Preface to Joint Proceedings of Posters, Demos, and Workshops of the 25th International Conference on Knowledge Engineering and Knowledge Management (EKAW-PDW 2026).

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Abstract

The 25th International Conference on Knowledge Engineering and Knowledge Management (EKAW 2026) took place in Turin, Italy, from September 29 to October 1, 2026. Under the special theme "New Frontiers in Knowledge Engineering", the conference brought together researchers and practitioners to explore advances in knowledge representation, acquisition, management, and their interplay with emerging Artificial Intelligence technologies. This volume collects contributions from the Posters and Demos Track and two of the three co-located workshops: Knowledge Management and Process Mining for Law (KM4LAW) and eXtraction and eXploitation of long-TAIL Knowledge with LLMs and KGs (X-TAIL).

Keywords

Knowledge Engineering, Knowledge Management, Knowledge Graphs, Artificial Intelligence, Neuro-symbolic AI, Large Language Models

1. Preface

The 25th International Conference on Knowledge Engineering and Knowledge Management (EKAW 2026) took place in Turin, Italy, from September 29 to October 1, 2026. This volume contains the joint proceedings of the Posters and Demos Track and two of the three workshops co-located with the main conference, namely KM4LAW and X-TAIL.

EKAW serves as a leading forum where researchers and practitioners advance the fields of knowledge engineering and knowledge management. The conference attracts a diverse community of scholars, knowledge engineers, IT architects, and industry professionals working towards the development of knowledge-based systems and applications.

This year's special theme, "New Frontiers in Knowledge Engineering", reflects the evolving role of knowledge representation and management in the rapidly changing landscape of Artificial Intelligence. The conference particularly encouraged contributions exploring emerging approaches to knowledge acquisition, representation, and reasoning, including the integration of symbolic and sub-symbolic methods, the use of large language models in knowledge engineering, and the development of trustworthy, human-centred knowledge systems.

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2. Posters & Demo Track

The Posters and Demos Track of EKAW 2026 provided an interactive forum for researchers and practitioners to present emerging ideas, ongoing research, and innovative tools and prototypes in knowledge engineering and management. Complementing the main conference, the track encouraged the exchange of ideas, constructive feedback, and opportunities for collaboration across different research communities.

This year's track featured 14 accepted contributions, spanning a broad range of topics, from ontology engineering, knowledge graph construction and querying, to knowledge-enhanced retrieval, human-in-the-loop evaluation, and neuro-symbolic AI. Several contributions explored the application of knowledge representation techniques to real-world challenges, including healthcare, robotics, cultural heritage, and misinformation detection.

Together, these works highlight the diversity of emerging research directions in knowledge engineering and the continued importance of translating methodological advances into practical tools and applications.

2.1. Track Chairs

Agnese Chiatti is an Assistant Professor at the AI and Robotics Lab of Politecnico di Milano (Italy). Her research focuses on developing AI systems that combine machine learning with neuro-symbolic reasoning, with a particular emphasis on graph representations for visual understanding, robot perception, and human-machine collaboration.

Alba Morales Tirado is a Research Associate at the Centre for Protecting Women Online. Her current research focuses studying approaches for AI-driven solutions that promote accountability, fairness principles and enhance online safety with particular emphasis on the use of Semantic Web technologies to represent online harms.

2.2. Program Committee

We sincerely thank the members of the Program Committee for their valuable contributions in reviewing the submissions and ensuring the quality of the accepted papers:

- Mark Adamik (Vrije Universiteit Amsterdam, Netherlands)
- Pietro Basci (Politecnico di Torino, Italy)
- Agnese Chiatti (Politecnico di Milano, Italy)
- Chenyang Ding (University of Glasgow, United Kingdom)
- Audrey Ekuban (The Open University, United Kingdom)
- Soline Felice (Université Toulouse Jean Jaurès, IRIT, France)
- Patrik Kompuš (Prague University of Economics and Business, Czech Republic)
- Nicolas Lazzari (University of Bologna, Italy)
- Thomas Lee (Lockheed Martin, USA)
- Francesco Manigrasso (Politecnico di Torino, Italy)
- Alba Catalina Morales Tirado (The Open University, United Kingdom)
- Krishna Pavani Munta (The Open University, United Kingdom)
- Beatriz Olarte-Martinez (Politecnico di Milano, Italy)
- Virginia Ramón Ferrer (Universidad Politécnica de Madrid, Spain)
- Angelo Salatino (The Open University, United Kingdom)
- Giacomo Savazzi (Politecnico di Milano, Italy)
- Jian Wu (Old Dominion University, USA)

2.3. Accepted Papers

The following contributions are included in the Posters and Demos Track proceedings:

- Encoding Guideline Disagreement as First-Class Knowledge: A Neo4j CDSS for Multi-Authority Reconciliation and Dual-Layer Disease Inference (Chenyang Ding, Ahmad Taha and João Ponciano)
- Spygame for Human-in-the-Loop Evaluation of Generated Knowledge Cues (Alonso Ruiz Palomo and Carlos Badenes-Olmedo)
- RoboKGNet: PDDL File Generation Using Knowledge Graphs to Support Neurosymbolic Sense-Plan-Act Loops (Mark Adamik, Paolo Forte and Ilaria Tiddi)
- Unite and Conquer: WebNLG-IR for Evaluating Triple, Text, and Hybrid Retrieval over Multilingual Knowledge Graphs (Virginia Ramón-Ferrer, Carlos Badenes-Olmedo and Oscar Corcho)
- Towards Automated Generation of Entity Graphs for Explaining False or Misleading Claims (Kateřina Haniková, David Chudán, Tomáš Březina and Vojtěch Svátek)
- Towards an Ontological Representation of Memory Concepts through Theories and Models (Soline Felice, Frank Arnould and Cassia Trojahn)
- Visual Modeling of OWL Individuals and Classifier-Based Value Sets in OWLGrEd (Jūlija Ovčiņņikova and Kārlis Čerāns)
- Deploying Sensemaking Robots in Healthcare Environments (Krishna Pavani Munta, Ilyass Tran and Enrico Motta)
- Towards Rich Data Queries From Schema Diagrams (Deniss Fjodorovs and Kārlis Čerāns)
- SABRINA: The Stakeholder Advocate (Audrey B. Ekuban, Ruth Dimes and Enrico Motta)
- CoQuMa: Demonstration of the Competency Question Manager for Collaborative Ontology Requirements Engineering (Johannes Riedel, Jan Martin Keil and Sirko Schindler)
- ANON: Towards a consolidated formal ontology for anonymity, unlinkability, and unobservability (Harry Halpin)
- Transformation Logic for the Role Pattern from PURO to OntoUML (Tomáš Březina)
- Semantic Data Pipeline: A Zero-Install Browser Workbench for Visual Ontology Editing and Event-to-Graph Materialisation (Patrik Kompuš)

3. Workshops and Tutorials Track

3.1. Workshop and Tutorials Chairs

The 25th International Conference on Knowledge Engineering and Knowledge Management (EKAW 2026) explores the diverse realms of knowledge management and engineering, covering topics such as elicitation, acquisition and modelling of knowledge. In particular, EKAW 2026 emphasises New Frontiers in Knowledge Engineering. Alongside the regular conference tracks, EKAW hosts workshops and tutorials.

- EKAW Workshops provide an informal setting in which participants have the opportunity to discuss specific topics in an atmosphere that fosters the exchange of ideas via networking activities.
- EKAW Tutorials enable attendees to fully engage in emerging methods and technologies relevant to knowledge representation and management, established schools of thought, and exciting application areas.

The EKAW-26 edition included five parallel events: two tutorials and three workshops.
The following tutorials were hosted:

- Neural Networks meet Explicit Knowledge Representation: Towards Mechanistic Interpretability and Neuro-symbolic Modeling by-design.

- Unlocking Legal Automation with Semantic Web Technology (ULA-SWeT).

These proceedings include the papers presented at two EKAW26 workshops and the description of the third workshop:

- Extraction and exploitation of long-TAIL Knowledge with LLMs and KGs (X-TAIL).
- Knowledge Management and Process Mining for Law (KM4LAW).
- The Third Playing with Meanings Workshop (PwM3).

Ilaria Tiddi is an Assistant Professor in Hybrid Intelligence at the Vrije Universiteit Amsterdam (Knowledge In AI group). Her research focuses on creating systems that generate complex narratives through a combination of machine learning, semantic technologies, open data and cognitive theories, mostly applied in e-Science and robotics scenarios.

Laura Waltersdorfer is a Senior Scientist and manages the Competence Center for Applied AI and Scientific Computing (AAISC) at Vienna University of Economics and Business. Her current research focus is on how to design and build auditable AI systems and on how to support applied AI in research.

4. Extraction and exploitation of long-TAIL Knowledge with LLMs and KGs (X-TAIL)

LLMs encode world knowledge through pre-training on massive datasets, making them the backbone of knowledge extraction tasks. Their reliability degrades on long-tail knowledge: low-popularity knowledge that occurs infrequently in pre-training data. Popularity is not a neutral property: pre-training datasets are predominantly web-crawled and, as such, are generalist, English-centric, and mostly produced over the past 30 years by Western, High-income, Educated, Liberal, Male-dominated (WHELM, Daryani et al 2025) communities, raising the risk of models underperforming on specialised domains, non-English languages and non-contemporary times sources, and on knowledge belonging to marginalised social groups. The X-TAIL workshop aims to advance research on extracting, exploiting, and ultimately preserving long-tail knowledge. The Workshop was opened by an invited keynote from Rossana Damiano (University of Turin) and featured four paper presentations.

Organising Committee

- Lia Draetta, University of Turin, Italy
- Arianna Graciotti, University of Groningen, Netherlands
- Enrico Daga, The Open University, United Kingdom
- Aidan Hogan, DCC, Universidad de Chile, Chile

Programme Committee

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- Rossana Damiano, University of Turin, Turin, Italy
- Ruhi Mahadeshwar, University of Groningen, Groningen,Netherlands
- Stefano De Giorgis, Vrije Universiteit Amsterdam, Amsterdam, Netherlands
- Stella Verkijk, Vrije University Amsterdam, Netherlands
- Teresa Paccosi, KNAW, Amsterdam, Netherlands

Accepted Papers

- All Present, None Accounted For: Named Entity Extraction as Diagnostic for Long-Tail Knowledge in Historical Archives. Jude Majumdar and Delfi Sol Martinez Pandiani
- ROBE: Reversed-Order-Biased-Experts for Extracting Extreme Long-tail Events from Historical Texts. Stella Verkijk and Piek Vossen
- MultiAgent-Constructed Knowledge Bases for Long-Tail Microbial Question Answering. Sandro Gepiro Contaldo, Giuseppe Mammolo, Sergio Rabellino, Giovanna Cristina Varese, Marco Aldinucci, Rossana Damiano, and Marco Beccuti
- From Travelogue to Knowledge Graph: An End-to-End Pipeline with Open-Weight LLMs for 19th-Century Dutch Travel Narratives. Tijn Donners and Franziska Pannach

5. Knowledge Management and Process Mining for Law (KM4LAW)

The way legal knowledge is modelled, analysed, and applied is rapidly transforming. This shift is primarily driven by the growing availability of legal data and recent advances in Artificial Intelligence (AI), Knowledge Representation and Reasoning (KRR), Natural Language Processing (NLP), Large Language Models (LLMs), and Process-Oriented Data Science. To explore these changes, the KM4LAW workshop provides an interdisciplinary forum for researchers and practitioners. We welcome contributions addressing the extraction, representation, interpretation, and use of legal knowledge from structured and unstructured sources. Relevant topics include legal ontologies, knowledge graphs, information extraction, argumentation, explainable AI for law, multilingual legal NLP (including cross-lingual transfer, semantic alignment, and legal translation), and the application of LLMs to tasks like summarisation, classification, and decision support. In addition, KM4LAW promotes research on legal processes and regulatory compliance through process mining techniques, such as process discovery, conformance checking, and predictive process monitoring. The growing adoption of digital procedures in courts and public administrations creates new opportunities to combine legal knowledge modelling with process-aware methods. By connecting communities across AI & Law, KRR, NLP, and Business Process Management, KM4LAW fosters collaboration and innovative approaches for the next generation of legal information systems.

Organising Committee

- Davide Audrito, European Commission (DG DIGIT B.2), University of Turin, Italy
- Rachele Mignone, University of Turin, Italy, University of Bologna Italy, University of Luxembourg, Luxembourg
- Roberto Nai, University of Turin, Italy
- Emilio Sulis, University of Turin, Italy

Programme Committee

- Beatriz Esteves, Ghent University, Belgium
- Federico Torrielli, University of Torino, Italy
- Michele Corazza, Università di Bologna, Italy
- Massimiliano Ronzani, FBK
- Sergio Picascia, Università degli Studi di Milano, Italy
- Andrea Vandin, Sant'Anna School of Advanced Studies, Italy
- Simone Agostinelli, Universitas Mercatorum, Italy
- Giuseppe Contissa, University of Bologna, Italy
- Galileo Sartor, Swansea University, Wales
- Salvatore Sapienza, University of Bologna, Italy

Accepted Papers

- Retrieval-Augmented Question Answering using the EU AI Act. Purbasha Chowdhury, Alberto De Lazzari, Teresa Scantamburlo and Paolo Falcarin
- The Violation Situation Pattern: Persistent Representation of Compliance Violations in Knowledge Graphs. Nima Kamali Lassem, Fuqi Song and Seyid Amjad Ali
- Vacuity Matters: Activation-Aware DECLARE Conformance Checking of Judicial Event Logs. Roberto Nai, Emilio Sulis, Vittoria Margherita Sofia Trifiletti and Alessandro Gianola

6. Playing with Meanings workshop (PwM3)

The Playing with Meanings 3rd edition (PwM3) continues to develop ontology-driven knowledge co-production methodologies, with new ontology games and group modelling activities that address three distinct topics: i) Knowledge Engineering and Justice Assessment ii) Bridging Intangible Cultural Heritage and Social-Ecological Systems iii) Modelling Discourses on Urban Systems and Place-making Together we will collaboratively generate and examine scenarios, practice group modelling with ontologies, and discuss pluralism and justice, ontological analysis and shared understandings. A variety of card games, role-play exercises, group modelling activities will be enacted; each integrates, teaches, and produces through the use of dedicated domain ontologies as well as the foundational ontologies UFO, BFO and DOLCE. PwM3 at EKAW2026 will be a full-day workshop, with three dedicated sessions, practising participatory ontology engineering together.

Organising Committee

- Max Willis, Free University of Bozen-Bolzano, Italy
- Greta Adamo, Free University of Bozen-Bolzano, Italy

Acknowledgments

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Declaration on Generative AI

During the preparation of this work, the editors used OpenAI ChatGPT for formatting assistance, and grammar and spelling check activities, as defined by the CEUR-WS GenAI Usage Taxonomy. Specifically, the tool helped with formatting conference metadata and proceedings lists. After using the tool, the editors reviewed and edited the content as needed and take full responsibility for the publication's content.