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Last modified: November 10, 2022

Research Interests

My research situates in quantitative science studies, where I apply big data analysis techniques to uncover the production, consumption, and diffusion of scientific knowledge. Specifically, my research focuses on the nature and dynamics of interdisciplinary research in social sciences and humanities. Three ongoing research threads are: (1) understanding the formation and mechanisms of interdisciplinarity and disciplinarity, (2) improving the validity of current interdisciplinarity indicators, and (3) proposing new quantitative models to evaluate and visualize interdisciplinarity.

Google Scholar: [\[LINK\]](#)

Educational Background

University of Antwerp, Antwerp, Belgium
Faculty of Social Sciences
Expertise Centre for Research and Development monitoring (ECOOM)
Doctoral Candidate in Library and Information Science
September 2020 to now

Indiana University, Bloomington, IN., U.S.A.
Luddy School of Informatics, Computing, and Engineering
M.S. in Data Science
January 2018 to December 2019

Wuhan University, Wuhan, China
School of Literature
B.S. in Chinese Language and Literature
September 2012 to June 2016

Pipeline

Submitted and In-preparation Papers

1. **Zhou, H.**, Guns, R., & Engels, T. C. E. (Major revision). Indicating interdisciplinarity: A multidimensional framework to characterize Interdisciplinary Knowledge Flow (IKF). *Journal of the Association for Information Science and Technology*.
<https://doi.org/10.48550/arXiv.2207.10722>
2. **Zhou, H.** (In-progress) Knowledge inheritance in disciplines: Quantifying the successive and distant reuse of references

3. **Zhou, H.** (In-progress) How do Natural Sciences learn from Social Sciences? Quantifying the presence of social science references.

Publications

Journal Articles

4. **Zhou, H.**, Guns, R., & Engels, T. C. E. (2022). Are social sciences becoming more interdisciplinary? Evidence from publications 1960–2014. *Journal of the Association for Information Science and Technology*, 73(9), 1201-1221. <https://doi.org/10.1002/asi.24627>

Conference Proceedings

5. **Zhou, H.**, Guns, R., & Engels, T. C. E. (2021, July). The evolution of interdisciplinarity in five social sciences and humanities disciplines: relations to impact and disruptiveness. In *Proceedings of the 18th International Conference on Scientometrics and Informetrics (ISSI 2021)*, virtual event, 12-15 July, 2021, KU Leuven, Belgium (pp. 1381-1392).
6. **Zhou, H.**, Guns, R., & Engels, T. C. E. (2021). Measurement of interdisciplinarity: Quantifying distance-based disparity using node2vec. *Proceedings of the Association for Information Science and Technology*, 58(1), 563-566.
7. **Zhou, H.**, Sun, B., Guns, R., & Zhang, L. (2022). How do natural sciences learn from social sciences? Investigating the prevalence, origin, and location of references. In N. Robinson-Garcia, D. Torres-Salinas, & W. Arroyo-Machado (Eds.), *Proceedings of the 26th International Conference on Science and Technology Indicators, STI 2022* (sti2245). <https://doi.org/10.5281/zenodo.6906971>

Files and Reports

8. Eykens, J., Guns, R., & **Zhou, H.** (2021). Situating and assessing interdisciplinarity involving the social sciences and humanities. In *Vlaams Indicatorenboek 2021*.
9. Vandewalle, E., **Zhou, H.**, Guns, R., Arhiliuc, C., & Eykens, J. (2022). Types of open peer review and their relation to VABB-SHW. ECOOM. <https://repository.uantwerpen.be/docstore/d:irua:13149>

Presentations

1. How is knowledge inherited? Quantifying the adjacent and distant reuse of references within disciplines. Nordic Workshop on Bibliometrics and Research Policy 2022, Turku, Finland. 2022/09
2. How do natural sciences learn from social sciences? Investigating the prevalence, origin, and location of references. STI 2022 Conference, Granada, Spain. 2022/09
3. Guest speaker. Understanding interdisciplinarity in the Social Sciences: a

- perspective from interdisciplinary knowledge flow. Presentation at External ECOOM Day Seminar (online) 2021/10
4. Measurement of Interdisciplinarity: Quantifying Distance-Based Disparity Using Node2vec. Presentation at the Association for Information Science and Technology Annual Meeting 2021. (online) 2021/10
 5. Guest speaker. Indicating interdisciplinarity: a multi-dimensional framework to quantify interdisciplinary knowledge flow. Presentation at Global TechMining Conference Virtual Quarterly Short-Forums: “Interdisciplinarity and Impact” (online) 2021/09
 6. The evolution of interdisciplinarity in five social sciences and humanities disciplines: relations to impact and disruptiveness. Presentation at the 18th Conference on Scientometrics and Informetrics. (online) 2021/07
 7. Guest speaker. Are social sciences becoming more interdisciplinary? Evidence from publications 1960-2009. Presentation at Internal ECOOM Day Seminar (online) 2021/02

Service

Journal Reviewer

Data and Information Management (2021-)
 Heliyon (2022-)
 Humanities and Social Sciences Communications (2022-)
 Information Processing and Management (2022-)
 Journal of Informetrics (2021-)
 Journal of Information Science (2022-)
 Journal of the Association for Information Science and Technology (2022-)
 Online Information Review (2021-)
 Scientometrics (2021-)
 Social Science & Humanities Open (2021-)

Conference Reviewer

ACM/IEEE Joint Conference on Digital Libraries (JCDL) (2021-)

Memberships/organizations

Association for Information Science and Technology (ASIS&T)