDENPLATZ

E

KUNSTHISTORISCHES MUSEUM
(ART HISTORY MUSEUM)
MARIA-TERESIEN-PLATZ



esss | European Summer
School for Scientometrics
Boltzmannngasse 5
A-1090 Vienna | Austria
T: +43-1-4277-276 19
F: +43-1-4277-9 276
office@scientometrics-school.eu
<http://www.scientometrics-school.eu>



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www.scientometrics-school.eu