

SEBASTIAN SCHULTHEIß

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RESEARCH ON COMMERCIAL SEARCH ENGINES FROM A USER PERSPECTIVE.

As an information scientist, I specialize in studying how users interact with search engines and how their behavior affects society. To conduct my research, I employ a variety of tools and techniques from social research. These methods include behavioral studies in the lab, interviews, and online surveys.

EXPERIENCE

May 2019–present

RESEARCH ASSOCIATE

Hamburg University of Applied Sciences, Research group Search Studies

- Conducting studies on search engine user behavior using various methods from social research such as laboratory studies, representative online surveys, experiments, and interviews
- Conducting usability studies for the research software 'Result Assessment Tool' (RAT)
- Development of a sustainability concept for RAT
- Statistical analysis of the results
- Teaching in the Bachelor and Master programs
- Supervising the student assistants of our research group
- Contributing to writing applications for third-party funding

Apr 2018–Feb 2019 and
Jan 2016–Aug 2017

STUDENT ASSISTANT

Hamburg University of Applied Sciences, Research group Search Studies

- Data collection, data evaluation, event organization

Oct 2017–Mar 2018

RESEARCH PROJECT IN THE MASTER'S PROGRAM

Carl von Ossietzky State and University Library Hamburg

- Transaction log analysis of a library discovery system

Sep 2014–Feb 2015

INTERNSHIP IN THE BACHELOR'S PROGRAM

Gruner + Jahr GmbH, Documentation department

Sep 2010–Aug 2013

APPRENTICESHIP AS A SPECIALIST IN MEDIA AND INFORMATION SERVICES

German National Library of Economics (ZBW)

EDUCATION

Nov 2022–Dec 2025

DOCTORAL CANDIDATE (Summa cum laude)

Humboldt University of Berlin

- "How search engine marketing influences user knowledge gain: Development and empirical testing of an information search behavior model"
- Supervisors: Prof. Vivien Petras, PhD, Prof. Dr. Dirk Lewandowski, Prof. Ian Ruthven, PhD

Sep 2016–Feb 2019

MASTER'S PROGRAM IN INFORMATION, MEDIA, LIBRARY

Hamburg University of Applied Sciences

- Search engines, user research, research data management
- Master thesis on the influence of user understanding of search-based advertising on user behavior
- Publication of master thesis see Schultheiß & Lewandowski, 2021c

- Search engines, user research
- Bachelor thesis on the impact of relevance and position on selection behavior
- Publication of bachelor thesis see Schultheiß et al., 2018

PUBLICATIONS

2026

Schultheiß, S., Niemann, K., & Lewandowski, D. (2026). Bias or Balance? Analyzing Stance in Google and Bing Results for the 2024 EU Parliament Election. *Proceedings of the 2026 Conference on Human Information Interaction and Retrieval*, 242–253. <https://doi.org/10.1145/3786304.3788849>

Sünkler, S., Bilir, K., Kumar, T., Koop, O., Schultheiß, S., & Lewandowski, D. (2026). Result Assessment Tool (RAT): An Open-Source Toolkit for Conducting Studies based on Search Results. *Proceedings of the 2026 Conference on Human Information Interaction and Retrieval*, 331–334. <https://doi.org/10.1145/3786304.3787925>

2025

Schultheiß, S., & Lewandowski, D. (2025a). Becoming visible with limited resources: Non-profit journalists' perspectives on search engine optimization. *PLOS One*, 20(4), e0322573. <https://doi.org/10.1371/journal.pone.0322573>

Schultheiß, S., & Lewandowski, D. (2025b). *Do They Capture All the Attention? Analyzing Google's AI Overviews Using Eye-Tracking and Quality Evaluation*. SEASON 2025 Conference (Search Engines and Society Network). <https://doi.org/10.5281/ZENODO.17156290>

Sünkler, S., Lewandowski, D., Schultheiß, S., & Yagci, N. (2025). Result Assessment Tool (RAT): Empowering search engine data analysis. *PeerJ Computer Science*, 11, Article e2962. <https://doi.org/10.7717/peerj-cs.2962>

2024

Sünkler, S., Yagci, N., Schultheiß, S., Von Mach, S., & Lewandowski, D. (2024). Result Assessment Tool: Software to Support Studies Based on Data from Search Engines. *Advances in Information Retrieval. ECIR 2024. Lecture Notes in Computer Science*, vol 14612, 206–211. https://doi.org/10.1007/978-3-031-56069-9_19

2023

Häußler, H., Schultheiß, S., & Lewandowski, D. (2023). Is googling risky? A study on risk perception and experiences of adverse consequences in web search. *Journal of the Association for Information Science and Technology*, asi.24802. <https://doi.org/10.1002/asi.24802>

Schultheiß, S., Sünkler, S., Yagci, N., Sygulla, D., Von Mach, S., & Lewandowski, D. (2023). Simplify your Search Engine Research: Wie das Result Assessment Tool (RAT) Studien auf der Basis von Suchergebnissen unterstützt. In W. Semar (Ed.), *Nachhaltige Information—Information für Nachhaltigkeit. Tagungsband des 17. Internationalen Symposiums für Informationswissenschaft (ISI 2023)*, Chur, Schweiz (pp. 429–437). Verlag Werner Hülsbusch. <https://doi.org/10.5281/zenodo.10009338> (proceedings)

Schultheiß, S., Lewandowski, D., Von Mach, S., & Yagci, N. (2023). Query sampler: Generating query sets for analyzing search engines using keyword research tools. *PeerJ Computer Science*, 9, e1421. <https://doi.org/10.7717/peerj-cs.1421>

Schultheiß, S. (2023). How search engine marketing influences user knowledge gain: Development and empirical testing of an information search behavior model. *ACM SIGIR Conference on Human Information Interaction and Retrieval (CHIIR '23)*, March 19–23, 2023, Austin, TX, USA. <https://doi.org/10.1145/3576840.3578297>

Sünkler, S., Yagci, N., Sygulla, D., Von Mach, S., Schultheiß, S., & Lewandowski, D. (2023a). Result Assessment Tool: A Software Toolkit for Conducting Studies Based on Search Results. *Proceedings of the Association for Information Science and Technology*, 60, 1143–1145. <https://doi.org/10.1002/prai.2.972>

Sünkler, S., Yagci, N., Sygulla, D., Von Mach, S., Schultheiß, S., & Lewandowski, D. (2023b). Result Assessment Tool: Software-Toolkit für die Durchführung von Studien auf der Grundlage von Suchergebnissen. In W. Semar (Ed.), *Nachhaltige Information – Information für Nachhaltigkeit. Tagungsband des 17. Internationalen Symposiums für Informationswissenschaft (ISI 2023)*, Chur, Schweiz (pp. 438–444). Verlag Werner Hülsbusch. <https://doi.org/10.5281/zenodo.10009338> (proceedings)

2022

Häußler, H., Schultheiß, S., Sünkler, S., & Lewandowski, D. (2022). From knowing to showing: Using marking tasks to demonstrate information literacy in practice. 2022 ASIS&T 24-Hour Conference. <https://doi.org/10.5281/zenodo.6406802>

Lewandowski, D., & Schultheiß, S. (2022). Public awareness and attitudes towards search engine optimization. *Behaviour & Information Technology*. <https://doi.org/10.1080/0144929X.2022.2056507>

Lewandowski, D., Schultheiß, S., & Sünkler, S. (2022). Einflüsse auf die Ergebnisse kommerzieller Suchmaschinen: Modellbildung und empirische Ergebnisse. In A. Imeri, K. Scheibe, & F. Zimmer (Eds.), *Informationswissenschaft im Wandel. Wissenschaftliche Tagung 2022 (IWWT22). Düsseldorfer Konferenz der Informationswissenschaft*, 6.–7. Oktober 2022, Haus der Universität Düsseldorf (p. 123–144). Verlag Werner Hülsbusch. <https://doi.org/10.5281/zenodo.7092079> (proceedings)

Schultheiß, S., Häußler, H., & Lewandowski, D. (2022). Does Search Engine Optimization come along with high-quality content? ACM SIGIR Conference on Human Information Interaction and Retrieval, 123–134. <https://doi.org/10.1145/3498366.3505811>

Schultheiß, S., & Lewandowski, D. (2022). Data set of a representative online survey on search engines with a focus on search engine optimization (SEO): A cross-sectional study [version 2; peer review: 2 approved]. *F1000Research*, 11(376). <https://doi.org/10.12688/f1000research.109662.1>

Sünkler, S., Yagci, N., Sygulla, D., von Mach, S., Schultheiß, S., & Lewandowski, D. (2022). Result Assessment Tool: Software zur Durchführung von Studien auf der Basis von Suchergebnissen. In A. Imeri, K. Scheibe, & F. Zimmer (Eds.), *Informationswissenschaft im Wandel. Wissenschaftliche Tagung 2022 (IWWT22). Düsseldorfer Konferenz der Informationswissenschaft*, 6.–7. Oktober 2022, Haus der Universität Düsseldorf (p. 287–291). Verlag Werner Hülsbusch. <https://doi.org/10.5281/zenodo.7092079> (proceedings)

2021

Lewandowski, D., Sünkler, S., Schultheiß, S., Häußler, H., Spree, U., & Behnert, C. (2021). The Search Studies Group at Hamburg University of Applied Sciences. *Datenbank-Spektrum*, 21(2). <https://doi.org/10.1007/s13222-021-00375-x>

Schultheiß, S. (2021). Der Einfluss des Verständnisses von Suchmaschinenwerbung auf das Rechercheverhalten am PC und am mobilen Endgerät: Eine Nutzerstudie [Extended Abstract]. *Information between Data and Knowledge. Information Science and its Neighbors from Data Science to Digital Humanities. Proceedings of the 16th International Symposium of Information Science (ISI 2021)*, Regensburg, Germany, 8th–10th March 2021, 461–467. <https://doi.org/10.5283/EPUB.44964>

Schultheiß, S., & Lewandowski, D. (2021a). Google Search Results—They're All the Same, Right? *Information Matters*, 1(21). <https://informationmatters.org/2021/11/google-search-results-theyre-all-the-same-right/>

Schultheiß, S., & Lewandowski, D. (2021b). (Un)bekannte Akteure auf der Suchergebnisseite? Ein Vergleich zwischen selbst eingeschätzter und tatsächlich vorhandener Suchmaschinenkompetenz deutscher InternetnutzerInnen. *Information between Data and Knowledge. Information Science and its Neighbors from Data Science to Digital Humanities. Proceedings of the 16th International Symposium of Information Science (ISI 2021)*, Regensburg, Germany, 8th–10th March 2021, 218–246. <https://doi.org/10.5283/epub.44946>

Schultheiß, S., & Lewandowski, D. (2021c). How users' knowledge of advertisements influences their viewing and selection behavior in search engines. *Journal of the Association for Information Science and Technology*, 72(3), 285–301. <https://doi.org/10.1002/asi.24410>

Schultheiß, S., & Lewandowski, D. (2021d). Misplaced trust? The relationship between trust, ability to identify commercially influenced results and search engine preference. *Journal of Information Science*. <https://doi.org/10.1177/01655515211014157>

2020

Lewandowski, D., Sünkler, S., & Schultheiß, S. (2020). Studies on Search: Designing Meaningful IIR Studies on Commercial Search Engines. *Datenbank-Spektrum*, 20(1). <https://doi.org/10.1007/s13222-020-00331-1>

Schultheiß, S., & Lewandowski, D. (2020). "Outside the industry, nobody knows what we do" SEO as seen by search engine optimizers and content providers. *Journal of Documentation*. <https://doi.org/10.1108/JD-07-2020-0127>

Schultheiß, S., Linhart, A., Behnert, C., Rulik, I., & Lewandowski, D. (2020). Known-item searches and search tactics in library search systems: Results from four transaction log analysis studies. *The Journal of Academic Librarianship*, 46(5), 102202. <https://doi.org/10.1016/j.jalib.2020.102202>

2019

Schultheiß, S. (2019). Der Einfluss des Verständnisses von Suchmaschinenwerbung auf das Rechercheverhalten am PC und am mobilen Endgerät: Eine Nutzerstudie [master thesis]. <https://doi.org/10.13140/RG.2.2.21818.03526>

2018

Schultheiß, S. (2018). Taktiken der Suche: Eine Logfileanalyse des Discovery-Systems beluga [research project]. <https://doi.org/10.13140/RG.2.2.22020.42888/1>

Schultheiß, S., Sünkler, S., & Lewandowski, D. (2018). We still trust in Google, but less than 10 years ago: An eye-tracking study. *Information Research*, 23(3). <http://www.informationr.net/ir/23-3/paper799.html>

Sünkler, S., Kerkmann, F., & Schultheiß, S. (2018). Ok Google ... The End of Search as we know it – Sprachgesteuerte Websuche im Test. *B.I.T. Online*, 21(1). <https://www.b-i-t-online.de/heft/2018-01/fachbeitrag-suenkler.pdf>

2017

Kerkmann, F., Sünkler, S., & Schultheiß, S. (2017). Die Suche nach dem „Wie...“ – Tutorials als Gegenstand der Suche. *Information - Wissenschaft & Praxis*, 68(1), 58–66. <https://doi.org/10.1515/iwp-2017-0003>

Schultheiß, S. (2017). IFLA-Weltkongress 2017: Erfahrungen eines Nachwuchsstipendiaten. *BuB: Forum Bibliothek Und Information*, 69(11), 633. https://opus4.kobv.de/opus4-bib-info/files/14269/BuB_2017_11_633.pdf

2016

Schultheiß, S. (2016). Die Praxis der Relevanzbeurteilung von Google-Nutzern auf dem Prüfstand: Eine Eye-Tracking-Studie [Bachelor thesis]. <https://doi.org/10.13140/RG.2.2.19554.32962>

Sünkler, S., Kerkmann, F., Quirnbach, S., & Schultheiß, S. (2016). Sprachgesteuerte Websuche im Test – Ein Erfahrungsbericht aus der Perspektive von Auftraggeber, Auftragnehmer und Durchführendem. In H. C. Mayr & M. Pinzger (Eds.), *INFORMATIK 2016, Lecture Notes in Informatics (LNI)* (pp. 211–225). Gesellschaft für Informatik (GI). <https://dl.gi.de/items/1323032f-8432-4bd6-a1eb-904a3d04fde4>

SCHOLARSHIPS AND AWARDS

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| 2021 | Gerhard Lustig Award for the best Master Thesis in Information Science 2017–2020 (Hochschulverband für Informationswissenschaft) |
| 2018 | SUMA Scholarship: financial support of the master thesis (SUMA-EV) |
| 2017 | Scholarship to attend the IFLA World Library and Information Congress 2017 (BI-International) |

TEACHING AT HAW HAMBURG

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| 2026 | Analysis Project: Digital Transformation in the Information and Media Sector, Summer Semester, M.A.
Quality of AI-generated health information on Google: An evaluation using the Result Assessment Tool (RAT), summer semester, B.A. |
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2025	Artificial intelligence (AI) in search engines, summer semester, B.A.
2024	Investigating an information science topic using Result Assessment Tool, summer semester, B.A. Research and Information Quality, winter semester, B.A.
2023	Research and Information Quality, winter semester, B.A.
2022	Information Research 2, summer semester, B.A. Research and Information Quality, winter semester, B.A.
2021	Information Research 2, summer semester, B.A. Theory and practice project: support and evaluation seminar, summer semester, M.A.
2020	Exploring information search behavior with multi-method studies, winter semester, M.A.

CO-SUPERVISION OF STUDENT WORK

2025	Bachelor thesis on SEO activities carried out by “shadow websites” Bachelor thesis on conspiracy theories in search results Bachelor thesis on the ethical requirements for Google search
2024	Master thesis on influencer marketing Bachelor thesis on native advertising on news websites
2023	Master thesis on UX-maturity models Bachelor thesis on human resources marketing in libraries Bachelor thesis on the image of librarians
2022	Research project on e-commerce marketing for a small business
2021	Research project on creating personas for user research Research project on customer relationship management

PEER REVIEW

2026	Journal of the Association for Information Science and Technology (JASIST)
2025	2025 ASIS&T Annual Meeting [3 reviews] European Conference on Information Retrieval (ECIR 2026) [4 reviews] Inaugural Conference of the Search Engines and Society Network (SEASON2025) [16 Reviews] Journal of the Association for Information Science and Technology (JASIST)
2024	2024 ASIS&T Annual Meeting [3 reviews] Computers in Human Behavior [2 reviews] Heliyon [2 Reviews] Information Processing & Management [2 reviews] International Symposium on Information Science (ISI 2025) [3 Reviews]
2023	ACM SIGIR Conference on Human Information Interaction and Retrieval (CHIIR) [7 reviews] International Journal of Human-Computer Interaction International Symposium on Information Science (ISI 2023) Journal of Electronic Commerce Research (JECR) [2 reviews] Journal of the Association for Information Science and Technology (JASIST) [2 reviews] New Media & Society The Electronic Library
2022	2022 ASIS&T Annual Meeting Journal of the Association for Information Science and Technology (JASIST) [2 reviews]
2021	Journal of the Association for Information Science and Technology (JASIST) [2 reviews] The Electronic Library [3 reviews]
2020	Aslib Journal of Information Management The Electronic Library
2019	Aslib Journal of Information Management

ACADEMIC SERVICE AND MEMBERSHIPS

2025–	Member of the Association for Information Science and Technology (ASIS&T)
2025–	Member of the German Academic Association for Information Science (Hochschulverband Informationswissenschaft e. V.)
2024–	Steering committee member of the Search Engines and Society Network (SEASON)

2022	Member of the Best Paper Award jury of the conference Informationswissenschaft im Wandel. Wissenschaftliche Tagung 2022
2022	Participation in an appointment committee as a representative of the academic staff
2021	Participation in an appointment committee as a representative of the academic staff
2019–2022	Member of the Research Committee of the Faculty of Design, Media, and Information at HAW Hamburg

CERTIFICATES

2022	Project Manager CCI
2021	Certified Professional for Usability and User Experience – Foundation Level (CPUX-F)
2020	Project Management CCI
2019	Introduction to statistical analysis using IBM SPSS Statistics

LANGUAGES AND OTHER SKILLS

Languages	German (first language) and English (fluent)
Digital skills	Eye tracking: Tobii Studio, iMotions Surveys: EFS Survey Content analysis: MAXQDA Statistical analysis: IBM SPSS Statistics Other: Microsoft Office, WordPress

ATTENDANCE AT CONFERENCES

Mar 2026	ACM SIGIR Conference on Human Information Interaction and Retrieval (CHIIR '26), Seattle, WA, USA, <i>presentations (Schultheiß et al., 2026; Sünkler et al., 2026)</i>
Sep 2025	Inaugural Conference of the Search Engines and Society Network (SEASON2025), Hamburg, Germany
Apr 2025	Authors' conference on „The 2025 German federal election – analyses of election, party, communication, and government research“, virtual, <i>presentation (article not yet published)</i> .
Mar 2025	18th International Symposium for Information Science (ISI 2025), Chemnitz, Germany
Mar 2024	ACM SIGIR Conference on Human Information Interaction and Retrieval (CHIIR '24), Sheffield, UK
Nov 2023	17th International Symposium for Information Science (ISI 2023), Chur, Switzerland, <i>poster presentation (Schultheiß, Sünkler, et al., 2023)</i>
Mar 2023	ACM SIGIR Conference on Human Information Interaction and Retrieval (CHIIR '23), Austin, TX, USA, <i>presentation (Schultheiß, 2023)</i>
Oct 2022	ASIS&T Annual Meeting, Pittsburgh, PA, USA
Apr 2022	ASIS&T 24-Hour Global Conference, April 26–27, 2022, virtual, <i>presentation (Häußler et al., 2022)</i>
Mar 2022	ACM SIGIR Conference on Human Information Interaction and Retrieval (CHIIR '22), virtual, <i>presentation (Schultheiß et al., 2022)</i>
Oct 2021	ASIS&T Annual Meeting, virtual
Oct 2021	OSSYM 2021 - 3rd International Open Search Symposium, virtual, <i>presentation</i>
Mar 2021	16th International Symposium for Information Science (ISI 2021), virtual, <i>presentations (Schultheiß, 2021) and (Schultheiß, Lewandowski, 2021b)</i>
Aug 2020	ACM SIGIR Conference on Human Information Interaction and Retrieval (CHIIR '20), virtual
Dec 2019	10. Studenten-Workshop für informationswissenschaftliche Forschung, Potsdam, Germany, <i>presentation</i>
Aug 2017	IFLA World Library and Information Congress, August 19–25, 2017, Wrocław, Poland, <i>student volunteer</i>
May 2017	106. Bibliothekartag in Frankfurt am Main, Frankfurt am Main, Germany, <i>presentation (Sünkler et al., 2018)</i>
Nov 2016	7. Studenten-Workshop für informationswissenschaftliche Forschung, Kiel, Germany, <i>presentation</i>
Sep 2016	INFORMATIK 2016: Informatik von Menschen für Menschen, Klagenfurt, Austria, <i>presentation</i>