Workshop Title:

Joint Workshop of the 5th AI + Informetrics (AII) and the 6th Extraction and Evaluation of Knowledge Entities from Scientific Documents (EEKE): AII-EEKE 2025

Organizers' Names and Affiliations:

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Workshop Objectives:

Artificial intelligence (AI), particularly the increasing success of large language models (LLMs), is revolutionizing the research paradigm of scientometrics and informetrics, highlighting its incredible capabilities in scalable, effective, robust, and adaptable data analytics. AI-empowered informetric models have achieved significant accomplishments in the context of scientometric studies, e.g., supporting the design of scientometric research with insights, communicating the community by combining computational models and human knowledge, and developing adaptable analytical tools for deep literature analysis.

- The **AI + Informetrics (AII) Workshop** series emphasizes endeavors in connecting AI and informetrics by constructing fundamental theories, developing novel methodologies, bridging conceptual knowledge with practical uses, and creating real-word solutions.

As one of the fundamental tasks in scientometrics, extracting useful knowledge entities from massive scientific data has been a long interest of the community, while the exponentially increased data volume and modality, the complicated real-world context of diverse knowledge entities, and the adaptability of rapidly developing AI techniques to actual information retrieval scenarios further obstacle a comprehensive solution.

- The **Extraction and Evaluation of Knowledge Entity (EEKE) Workshop** series highlights the development of intelligent methods for identifying knowledge entities from scientific documents and promoting their application in broad information studies.

This joint workshop aims to engage the scientometrics community with broad open problems in AII and EEKE, foster interactive applications in the context of scientometrics, and gather researchers and practical users to open a collaborative platform for exchanging ideas, sharing pilot studies, and scoping future directions on this cutting-edge venue. We highlight the following core objectives:

- Cohering AII-EEKE to fulfill cross-disciplinary gaps from either theoretical or practical perspectives
- Developing advanced AII-EEKE models with enhanced capabilities in robustness, adaptability, and effectiveness.

- Leveraging knowledge, concepts, and models in information management to strengthen the interpretability of AII-EEKE to adapt to empirical needs in real-world cases.

Target Audience:

This workshop is primarily designed for academic researchers in broad information and library sciences, science of science, artificial intelligence, and will also be of interest to bibliometricians, librarians, R&D administrators and policymakers, and practitioners in any related sectors.

AII-EEKE General Chairs

- Yi Zhang, University of Technology Sydney, Australia
- Chengzhi Zhang, Nanjing University of Science and Technology, China
- Philipp Mayr, GESIS – Leibniz-Institute for the Social Science, Germany

AII-EEKE Organization Committee

- Wei Lu, Wuhan University, China
- Ying Ding, University of Texas at Austin, USA
- Arho Suonimen, VTT Technical Research Centre of Finland & Tampere University, Finland
- Haihua Chen, University of North Texas, USA

AII-EEKE Programme Committee consists of >60 reputable researchers from >10 countries/regions, e.g., USA, China, Australia, Germany, France, Finland, India, Belgium, Japan, South Korea, and Thailand. The committee is well-balanced in gender, ethnicity, career age, geographical location, global south vs. north, etc.

Please refer to the website for more details, including programme committee members, previous workshops, workshop structures, special issues, and workshop proceedings:

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

Workshop Format:

The one-day workshop (estimated 6-8 hours) contains keynotes, a panel discussion, and presentation sessions with long papers, short papers, and demos/posters.

We will invite 1-2 keynotes, ideally from the ISSI2025 participants, but we are also open for online keynotes, if necessary. We will also form a panel with 3-4 panelists to address urgent challenges and opportunities regarding the scientometrics community's rising interests in AI, particularly large language models.

According to our previous workshops (https://eeke-workshop.github.io/2024/), we expect to receive 40-50 submissions, and accept 4-5 long papers, 12-15 short papers, and 8-10 demos/posters.

As a reference, we presented the structure of our AII-EEKE 2024 workshop (6 hours in total, split into two half days) affiliated with the iConference2024 below. Note that our AII-EEKE 2025 workshop will be organized in a one-day bias.

- **Day 1** (2:00pm – 5:30pm)
  - Opening Remarks (2:00pm – 2:05pm)
  - Session 1: Technology Mining (2:05pm – 3:30pm)
    - 2 long papers and 3 short papers
  - Coffee Break (3:30pm – 4:00pm)
  - Session 2: Entity & Relation Extraction (4:00pm – 5:25pm)
    - 2 long papers and 3 short papers
- **Day 2** (2:00pm – 5:30pm)
  - Keynote (online; 2:00pm – 2:45pm)
  - Session 3: Power Talk (2:45pm – 3:30pm)
    - 9 demos/posters (5-min presentation for each, rather than traditional poster sessions)
  - Coffee Break (3:30pm – 4:00pm)
  - Session 4: AI for Informetrics (4:00pm – 5:25pm)
    - 6 short papers

Description and Outline:

We invite stimulating research on topics including, but not limited to, methods of knowledge entity extraction and applications of knowledge entity. Specific examples of fields of interest include:

- Bibliometrics/Scientometrics/Informetrics with large language models
- Bibliometrics/Scientometrics/Informetrics with machine learning (including deep learning)
- Bibliometrics/Scientometrics/Informetrics with natural language processing or computational linguistics
- Bibliometrics/Scientometrics/Informetrics with computer vision
- Bibliometrics/Scientometrics/Informetrics with other related AI techniques (e.g., information retrieval)
- 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 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

Required Materials and Equipment:

The workshop requires general supports and equipment for academic presentations, including a projector, a laptop, etc.

Key Takeaways:

The workshop aims to offer the following key takeaways:

- Cutting-edge AI-empowered technological advancements in the context of scientometrics
- Novel AI applications (including large language models) for broad scientometric studies
- Creative ideas related to AII-EEKE and beyond
- Networking with global researchers sharing common interests