



SEPTEMBER 17-22

# 2017 BERLIN

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for scientometrics

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**programme**

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## partners



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## programme

### Sunday, September 17th

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<b>11.00-12.15</b>	<b>Bibliometric Crash Course</b> Wolfgang Glänzel, Centre for R&D Monitoring (ECO0M), KU Leuven, Belgium / Juan Gorraiz, Bibliometrics and Publication Strategies, University of Vienna, Austria / Sybille Hinze, German Centre for Higher Education Research and Science Studies (DZHW), Germany / Nicolas Robinson-Garcia, Georgia Institute of Technology (School of Public Policy), USA, Universidad de Granada (EC3metrics), Spain
<b>12.15-13.00</b>	<b>Introduction to Bibliometric Data Sources</b> Wolfgang Glänzel, Centre for R&D Monitoring (ECO0M), KU Leuven, Belgium / Juan Gorraiz, Bibliometrics and Publication Strategies, University of Vienna, Austria
<b>13.00-14.00</b>	<b>Lunch break</b>
<b>14.00-15.00</b>	<b>Tutorial</b> <b>Web of Science Core Collection and Platform / InCites B&amp;A and Journal &amp; Highly Cited Research</b> Tihomir Tsenkulovski, Strategic Business Manager, Clarivate Analytics
<b>15.00-16.00</b>	<b>Tutorial</b> <b>Scopus: Elsevier's A&amp;I Database and its Use for Researchers and Research Offices</b> Tomasz Asmussen, Customer Consultant, Research Management, Elsevier
<b>16.00-16.30</b>	<b>Product Presentation</b> <b>SciVal: Elsevier's Advanced Data Analytics Solution to Measure, Benchmark and Visualize Research Performance and Trends</b> Tomasz Asmussen, Customer Consultant, Research Management, Elsevier
<b>16.30-17.30</b>	<b>Welcome reception</b>

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## Monday, September 18th

09.00-09.05	<b>Welcome and Opening Remarks</b>
09.05-09.45	<b>Bibliometrics Reviewed: History, Institutionalization, and Concepts</b> Stefan Hornbostel, German Centre for Higher Education Research and Science Studies (DZHW), Germany
09.45-10.30	<b>Scientometric Indicators in Use: an Overview</b> Sybille Hinze, German Centre for Higher Education Research and Science Studies (DZHW), Germany / Wolfgang Glänzel, Centre for R&D Monitoring (ECOOM), KU Leuven, Belgium
10.30-11.00	<b>Coffee break</b>
11.00-11.45	<b>Subject Classification in Bibliometrics – Theory, Approaches &amp; Limitations</b> Stephan Gauch, German Centre for Higher Education Research and Science Studies (DZHW) & Humboldt Universität zu Berlin, Germany
11.45-12.30	<b>Bibliometrics from the Perspective of a University</b> Juan Gorraiz, Bibliometrics and Publication Strategies, University of Vienna, Austria
12.30-13.30	<b>Lunch break</b>
13.30-14.15	<b>Policy Use of Bibliometric Evaluation and its Repercussions on the Scientific Community with Focus on Research, Technology, Patents, Development and Knowledge Transfer</b> Koenraad Debackere, KU Leuven, Belgium
14.15-15.30	<b>The Application Context of Research Assessment Methodologies</b> Jonathan Adams, Digital Science, UK
15.30-16.00	<b>Coffee break</b>
16.00-16.45	<b>Bibliometrics and Open Access</b> Eric Archambault, 1science & Science-Metrix, Canada

16.45- 17.15	<b>Product Presentation</b> <b>2017: Metadata, Breadth, Depth &amp; New Directions with Clarivate Analytics</b> Stephane Jouanin, Solutions Specialist, Scientific & Scholarly Research, Clarivate Analytics
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## Tuesday, September 19th

09.00-09.45	<b>Designing Effective Queries for Document Retrieval</b> Stephan Gauch, German Centre for Higher Education Research and Science Studies (DZHW) & Humboldt Universität zu Berlin, Germany
09.45-10.30	<b>Data Cleaning and Processing</b> Christine Rimmert, Institute for Interdisciplinary Studies of Science – AG Bibliometrie, Bielefeld University, Germany
10.30-11.00	<b>Coffee break</b>
11.00-11.45	<b>Subject Normalization for Citation Analysis</b> Wolfgang Glänzel, Centre for R&D Monitoring (ECOOM), KU Leuven, Belgium
11.45-12.30	<b>Journal Impact Measures</b> Wolfgang Glänzel, Centre for R&D Monitoring (ECOOM), KU Leuven, Belgium / Juan Gorraiz, Bibliometrics and Publication Strategies, University of Vienna, Austria
12.30-13.30	<b>Lunch break</b>
13.30-15.00	<b>Exercises, Project Work</b>
15.00-15.30	<b>Coffee break</b>
15.30- 17.00	<b>Exercises, Project Work</b>
18.00-20.00	<b>Social event: Street Art Tour</b> Meeting Point: Panoramastraße 1 A

## Wednesday, September 20th

09.00-09.45	<b>The Application of Network Analysis in Science Studies: Common Theoretical Background for Broad Applications</b> Bart Thijs, Centre for R&D Monitoring (ECO0M), Dept MSI, KU Leuven, Belgium
09.45-10.30	<b>Research Collaboration Measured by Co-Authorship</b> Wolfgang Glänzel, Centre for R&D Monitoring (ECO0M), KU Leuven, Belgium
10.30-11.00	<b>Coffee break</b>
11.00-12.30	Parallel sessions: <b>Data Analysis using iGraph</b> Bart Thijs, Centre for R&D Monitoring (ECO0M), Dept MSI, KU Leuven, Belgium / Wolfgang Glänzel, Centre for R&D Monitoring (ECO0M), KU Leuven, Belgium <b>Data Analysis using BibExcel and Pajek</b> Juan Gorraiz, Bibliometrics and Publication Strategies, University of Vienna, Austria / Nicola De Bellis, Bibliometric Office (CSBA) – University of Modena and Reggio Emilia, Italy
12.30-13.30	<b>Lunch break</b>
13.30-15.00	<b>Exercises, Project Work</b>
15.00- 15.30	<b>Coffee break</b>
15.30-17.00	<b>Exercises, Project Work</b>
17.00-17.30	<b>Product Presentation</b> <b>Modern Impact Metrics for the Evaluation of Research Output</b> Christina Lohr, Product Manager Research Metrics – Elsevier

## Thursday, September 21st

### Focus Topic Day: Identification of Research Focuses. National & Institutional Profiles and Strategic Partnerships

09.00-09.45	<b>What is a “Research Focus” and How to Foster it</b> David Müller, Federal Ministry of Science, Research and Economy, Austria
09.45-10.30	<b>Academic Profile, Network and Collaboration Analysis: Use Cases for the University</b> Jürgen Wastl, Head of Research Information, University of Cambridge, UK
10.30-11.00	<b>Coffee break</b>
11.00-11.45	<b>Measuring Science: Evaluation and Mapping of Scientific Research</b> Ton van Raan, Centre for Science and Technology Studies (CWTS), Leiden University, The Netherlands
11.45- 12.30	<b>Bibliometric Methods in Subject Delineation</b> Wolfgang Glänzel, Centre for R&D Monitoring (ECO0M), KU Leuven, Belgium / Bart Thijs, Centre for R&D Monitoring (ECO0M), Dept MSI, KU Leuven, Belgium
12.30-13.30	<b>Lunch break</b>
13.30- 14.15	<b>Bibliometric Solutions for Identifying Potential Collaborators</b> Nicolas Robinson-Garcia, Georgia Institute of Technology (School of Public Policy), USA, Universidad de Granada (EC3metrics), Spain / Daniel Torres-Salinas, Universidad de Navarra and Universidad de Granada (EC3metrics & Medialab UGR), Spain
14.15-16.00	<b>Exercises, Project Work</b>
16.00- 16.30	<b>Coffee break</b>

## programme

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**16.30-18.00** **Bibliometric Agora: Identification of Research Focuses**  
Panelists: Juergen Wastl, University of Cambridge, UK / David Müller, Federal Ministry of Science, Research and Economy, Austria / Peter A. Frensch, Vice President for Research, Humboldt-Universität zu Berlin, Germany  
Moderation: Stefan Hornbostel, German Centre for Higher Education Research and Science Studies (DZHW), Germany

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**19.00-23.00** **Social Event: Conference Dinner**  
TorEins, Möckernstraße 26

## Friday, September 22nd

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**09.00-09.45** **The Dawn of a New Metrics Era**  
Juan Gorraiz, Bibliometrics and Publication Strategies, University of Vienna, Austria

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**9.45-10.30** **Altmetrics: State of the Art and Future Work**  
Isabella Peters, Leibniz-Informationszentrum Wirtschaft (ZBW), Germany

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**10.30-11.00** **Coffee break**

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**11.00-12.30** **Exercises, Project Work**

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**12.30- 13.30** **Lunch break**

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**13.30-15.00** **Project Presentations**

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**15.00- 16.00** **Coffee, Q&A, Farewell**

## abstracts

### Sunday, September 17th

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#### **Bibliometric Crash Course**

**Wolfgang Glänzel**, Centre for R&D Monitoring (ECOOM), KU Leuven, Belgium / **Juan Gorraiz**, Bibliometrics Department, University of Vienna, Austria / **Sybille Hinze**, Institute for Research Information and Quality Assurance (iFQ), Germany / **Nicolas Robinson-Garcia**, Georgia Institute of Technology (School of Public Policy), USA, Universidad de Granada (EC3metrics), Spain

Introduction to basic bibliometric terminology, concepts and data sources for participants who are short on experience in the field.

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#### **Introduction to Bibliometric Data Sources**

**Wolfgang Glänzel**, Centre for R&D Monitoring (ECOOM), 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 this talk some basic database features are introduced exemplarily from different products. A distinction is made between subject-specific and multidisciplinary databases. In particular, the pros and cons of the three major multidisciplinary data sources – Web of Science, SCOPUS and Google Scholar – are discussed. In addition, subject-specific databases (e.g. “MathSciNet”, “SciFinder”), 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.

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#### **Web of Science Core Collection and Platform / InCites B&A and Journal & Highly Cited Research**

**Tihomir Tsenkulovski**, Strategic Business Manager, Clarivate Analytics

The “Web of Science” universe, which originated over 60 years ago with the launch of Dr. Eugene Garfield’s Science Citation Index, is nowadays considered the gold standard for citation indexing, thanks to its high selectivity and comprehensive coverage. Since its inception, this citation universe has been rapidly expanding, and the “Web of Science” has evolved into an entire ecosystem of databases and useful tools. Its powerful

capabilities allow you to search across more than 1 billion cited references and over 123 million records of curated research content spanning more than a century of science. Citations represent intrinsic intellectual links among a variety of content types, disciplines, and data sources, and their meticulous capture enables both insightful discovery and sound analytics. In this session the latest enhancements to the Web of Science platform and the expansion of coverage via the Emerging Sources Citation Index [ESCI] as well as the new partnerships with Google Scholar, Altmetrics, and Researchfish will be presented. Using a relevant case study, participants will learn how to find the leading institutions and authors in any of over 250 disciplines in the “Web of Science Core Collection” with a view to identifying potential collaborators, how to explore the entire history of a research topic, how to retrieve the entire research output of an author or an institution and analyse it using a Citation Report, and how to make use of the universe of cited references to discover relevant research and study the impact that an original work has had. Following a typical workflow, participants will also learn how to export bibliographic data in a variety of formats and to various destinations, including “ResearcherID” and “ORCID” - tools intended to facilitate the disambiguation of author names and increase the visibility of an author’s accomplishments and accelerate collaborations; “EndNote” – a tool for publishing and managing bibliographies, citations and references; and “InCites” – a flexible, citation-based research analytics tool that enables the evaluation of the

research output and impact of different entities using a range of indicators. Finally, this session will provide practical knowledge about finding the most prestigious journals in the “Journal Citation Reports” on the basis of their “Impact Factor” and other metrics, and to explore the most influential authors, institutions and emerging research trends based on highly-cited papers in the “Essential Science Indicators”.

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**Scopus: Elsevier’s A&I Database and its Use for Researchers and Research Offices**  
[Tomasz Asmussen, Customer Consultant, Research Management, Elsevier](#)

In this lecture the latest enhancements of Scopus, world’s most comprehensive abstract and citation database, will be presented, including the continuous expansion of the coverage of citation data and peer-reviewed content. Special focus will be on the profiling of institutions (affiliations) and researchers (authors) by extensive Author search, Affiliation search and author-affiliation features. This lecture will also offer the opportunity to elaborate on the specifics of using Scopus as a source of bibliometric data and on any specific questions the participants may have.

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**SciVal: Elsevier’s Advanced Data Analytics Solution to Measure, Benchmark and Visualize Research Performance and Trends**  
[Tomasz Asmussen, Customer Consultant, Research Management, Elsevier](#)

This presentation will provide an overview of SciVal, Elsevier’s advanced data analytics solution, its analytical capabilities and variety of metrics to evaluate international research institutions’ profiles, benchmark research output, analyse international academic and academic-corporate collaboration and identify new research trends and topics. Further it will be demonstrated how over 30 metrics, a dynamic selection of researcher, institutions or research areas and a variety of visualizations can be used to improve research management, benchmarking and international collaboration.

## Monday, September 18th

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**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.

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### 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), 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 indicators and their use in science policy making. 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.

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### 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.

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### Bibliometrics from the Perspective of a University

**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.

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### 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 behaviour of individual scientists.

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### The Application Context of Research Assessment Methodologies

[Jonathan Adams](#), [Digital Science](#), UK

A research assessment method must be based on an identifiable relationship between the data used and the target of the assessment. In many instances this is implied, and the relationship may reasonably be assumed, but an explicit statement is missing. Making the relationship explicit is also valuable because in doing so it may become clear that the data to be used are only indirectly linked to the target. Any one piece of research has many such components (e.g. people, objectives, activity, outputs, impacts). The metadata associated with these are used to create proxy indicators - as a more objective substitute for subjective observer judgment - that are inferred to describe the nature of the research itself. Each proxy indicator delivers different insights about the nature of the research.

An example will be discussed in the context of assessing 'interdisciplinary' research (IDR). Multiple concepts and imprecise definitions of IDR challenge its objective identification. Most observers are imprecise about the aspect (or component) to which they refer. In a project for the UK Research Councils, we found that, under analysis, the same project may be indexed as interdisciplinary for one parameter (say, departmental affiliations) but not for another (say, diversity of references). The spread of indices we evaluated delivered results that were inconsistent, and sometimes contradictory. Variance depended on both the specific dataset and

the application of specific methodology. It is essential to consider a framework for analysis, drawing on multiple indicators, rather than expecting any simplistic index to produce an informative outcome on its own.

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### Bibliometrics and Open Access

[Eric Archambault](#), [1science & Science-Metrix](#), Canada

The Open Access (OA) model for scientific publications has been examined for years by academics who have argued that it presents advantages in increasing accessibility and, consequently, in increasing the impact of papers. It has been noted that OA availability has increased steadily over the years. However, current measurement has seriously underestimated the proportion of OA peer reviewed articles. Therefore, it is necessary to develop new measurement methods. One challenge is to distinguish more clearly between Gold OA, Hybrid OA and non-fully Gold journals, and self-archiving ('Green OA'). This presentation examines the results of recent studies assessing the free availability of scholarly publications during different time periods and the proportion of Open Access Papers published in peer-reviewed journals at different levels. Different types of growth in freely available papers have been identified and analysed.

In conclusion, best practices for institutional repository management will be mentioned and opportunities and challenges faced by the OA model will be examined.

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### 2017: Metadata, Breadth, Depth & New Directions with Clarivate Analytics

[Stephane Jouanin](#), [Solutions Specialist](#), [Scientific & Scholarly Research](#), [Clarivate Analytics](#)

Collaboration and impact: Using the breadth and depth of Web of Science/Incites metadata to identify new European partners leading to impactful collaborations in specific disciplines - finding the rising stars and the most suitable institutions in order to boost ranking and funding.

## Tuesday, September 19th

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### 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 classifications. 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".



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### 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.

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### Subject Normalization for Citation Analysis

**Wolfgang Glänzel**, Centre for R&D Monitoring (ECOOM), 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.

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### Journal Impact Measures

**Wolfgang Glänzel**, Centre for R&D Monitoring (ECOOM), 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 recent years and will be presented to complete the picture. The theoretically imparted knowledge will finally be consolidated in practical exercises.

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## Wednesday, September 20th

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

**Bart Thijs**, Centre for R&D Monitoring (ECOOM), Dept MSI, 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.

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### Research Collaboration Measured by Co-Authorship

**Wolfgang Glänzel**, Centre for R&D Monitoring (ECOOM), 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.

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### Modern Impact Metrics for the Evaluation of Research Output

**Christina Lohr**, Product Manager Research Metrics – Elsevier

As research output and research sharing have moved from print to online, the ecosystem of tools to quantify engagement with and impact of these outputs has evolved as well. Research outputs now include more than published articles: e.g. research data, software code, books and book chapters or conference presentations. Interactions with these outputs go far beyond traditional citations. People share them online, bookmark them, download them, tweet about them and more. While citation metrics are still very important, with an average of 3-5 years to gather a bulk of citations this metric only provides a long-term view of the impact of a researcher's output. Especially early career researchers need more ways to tell the story of the reach and impact of their research, specifically within the first 12 months of creation. Modern metrics can fill that gap. Plum Analytics provides research metrics that measure awareness and interest before citation counts occur, and therewith tell the stories of research from the beginning. In February this year, Plum Analytics became part of the Elsevier portfolio. This presentation will focus on how Plum Analytics metrics are incorporated to enhance Elsevier products. Amongst others:

- The types of information that can be gathered
- How this information is categorized
- Incorporation of metrics into research products
- The advantages to researchers
- And more

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## Thursday, September 21st

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### What is a "Research Focus" And How to Foster it

**David Müller**, Federal Ministry of Science, Research and Economy, Austria

The question of identifying research focuses has recently become an institutional, if not a national one, and more and more funding opportunities and decisions (intramural or on a national level) take into account "institutional profiles" of individual research units. This talk is about the role and agenda of the government as one of the driving forces and the primary source of funds within this development and its relationship to predominantly autonomous universities, as is the case in Austria. In this perspective, institutional research focuses cannot be seen merely as the collectivization of individual research interests but as a management tool on both the institutional and the governmental level. Within this context, bibliometrics is a means which can help make informed decisions, but it also comes at a price and its secondary effects and limitations have to come yet again under close scrutiny. Is it the right tool to further research and innovation and if not, what is? And what do we do in the meantime?

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### Academic Profile, Network and Collaboration Analysis: Use Cases for the University

**Jürgen Wastl**, University of Cambridge, UK

Recent years saw the emergence of research information systems (RIS) in University IT portfolios. The increasing number of local RIS show the need for the institutions to provide tools for its academic and administrative staff as well as for senior management for making strategic decision or complying with reporting requirements. This seminar lecture focuses on trends and challenges in managing implementations of RIS from an institutional view: Data curation and data quality issues form the basis of the quest for a fit-for-purpose, efficient and sustainable RIS. Examples based around interconnectivity will exploit the application of data standards to increase efficiency and sustainability in research information matters. Previously used for retrospective mandatory reporting requirements (e.g. peer review evaluation in REF, funder post-award reports), RIS expand to more than that: Academic Profiles, network and collaboration analysis form part of latest developments to futureproof the University RIS to become a pro-active tool used by academics in their day-to-day business.

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### 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 with a focus on 'responsible metrics'. These applications also offer individual scientists instruments to explore their own research field. We show how cluster-based normalization is used to tackle the problem of the large differences in citation density within fields. The strong strategic potential of science mapping based on new bibliometric instruments such as the VoS-viewer and CitNetExplorer is shown by recent work on the study of technology-relevant publications. We will also discuss the new version of the Leiden Ranking in comparison with other prominent university rankings.

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### Bibliometric Methods for Subject Delineation

**Wolfgang Glänzel**, Centre for R&D Monitoring (ECOOM), KU Leuven, Belgium / **Bart Thijs**, 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.

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### Bibliometric Solutions for Identifying Potential Collaborators

**Nicolas Robinson-Garcia**, Georgia Institute of Technology (School of Public Policy), USA, **Universidad de Granada (EC3metrics)**, Spain / **Daniel Torres-Salinas**, **Universidad de Navarra and Universidad de Granada (EC3metrics & Medialab UGR)**, Spain

Bibliometric indicators and methodologies are commonly used for benchmarking institutions and individuals, and analysing their research performance. Their potential for identifying partners and promoting collaboration is many times overseen by research institutions. In this presentation we will discuss different indicators and methodologies that can be used to spot institutions, research groups and individuals working on similar research fronts. By using different visualization techniques, we will provide examples on how to present these data in an appealing way which can inform university and research managers. These types of analyses are useful when searching for potential partners or designing strategies to establish scientific collaboration networks.

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## Friday, September 22nd

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### The Dawn of a New Metrics Era

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

It is impossible to ignore the omnipresent and substantial influence of social media on our daily life activities, which also increasingly calls for changes in scientific communication processes. This is certainly a new challenge for scientists, librarians and research administrators alike. This talk provides general background information, a historical overview as well as a critical discussion about the relevance of new metrics in comparison to traditional citation metrics. It points out the diversity, heterogeneity as well as the shortcomings of these new metrics and will address the lacking standardization, which is a critical issue for the acceptance within the scientific community. Furthermore, selected results, comparisons and models will be presented and discussed, like a potential usefulness of new metrics for assessing research "impact" in the humanities. Finally, it will be debated how scientists can cope with this new development, particularly to which degree they are obliged to actively participate in the self-promotion game and how this would change their traditional role as a scientist.

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### 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.

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### Jonathan Adams

Digital Science, UK



Jonathan Adams is Chief Scientist at Digital Science & Research Ltd, a Holtzbrinck Group company and sister-company to Nature Publishing Group. He is a Visiting Professor at King's

College London, Policy Institute. Jonathan was the lead founder of Evidence Ltd, and Director of Research Evaluation for Thomson Reuters until March 2013. Evidence carried out research evaluation for agencies and institutions in the UK, elsewhere in Europe, Brazil, Australia, China and India. Jonathan led the New Zealand government's 2008 review of research evaluation and was a member of the Australian Research Council (ARC) indicators development groups for Excellence in Research for Australia (2009) and impact and engagement (2016). In 2004 he chaired the European Commission Monitoring Committee for the Evaluation of Framework Programme 6 (FP6); and, in 2006, he chaired the Monitoring Group of the European Research Fund for Coal & Steel. He has worked at King's College London (1979-1980), University of Newcastle upon Tyne (1980-1983), University of Leeds (1983-1989) and Imperial College London (1989-1992), was a member of the science policy staff of the UK Advisory Board for the Research Councils (1989-1992) and Leeds University's Director of Research Strategy (1993-1997).

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### Éric Archambault

1science & Science-Metrix, Canada



Éric Archambault is President and CEO of Science-Metrix and has been a passionate student, analyst, and researcher in the evaluation and measurement of science, tech-

nology, and innovation for 25 years. With his extensive knowledge of quantitative methods and the issues surrounding the evolution and monitoring of research, education and S&T policy, Dr. Archambault has directed well over 100 S&T evaluation-, measurement- and policy-related projects during his 10 years as head of Science-Metrix. Éric graduated in Science, Technology and Society 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). Dr. Archambault is a member of the Canadian Evaluation Society and the American Evaluation Association and a Fellow at the Centre for Innovation Studies (THESIS, University of Calgary, Alberta, Canada). He is also a lifetime member of the ISSI (International Society for Scientometrics & Infometrics) and sits on the editorial board of the Scientometrics journal. Thanks to his initiative, the Science and Technology Indicator Conference (STI, as known as the "Leiden Conference") was held outside Europe for the first time in Montreal from September 6 to 9, 2012 with Éric as co-chair.

## lecturers

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### Tomasz Asmusen

Customer Consultant, Research Management, Elsevier



Tomasz Asmusen 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 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 9 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 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).

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### 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.

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### 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 labour between formal and informal standardization in ICT. His thesis was awarded with the "Sonderpreis Wissenschaft 2012" of the German Institute for Standardization (DIN). Since 2014 Stephan Gauch is affiliated to DZHW and Humboldt University of Berlin.

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### 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-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 (ECCOM) 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.

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### Wolfgang Glänzel

KU Leuven, Belgium



Wolfgang Glänzel is at KU Leuven since 2002. He is Director of Centre for R&D Monitoring (ECCOM) of the Flemish government and Professor at KU Leuven.

He is also affiliated with the Department of Science Policy & Scientometrics at the Library of the Hungarian Academy of Sciences in Budapest (Hungary). Wolfgang Glänzel is skilled mathematician. He holds a doctorate in mathematics from the Eötvös University in Budapest (1984) and a PhD in Science Studies from Leiden University (1997). Wolfgang Glänzel worked at the Library of the Hungarian Academy of Sciences between 1980 and 2001. Wolfgang Glänzel is Research Fellow of the Alexander von Humboldt Foundation. He was awarded the Derek de Solla Price Medal "for outstanding contributions to quantitative studies of



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science” in 1999. He is Editor-in-Chief of the international journal *Scientometrics* since 2014. In the same year he has been selected as a Thomson Reuters Highly Cited Researcher in the field of Social Sciences, general (<http://highlycited.com>).

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### Juan Gorraiz

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 Publication 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.

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### 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, Cologne, 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 department “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.

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### 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.

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### Stephane Jouanin

Solutions Specialist, Scientific & Scholarly Research, Clarivate Analytics



Stephane Jouanin is a Solutions Specialist at Clarivate Analytics (Formerly the Thomson Reuters IP&Science division). His current responsibilities entail to working

with European Academic and Governmental institutions. His role requires to be involved in various stages of projects from needs analysis to implementation of information and/or bibliometric solutions. Before this, he worked in various sales and consulting roles within the information industry for companies such as Knight-Ridder Information, Dialog Corp, Thomson Scientific, ... With over 20 years' experience in the information industry, he has been involved in a variety of projects relating to knowledge solutions. Those roles gave him the opportunity to work closely with major European companies from the Energy, Life Sciences and Pharmaceutical sectors. Stephane holds a B's in Chemistry from Pierre & Marie Curie University in Paris and a post graduate degree in Strategic Marketing from Caen University.

## lecturers

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### Christina Lohr

Product Manager Research Metrics – Elsevier



Christina Lohr is a Product Manager for Research Metrics at Elsevier, where she currently works on integrating altmetrics into the Elsevier product portfolio. She studied

bioprocess engineering at the Technical University in Dresden before moving to Denmark to gain her PhD degree from the University of Copenhagen's Nano-Science Center. After graduation she travelled extensively in Asia and Northern Europe, and then moved to Amsterdam to pursue a career in Data Analytics. Before joining Elsevier Christina worked as a Data Analyst at the Amsterdam Institute for Global Health and Development. Christina became part of the Plum Analytics product team when the company joined Elsevier in February 2017.

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### David Müller

Federal Ministry of Science, Research and Economy, Austria

David Müller, BA studied political science at the University of Vienna and joined the Federal Ministry of Science, Research and Economy in 2011 where he's since been working on trying to identify the main research focuses of the Austrian universities with a variety of statistical methods and a multitude of data sources. He gained experience with quantitative measures of research performance in the analysis and further development of research-related indicators depicting part of what is called the Intellectual Capital of the Austrian universities. In the course of his work, he developed and implemented a database on research focuses and research profiles of the Austrian universities. This database is used as a primary source of information "behind the scenes" in the ministry's triennial negotiations with the universities on their performance agreements, determining the universities' main budget for three years. Since 2016, he's also involved with the ministry's negotiations on the performance agreements with the universities of Arts.

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### 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.

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### 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, coordinated by Matthias Winterhager). She is currently working on clearing and processing of institutional data in citation databases.

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### Nicolas Robinson-Garcia

Georgia Institute of Technology (School of Public Policy), USA, Universidad de Granada (EC3metrics), Spain



Nicolas Robinson-Garcia is a researcher in the field of bibliometrics and research evaluation. He currently works at the School of Public Policy at Georgia Institute of Technology as a

postdoctoral researcher for an NSF-funded project. Before joining Georgia Tech he was a postdoctoral researcher at INGENIO(CSIC-UPV), Universitat Politècnica de València (Spain). He holds a PhD on Social Sciences at the University of Granada where he worked until 2014 within the EC3 Research Group. He collaborates with EC3metrics SL as an external consultant. His main lines of research are the evaluation of monographs, university rankings and the use of new data sources for research assessment. He has recently started a new line of work on novel methodologies to trace public engagement using social media.

## lecturers

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### Bart Thijs

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



Bart Thijs is a research expert in bibliometrics at the KU Leuven. 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 2009 he received his PhD from the Leiden University. Nowadays he is a senior researcher at the Centre for R&D Monitoring (ECOOM). He works on mapping of science based on the application of hybrid techniques.

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### Daniel Torres-Salinas

Universidad de Navarra and Universidad de Granada (EC3metrics & Medialab UGR), Spain



Daniel Torres Salinas, was awarded a PhD in Scientific Documentation from the University of Granada (2007). He works as a technician at the University of Navarra and the University

of Granada, where he audits the research performance. He is also a researcher in the field of bibliometrics and a member of the

EC3 Group (Evaluation of Science and Scientific Communication-University of Granada), regularly publishing in journals such as *Scientometrics*, *JASIST* and *Profesional de la Información*. His main lines of research are the evaluation of Books, university rankings, *Altmetrics* and evaluative bibliometrics at university level. As an entrepreneur he is co-founder and CEO of the scientific consultancy spin-off *EC3metrics* and coordinator of the Digital Science Area at *Medialab UGR*. He is a developer for various research evaluation tools such as *cientificacvn*, *I-UGR Rankings of Spanish universities*, *CIRC (Clasificación Integrada de Revistas Científicas – Integrated Classification of Scientific Journals)* or *Bipublisher – Bibliometric Indicators for Publishers*. He frequently teaches courses on scientific communication, Web 2.0 and library research services and science.

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### Tihomir Tsenkulovski

Strategic Business Manager, Clarivate Analytics



In his role as a Strategic Business Manager Tihomir Tsenkulovski is responsible for the maintenance of relationships with institutions from the scientific and scholarly

community in Germany, Austria, Switzerland, Eastern and Central Europe, and the Iberian peninsula. He ensures customers' understanding of the value and functionalities of intelligent information solutions

used for research discovery and analytics. Tihomir attained his Master's degree in Law and Diplomacy at the Fletcher School, Tufts University as a Fulbright scholar and studied Strategic Management at Harvard Business School. He was a DAAD fellow in Economics at the Humboldt University in Berlin. During his graduate career, Tihomir served as a research assistant at Harvard Law School, as a staff editor of the Fletcher Forum of World Affairs, and led a research project at the University of Pennsylvania. He was also appointed an election observer for the European Commission in Bolivia. Upon the completion of his degree Tihomir gained experience as an advisor at the United Nations and as a strategy consultant in the international division of Scholastic Inc. in New York City. He subsequently managed all research and communication functions of an international project concerned with fostering the development of medium- and small-sized enterprises at the World Bank Group. He has a good command of German, Spanish, English, French, Bulgarian, and Russian.

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### 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 quantita-



## lecturers

tive studies of science. Main research interests: 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. More info: <http://www.cwts.nl/tvr/>.

### Jürgen Wastl

University of Cambridge, UK



Jürgen Wastl studied Biology at the University of Bayreuth and obtained his PhD in Plant Molecular Biology at Philipps University Marburg. Thereafter he held posts in plant

biochemical and biophysical research at the University of Cambridge and in mode-of-action detection in agrochemical research at BASF. Based on his experience in management of research he started 2009 with introducing and implementing a research information system at Cambridge University to prepare for the national research evaluation framework (REF2014). Since 2014 Jürgen Wastl heads the research information team in the Research Strategy Office at the University of Cambridge. In this role he is responsible for the development and advancement of tools and applications in research information matters. The focus on academic profiling and network analysis aims at the implementation of an efficient and accepted tool for academics and administrators. He also engages with a multitude of pilot projects to improve and implement standards and increase interoperability between systems. He represents the University in a number of steering groups and advisory boards (e.g. RCUK Interoperability Steering Group). Since October 2016 Jürgen deputises as REF Manager for the University of Cambridge.

## social events



### Tuesday, September 19th Street Art Tour

The street art and graffiti tour will give participants the perfect opportunity to get an insight look into Berlin's urban art scene. The tour aims at teaching the differences between street art and graffiti as well as explaining the motives of the artists. Participants will learn about the scene's terminology (tags, writers, bombing), its techniques, the legal situation for writers in Germany and the most notorious artists in Berlin. The tour guides are all active members of the Berlin street art scene and can thus lead the participants to Berlin's most alternative and colourful neighbourhoods.

Meeting Point:  
Panoramastraße 1 A  
10178 Berlin  
18.00h – 20.00h  
Price: 15 Euro



### Thursday, September 21st Conference Dinner

The restaurant TorEins in Kreuzberg is part of the Deutsches Technikmuseum and situated in one of the museum's former storage depots. The restaurant's interior reflects this background with its industrial ease, while the terrace gives a spectacular view onto the "Kreuzberger field" ("Kreuzberger Wiese") in the heart of the Park am Gleisdreieck, which was awarded the Berlin prize for architecture in 2013. The culinary offer ranges from South German to Berlin specialities, always with a focus on the use of regional products. The buffet will contain vegetarian alternatives.

TorEins  
Möckernstraße 26  
10963 Berlin  
19.00h  
Price: 60 Euro

# location information

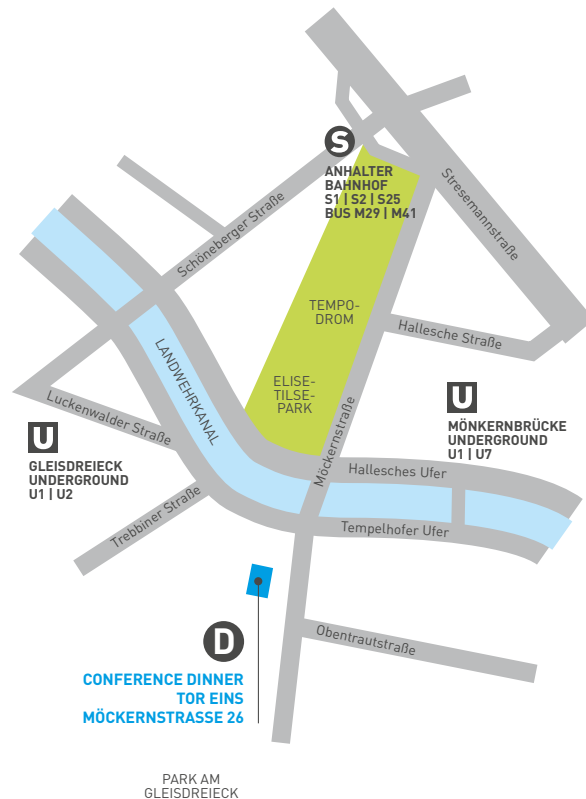
**A**  
**Exercises, Project Work**  
**Department of Social Sciences**  
**Room 005, ground floor**  
**Room 205, 2nd floor**  
 Universitätsstraße 3b  
 10117 Berlin

**B**  
**Lectures**  
**Berlin School of Library and Information Science**  
**Hörsaal 207, 2nd floor**  
 Dorotheenstraße 26  
 10117 Berlin

## Social Events

**C**  
**Meeting Point Street Art Tour**  
**Tuesday, September 19th**  
**18.00**  
 Panoramastraße 1 A  
 10178 Berlin

**D**  
**Conference Dinner**  
**Thursday, September 21st**  
**19.00**  
**TorEins**  
 Möckernstraße 26  
 10963 Berlin



# map





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