Workshop@CAiSE'25

Knowledge Graph Gemantics-driven ystems Engineering



https://www.omilab.org/activities/events/caise2025_kg4sdse/

Submission Deadline 21. March 2025

Decision Notification 07. April 2025



GOAL: to stimulate research and experience reports on how Knowledge Graphs can add context and flexibility to information systems, compensating for the semantic loss of system design methods or for the logical flaws of large language models, ultimately enabling semantic enrichment and reasoning capabilities in information systems operation or engineering processes.

FOCUS: how Knowledge Graphs can be relevant to Information Systems engineering.

OBJECTIVES:

- Investigate the place of Knowledge Graphs in the Conceptual Modeling paradigm and how they can enable new flavors of model-driven engineering.
- Discuss application scenarios and engineering methods benefitting from Knowledge Graphs.
- Explore the interplay between Knowledge Graphs, Large Language Models and other Al ingredients.

Submission via Easychair (in Springer's LNCS/ LNBIP format) of

- FULL PAPERS which can be regular research or experience papers (9-12 pages) or
- SHORT PAPERS which can be position or vision papers (6-8 pages)



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🕖 Web Presence Chair

Iulia Vaidian, OMiLAB NPO, Germany

Workshop Chairs:

Robert Buchmann, Babeş-Bolyai University, Romania Dimitris Karagiannis, University of Vienna, Austria Dimitris Plexousakis, Institute of Computer Science (FORTH), University of Crete, Greece

Workshop Program Committee

Full Details on the Workshop Page.

Relevant Topics:

- Information Systems engineering methods based on Knowledge Graphs
- Convergence of KG, Large Language Models and systems engineering
- KG as mediators between data, stakeholders and Large Language Models
- KG for model-driven engineering
- Application scenarios for KG
- Linking, transforming or augmenting domainspecific models with KG
- KG informed by system theories and system engineering conceptualizations
- Machine reasoning for Information Systems engineering
- KG embeddings and graph neural networks
- Requirements engineering based on KG
- System design and analysis augmented by KG KG for Digital Twins and digital-first artifacts
- Citizen-centric low-code KG management
- Empirical studies and experience reports on Knowledge Graph-based information systems

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