BEICHEN WANG

CONTACT INFO

E-mail beichen.wang@wur.nl

LinkedIn linkedin.com/in/beichen-wang

GitHub github.com/wbcbugfree

Google Scholar scholar.google.com/citations?user=SiU_-YEAAAAJ

ORCID orcid.org/0009-0008-5213-5114

ResearchGate researchgate.net/profile/Beichen-Wang-8

ABOUT ME

I am a PhD candidate at Wageningen University & Research, supervised by Prof. Dr. Anna Fensel and Dr. Luís Moreira de Sousa. Currently, I am engaged in the Soil-Wise Horizon Europe project, where I developed a soil health knowledge graph from unstructured text using large language models (LLMs). I'm also developing a controlled vocabulary dedicated to soil science and a RAG-based chatbot for soil-related question answering. My work combines LLMs and natural language processing with semantic web technologies, such as RDF knowledge graphs, ontologies, and SPARQL, to extract, integrate, and disseminate critical insights on soil health and soil science.

EXPERIENCE

PhD Candidate **Apr 2024 - Mar 2028**
Wageningen University & Research | *Wageningen, the Netherlands*

Natural Language Processing Research Assistant **Nov 2020 - Jul 2021**
iFLYTEK | *Beijing, China*

EDUCATION

Master of Science in Electrical Engineering **Sep 2021 - Aug 2023**
Delft University of Technology | *Delft, the Netherlands*

- Track: Wireless Communication and Sensing
- Thesis topic: "Linear Clustering Process on Networks"

Bachelor of Engineering in Telecommunication Engineering **Sep 2016 - Jun 2020**
Beijing University of Posts and Telecommunications | *Beijing, China*

- Thesis topic: "Object Detection in Microscope Images Based on Deep Learning"

PROJECT

SoilWise Horizon Europe **Apr 2024 - Now**
Knowledge graph, Thesaurus, Chatbot | *Wageningen, the Netherlands*

PUBLICATIONS

Paper

Beichen Wang, Luís Moreira De Sousa, and Anna Fensel (2025). "Make soil healthy again: Construction of ontology-compliant soil health knowledge graph with large language models". In: *Proceedings of the 13th Knowledge Capture Conference 2025*. K-CAP '25. New York, NY, USA: Association for Computing Machinery, pp. 56–60. ISBN: 9798400718670. DOI: 10.1145/3731443.3771730.

Ivan Jokić, **Beichen Wang**, and Piet Van Mieghem (May 2024). "Linear clustering process on networks: a comparative study". In: *Journal of Complex Networks* 12.3, cnae022. ISSN: 2051-1329. DOI: 10.1093/comnet/cnae022. URL: https://doi.org/10.1093/comnet/cnae022.

Beichen Wang, Ziyue Wang, Baoxin Wang, Dayong Wu, Zhigang Chen, Shijin Wang, and Guoping Hu (2021). "Various Legal Factors Extraction Based on Machine Reading Comprehension". In: *Information Retrieval - 27th China Conference, CCIR 2021, Dalian, China, October 29-31, 2021, Proceedings*. Vol. 13026. Lecture Notes in Computer Science. Springer, pp. 16–31. DOI: 10.1007/978-3-030-88189-4_2.

Thesis

Beichen Wang (Aug. 2023). "Linear Clustering Process on Networks". Available at https://resolver.tudelft.nl/uuid:41dc9ae8-2055-47d1-bb0a-a870cc076cdc. Master's thesis.

TALKS

Make soil healthy again: Construction of ontology-compliant soil health knowledge graph with large language models **Dec 10, 2025**
K-CAP '25: the 13th Knowledge Capture Conference 2025 | *Dayton, Ohio, USA*

Soil health knowledge graph: Current progress, use cases and future work **Aug 21, 2025**
OpenGeoHub | *Doorwerth, the Netherlands*

Constructing knowledge graphs from text using LLMs: Current progress, open challenges and future work **Dec 2, 2024**
Artificial Intelligence Chair Group | *Wageningen University, the Netherlands*

Soil health knowledge graph: Iteration I **Oct 29, 2024**
SoilWise Annual Meeting | *CREA AA, Florence, Italy*

Linear clustering process on networks **Sep 28, 2023**
Computational Network Science Lab | *Leiden University, the Netherlands*