

Quantifying the interdisciplinary research field of search engine studies

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1. Abstract

This study provides a systematic bibliometric analysis of the interdisciplinary field of Search Engine Studies, with a particular focus on research on the societal impact of search engines. Their applications have been examined across multiple disciplines and from diverse theoretical perspectives. However, despite the growing importance of the field at the intersection of technology and society, research activities often remain fragmented. Scholars are frequently unaware of related work conducted in neighboring disciplines or even within their own field, resulting in limited structural connections and weak interdisciplinary exchange (Lewandowski et al., 2023).

Consequently, there is still no comprehensive overview of its central actors, institutional structures, publication venues, or international collaboration patterns. Addressing this gap is particularly important during the formative phase of the field, as a broader understanding of existing structures and networks can support more effective cumulative scientific progress and foster stronger scientific collaboration. This study therefore aims to provide a systematic and data-driven overview of the current research landscape and to improve transparency within the field.

The study applies a quantitative bibliometric approach based on publications indexed in the Scopus database between 2015 and 2025. To ensure transparency and reproducibility, the research process followed the PRISMA methodology (Page et al., 2021) and the PRISMA-S guidelines (Rethlefsen et al., 2021). An iterative multi-stage search strategy was developed to construct the search query for the database retrieval process, resulting in a dataset of 16.803 Records. To further support transparency, reproducibility, and reuse, the research data underlying this analysis have been made available on OSF: [Research data on OSF](#).

Following a multi-phase screening process, records were included if they addressed search engines within a societally relevant context (e.g., search engine bias, disinformation, information behavior, or educational use) rather than focusing on purely technical or algorithmic aspects; the search was further restricted to English- and German-language publications, specific document types (e.g., data papers, letters, short surveys, and retracted publications) were excluded as well. Following further identification of relevant records via authors' Scopus profiles, the final dataset of $N = 716$ records was analyzed to identify publication trends, major authors, leading institutions and countries, as well as patterns of international collaboration, which were examined through co-authorship network analysis and cluster detection using VOSviewer (Van Eck & Waltman, 2010).

The findings reveal that the field of Search Engine Studies has developed into a stable and continuously active research area, with publication numbers remaining relatively consistent over the investigated period. The analysis identified a strong concentration of publications within a limited number of highly productive journals and conference venues. The United States emerged as the central

actor in the international collaboration network and the most productive country in the field. Within Europe, Germany, the Netherlands, and Switzerland appeared as the most prominent actors, occupying structurally important positions characterized by dense international collaborations.

At the same time, the results demonstrate that the field remains asymmetrically organized: alongside highly connected international networks, several isolated research groups and countries with limited collaboration patterns were identified.

As the analysis relies exclusively on the Scopus database, the findings may be subject to limitations in disciplinary coverage, language representation, and indexing practices, which should be considered when interpreting the results. Furthermore, as data collection concluded in 2025, the dataset does not yet capture the more recent emergence of research on generative AI and conversational search technologies; future studies should examine how these developments are reshaping the field.

Overall, the study contributes to a deeper understanding of the organizational and collaborative structure of Search Engine Studies. By mapping key actors, institutional relationships, and international research networks, the analysis provides an important foundation for future research, facilitates orientation for new scholars entering the field, and supports the further development of interdisciplinary exchange initiatives.

2. References

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