

FLOC 2026  
SKILLED-LLMS 2026

# Call For Papers

Joint Workshop on Statistics and  
Knowledge Integration for Logic,  
Learning, Ethical Decisions, and LLMs

Pin The Date  
18th  
July, 2026

Lisbon, Portugal

## Theme

Unraveling the Complexities  
of Synergizing LLMs with  
Logic, Reasoning, and Ethics

### Example topics for SKILLED-LLMS

- ✓ Formalizing and characterizing LLM reasoning
- ✓ Knowledge integration for reasoning
- ✓ Multi-agent reasoning and deliberation with ethical rules
- ✓ and more (check 2<sup>nd</sup> page)

## Submission Details

### Paper Contributions

Regular papers                      9 pages  
Short/Position papers              5 pages

### Registration Information

Visit [FLoC Registration](https://www.floc26.org/registration) page  
<https://www.floc26.org/registration>

## Important Dates

April 20, 2026

Paper  
submission  
deadline

May 20, 2026

Acceptance  
notification

June 26, 2026

Camera ready  
submission  
deadline

June 1, 2026

Registration and  
payment  
deadline

July 18, 2026

Workshop  
date

SKILLED-LLMs is Co-located with

The Federated Logic Conference (FLoC)

Lisbon, Portugal - July 2026

### Submission Link

[https://easychair.org/publications/for\\_authors](https://easychair.org/publications/for_authors)

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## About The Workshop

Reasoning is the cognitive process that underpins the extraction of meaningful insights from stored knowledge, facilitating decision-making. This workshop creates a platform for researchers from different disciplines and AI perspectives to explore approaches and techniques that reconcile reasoning between large language models (LLMs) and logic-based representations, and to formalize the type of reasoning language models perform. Knowledge representation and reasoning (KRR) approaches can be integrated with LLMs via neuro-symbolic means and statistically grounded knowledge integration in order to build AI systems that possess more human-like cognitive abilities, combining a strong reasoning component with a clear textual communicative element. Furthermore, ethical concerns surrounding LLMs emerged to the forefront, with issues such as bias and lack of transparency in decision-making highlighting the need for responsible deployment and use. The workshop emphasizes the need for integration between reasoning and ethics and the ability to achieve this via transparent knowledge representation methods. Overall, the synergy of reasoning and LLMs offers the potential to harness the strengths of both while promoting ethical AI development. This joint workshop brings together the communities of statistical learning, knowledge integration, KRR, neuro-symbolic AI, and responsible AI to advance methods, evaluations, and real-world systems that make reasoning-centric LLMs more trustworthy in critical settings.

## Topics include, but are not limited to:

- Formalizing and characterizing LLM reasoning
- Statistical-symbolic reasoning under uncertainty
- Knowledge integration for reasoning
- Neuro-symbolic methods for KR and reasoning in LLMs
- Logical constraints injection in LLM generation
- Argumentation, negotiation, and agent-based reasoning in LLMs
- Retrieval-augmented reasoning with structured knowledge
- Unstructured data conversion to knowledge graphs
- Calibration and confidence for reasoning systems
- Causal and counterfactual reasoning for trustworthy decisions
- Explainable and auditable reasoning
- Ethics-aware reasoning and normative constraints
- Bias and fairness in reasoning outputs
- Verification and validation of LLM reasoning
- Human-In-The-Loop oversight for AI decisions
- Privacy and security in knowledge-integrated LLM systems
- Continuous and adaptive knowledge integration
- Tool-augmented LLM reasoning
- Multi-agent reasoning and deliberation with ethical rules
- Evaluation of reasoning quality across paradigms
- High-impact applications and deployment use cases

## Organizers

- Ken Satoh Center for Juris-Informatics, ROIS-DS, Tokyo, Japan
- Ha Thanh Nguyen, Center for Juris-Informatics, ROIS-DS, Tokyo, Japan
- Francesca Toni, Imperial College London, United Kingdom
- Randy Goebel, Alberta Machine Intelligence Institute, University of Alberta, Canada
- Kostas Stathis Royal Holloway University of London, United Kingdom
- Nourhan Ehab, Faculty of Media Engineering and Technology, German University in Cairo, Egypt
- Mervat Abuelkheir, Faculty of Media Engineering and Technology, German University in Cairo, Egypt
- Yves Lesperance, Department of Electrical Engineering and Computer Science, York University, Toronto, Canada
- Elena Umili, Sapienza University of Rome, Italy
- Francesco Chiariello, Chair of Machine Learning and Reasoning, RWTH Aachen University, Germany
- Matteo Magnini, Department of Computer Science, University of Luxembourg, Luxembourg
- Federico Sabbatini, University of Urbino, Italy

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