

Novel Approaches to the Development and Application of Informetric and Scientometric Tools

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This volume (Vol. 5, No. 3) of the *Journal of Data and Information Science* (JDIS) is the Part I of the Special Issue on ISSI 2019, the 17th *International Conference on Scientometrics and Informetrics* (ISSI2019) held in Rome, on 2–5 September 2019 and includes the first part of the selected posters presented during the conference and extended by the authors afterward.

The goal of ISSI 2019 was to bring together scholars and practitioners in the area of informetrics, bibliometrics, scientometrics, webometrics and altmetrics to discuss new research directions, methods and theories, and to highlight the best research in this area.

The 13 selected papers included in this issue relate the general topic of novel approaches to the development and application of informetric and scientometric tools and have been grouped in four themes:

- Indicators & Databases
- Analytical methods
- Social context, Innovation, Policy
- Application domains

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A summary of their content is reported in the following with our invitation to read the full version of the papers available online, on the Journal's website.

Indicators & Databases

In the group of papers about Indicators & Databases, Haunschild et al. (2020) explores a new methodology for comparing public and scientific discourses by presenting a network-oriented approach for using Twitter data in research evaluation. Their approach can be used to measure the public discussion around a specific field or topic.

Pölönen and Hammarfelt (2020) study the historical and linguistic coverage of Google Scholar, considering the publications in the field of Roman law as an example. They show that Google Scholar could be a promising data source for historical bibliometrics and could help to bridge the gap between bibliometrics and “digital humanities”.

In the same group of papers, Arsalan et al. (2020) explore the development of nomenclature for research impact indicators and propose a taxonomy of research impact indicators based on their characteristics and scope, introducing the concept of evidence-based nomenclature of research impact (RI) indicator.

Souma et al. (2020) propose an indicator to rank papers with the same number of citations, by using the ranking based on the number of citations and PageRank.

Finally, Fassin (2020) proposes an indicator able to include the dynamic aspect of citations in a bibliometric index, and so useful to overcome the static nature of many bibliometric indicators.

Analytical methods

Smolinsky and Lercher (2020) propose a theoretical methodology based on the notion of credit spaces for a discipline which quantifies the total citation or publication credit accumulated at the level of scientists in the discipline.

Nguyen et al. (2020) introduce a novel approach for improving data quality issues related to incomplete author affiliation data for the measurement of international research collaboration. Their approach relies on the exploitation of the Web-based knowledge graph Wikidata.

Social context, Innovation, Policy

The two papers in this thematic group refer to measures of gender inequalities and data quality procedures.



Carvalho et al. (2020) measure and consider gender inequalities in institutional collaborations and technological fields, across time, analyzing all the 23 Ibero-American countries who are WIPO Members.

Daraio et al. (2020) present a set of data-driven quality checks that do not rely on pre-specified theoretical distributions and may be useful for building and monitoring the data quality of databases characterized by high heterogeneity and complexity of the units of analysis.

Application domains

A rich set of papers referred to the broad topic of application domains.

Cox et al. (2020) analyze current cell culture practices in the biomedical research community by using text mining to capture typical research practices and trends around cell culture.

Hubbard and Laddusaw (2020) instead, investigate acknowledgments to libraries in the journal literature, assessing the effectiveness of using Web of Science (WoS) to locate general acknowledgment text. By doing this, the authors contribute to the scant literature that has examined library acknowledgments in the scholarly literature.

Sargsyan et al. (2020) introduce a new term for the investigation of the development of national journals and illustrate it analyzing Armenian journals.

Finally, Lazarev (2020) presents an original application focusing on the evaluation of scientific serial publications.

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Editorial

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