



ICDAM-2026

7th International Conference on Data Analysis and Management

*Organized by London Metropolitan University, London, UK (Venue Partner)
in association with*

WSG University, Bydgoszcz, Poland, Europe

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Portalegre Polytechnic University, Portugal, Europe

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SGGW Management Institute, Poland, Portugal

Date: 12th – 14th June 2026

******* CALL FOR PAPERS *******

SPECIAL SESSION ON

Unifying Knowledge, Linguistic Intelligence, and Perceptual Systems: The Impact of Cognitive Computing and XAI in Future AI

SESSION ORGANIZERS:

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EDITORIAL BOARD: (Optional):

[Name, University or Organization, Country, e-mail]

SESSION DESCRIPTION:

The rapid evolution of Artificial Intelligence is moving beyond isolated learning models toward integrated cognitive systems that combine knowledge representation, natural language understanding, and perceptual intelligence. Cognitive computing aims to simulate human thought processes by merging structured knowledge, language models, and perception-driven systems such as computer vision and speech recognition.

However, as AI systems grow more complex, transparency and interpretability become critical. Explainable AI (XAI) plays a pivotal role in ensuring that next-generation AI systems are trustworthy, accountable, and ethically aligned. By incorporating interpretability techniques such as feature attribution, attention visualization, and model-agnostic explanation frameworks, AI systems can provide meaningful insights into their decision-making processes.

This session will explore how Explainable AI strengthens cognitive computing frameworks by enhancing transparency in knowledge graphs, large language models, multimodal systems, and perception-driven architectures. The discussion will also highlight applications in healthcare, finance, education, and autonomous systems, emphasizing fairness, bias mitigation, and regulatory compliance.

RECOMMENDED TOPICS:

Topics to be discussed in this special session include (but are not limited to) the following:

- Cognitive Computing and Human-like Intelligence
- Integration of Knowledge Graphs and Language Models
- Perception Systems (Vision, Speech, Multimodal AI)
- Explainable AI Techniques (LIME, SHAP, Grad-CAM, Attention Mechanisms)
- Trustworthy, Ethical, and Responsible AI
- Case Studies in Real-world Cognitive Systems

SUBMISSION PROCEDURE:

Researchers and practitioners are invited to submit papers for this special theme session on **[Unifying Knowledge, Linguistic Intelligence, and Perceptual Systems: The Impact of Cognitive Computing and XAI in Future AI]**. All submissions must be original and may not be under review by another publication. INTERESTED AUTHORS SHOULD CONSULT THE CONFERENCE'S GUIDELINES FOR MANUSCRIPT SUBMISSIONS at <https://icdam-conf.com/downloads> . All submitted papers will be reviewed on a double-blind, peer-review basis.

NOTE: While submitting a paper in this special session, please specify **[SESSION NAME]** at the top (above paper title) of the first page of your paper.

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