

<https://eeke-workshop.github.io/2024/>



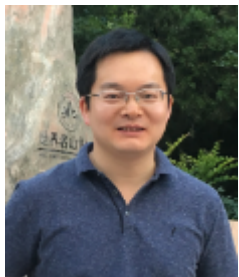
April 23~24, 2024

Joint Workshop of the 5th Extraction and Evaluation of Knowledge Entities from Scientific Documents and the 4th AI + Informetrics (EEKE-AII 2024)

Chengzhi Zhang, Yi Zhang, Philipp Mayr, Wei Lu,
Arho Suominen, Haihua Chen & Ying Ding

co-located with iConference 2024

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**... to our authors, programme committee and
participants...thank you!**

Goal

- **Extraction and Evaluation of Knowledge Entity (EEKE)**
 - Highlighting the development of intelligent methods for identifying knowledge entities from scientific documents, and promoting their application in broad information studies.
- **AI + Informetrics (AII)**
 - Emphasizing endeavors in interacting AI and informetrics by constructing fundamental theories, developing novel methodologies, bridging conceptual knowledge with practical uses, and creating real-word solutions.

Topics

- **Extraction and Evaluation of Knowledge Entity**

- Task and methodology from scientific documents
- Model and algorithmize entity extraction from scientific documents
- Dataset and metrics mention extraction from scientific documents
- Software and tool extraction from scientific documents
- Knowledge entity summarization
- Relation extraction of knowledge entity
- Modeling function of knowledge entity citation

- **AI + Informetrics**

- Informetrics with machine learning (including deep learning)
- Informetrics with natural language processing or computational linguistics
- Informetrics with computer vision
- Informetrics with other related AI techniques (e.g., information retrieval)
- AI for science of science
- AI for science, technology, & innovation
- AI for research policy and strategic management
- Application of knowledge entity extraction
- Applications of AI-empowered informetrics

2:05pm-3:30pm, April 23

Agenda: Part 1

2:05pm-3:30pm, April 23	Session 1: Technology Mining	
2:05-2:25	<u>Technological Forecasting Based on Spectral Clustering for Word Frequency Time Series</u>	Han Huang* , Xiaoguang Wang and Hongyu Wang
2:25-2:45	<u>Automated Identification of Emerging Technologies: Open Data Approach</u>	Ljiljana Dolamic, Julian Jang-Jaccard* , Alain Mermoud and Vincent Lenders
2:45-3:00	<u>Technology Convergence Prediction From a Timeliness Perspective: An Improved Contribution Index in a Dynamic Network</u>	Jinzhu Zhang and Bing Yan*
3:00-3:15	<u>A research topic evolution prediction approach based on multiplex-graph representation learning</u>	Yang Zheng, Kaiwen Shi, Yuhang Dong, Xiaoguang Wang and Hongyu Wang*
3:15-3:30	<u>Unveiling the secret of information rediffusion process on social media from information coupling perspective: a hybrid approach of machine learning and regression model</u>	Zhen Yan* , Rong Du and Hua Wang

Chair: **Zhinan Wang**

Agenda: Part 2

4:00pm-5:25pm, April 23

4:00pm-5:25pm, April 23	<i>Session 2: Entity & Relation Extraction</i>		
4:00-4:20	<u>Biomedical Relation Extraction via Domain Knowledge and Prompt Learning</u>	<i>Jianyuan Yuan*</i> , Wei Du, Xiaoxia Liu and Yijia Zhang	Chair: <i>Yingyi Zhang</i>
4:20-4:40	<u>Identifying scientific problems and solutions: Semantic network analytics and deep learning</u>	Lu Huang, <i>Xiaoli Cao*</i> , Hang Ren, Chunze Zhang and Zhenxin Wu	
4:40-4:55	<u>Material performance evolution discovery based on entity extraction and social circle theory</u>	Jinzhu Zhang and <i>Wenwen Sun*</i>	
4:55-5:10	<u>Revealing the Country Preference on Research Method in the Field of Digital Humanities: From the Perspective of Library and Information Science</u>	<i>Chengxi Yan*</i> and Zhichao Fang	
5:10-5:25	<u>LLM-Resilient Bibliometrics: Factual Consistency Through Entity Triplet Extraction</u>	<i>Alexander Sternfeld*</i> , Andrei Kucharavy, Dimitri Percia David, Julian Jang-Jaccard and Alain Mermoud	

Agenda: Part 3

2:00pm-3:30pm, April 24

2:00pm-2:45pm, April 24	<i>Keynote : Opportunities for AI-enabled scientific knowledge exploration, analysis, and discovery</i>	<i>Karin Verspoor</i>	Chair: <i>Yi Zhang</i>
2:45pm-3:30pm, April 24	<i>Session 3: Power Talk</i>		
2:45-2:50	<i>How to Measure Information Cocoon in Academic Environment</i>	<i>Jia Yuan, Guoxiu He and Yunhan Yang*</i>	
2:50-2:55	<i>May Generative AI Be a Reviewer on an Academic Paper?</i>	<i>Haichen Zhou*</i> , Xiaorong Huang, Hongjun Pu and Qi Zhang	
2:55-3:00	<i>Research on the Identification of breakthrough technology combinations driven by science</i>	<i>Dan Wang*</i> , Xiao Zhou, Pengwei Zhao, Juan Pang and Qiaoyang Ren	
3:00-3:05	<i>Connector and Provincial Hub Dichotomy in Scientific Collaborations Identified by Reinforcement Learning Algorithm</i>	<i>Feifan Liu*</i> , Shuang Zhang and Haoxiang Xia	
3:05-3:10	<i>Research on Named Entity Recognition from Patent Texts with Local Larg Language Models</i>	Chi Yu, <i>Liang Chen*</i> and Haiyun Xu	Chair: <i>Meijun Liu</i>
3:10-3:15	<i>IRUGCN: A Graph Convolutional Network Rumor Detection Model Incorporating User Behavior</i>	Shu Zhou, Hao Wang, <i>Zhengda Zhou*</i> , Haohan Yi and Bin Shi	
3:15-3:20	<i>Identification of core technological topics in the new energy vehicle industry: The SAO-BERTopic topic modeling approach based on patent text mining</i>	Jianxin Zhu, <i>Yutong Chuang*</i> , Zhinan Wang and Yunke Li	
3:20-3:25	<i>Research on Fine-grained S&T Entity Identification with Contextual Semantics in Think-Tank Text</i>	<i>Mengge Sun*</i> , Yanpeng Wang and Yang Zhao	
3:25-3:30	<i>Biomedical association inference on pandemic knowledge graphs: A comparative study</i>	<i>Mengjia Wu*</i> , Chao Yu, Jian Xu, Ying Ding and Yi Zhang.	

4:00pm-5:35pm, April 24

Agenda: Part 4

4:00pm-5:35pm, April 24	<i>Session 4: AI for informetrics</i>		
4:00-4:15	<u>Understanding Citation Mobility in the Knowledge Space</u>	<i>Shuang Zhang*</i> , Feifan Liu and Haoxiang Xia	Chair: <i>Jin Mao</i>
4:15-4:30	<u>Relationship between Team Diversity and Innovation Performance in Interdisciplinary Research Teams within the Field of Artificial Intelligence: Decision Tree Analysis</u>	<i>Junwan Liu*</i> , Chenchen Huang and Shuo Xu	
4:30-4:45	<u>Understanding Partnership in Scientific Collaborations A Preliminary Study from the Paper-level Perspective</u>	<i>Chao Lu*</i> , Mengting Li and Chenyu Zhou	
4:45-5:00	<u>Quantifying scientific novelty of doctoral theses with Bio-BERT model</u>	Alex Yang, Yi Bu, Ying Ding and <i>Meijun Liu*</i>	
5:00-5:15	<u>Are Disruptive Patents Less Likely to be Granted? Analyzing Scientific Gatekeeping with USPTO Patent Data (2004-2018)</u>	<i>Lihan Yan*</i> , Haochuan Cui and Cheng-Jun Wang	
5:15-5:30	<u>Open-mentorship team benefit disruptive ideas</u>	<i>Bili Zheng*</i> , Wenjing Li and Jianhua Hou	
5:30-5:35	Greeting Notes of EEKE2022	Co-Chairs of EEKE-All2023 (<i>Chengzhi Zhang, Yi Zhang, Philipp Mayr, Wei Lu, Arho Suominen, Haihua Chen, and Ying Ding</i>)	

Keynote

■ Prof. Karin Verspoor (RMIT University)



KEYNOTE

**Opportunities for AI-enabled
scientific knowledge
exploration, analysis, and
discovery**

Proceedings

EEKE-All2024 proceedings will be published with CEUR-WS <http://ceur-ws.org/> **we need the following things!**

- **Camera-ready paper:** Before **May 30**
- + **Author agreement** (signed by corresponding author) -> send **via email to** zhangcz@njust.edu.cn
- + **Send sources** (tex->zip or MS word) of your paper
via email to zhangcz@njust.edu.cn

Next steps: Special Issue

- ***Technological Forecasting & Social Change(TFSC)*** (TBD)





Thank you!

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