Preface of the Joint Proceedings of the Workshops and Doctoral Consortium of the 42nd International Conference on Logic Programming

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Abstract

This volume collects the papers accepted for publication at five workshops and the Doctoral Consortium associated with the 42nd International Conference on Logic Programming (ICLP 2026). The events took place in Lisbon, Portugal, on July 20-23, 2026. There were 57 papers submitted for peer-review to the workshops and the Doctoral Consortium included in this volume. After a thorough review process, 55 papers were accepted for publication, 44 of which were presented at the workshops and 11 at the Doctoral Consortium. Of the 44 workshop papers presented at workshops, 36 were regular papers, 6 were short papers, and 2 were abstracts corresponding to invited talks. The Doctoral Consortium papers were all short papers.

1. Answer Set Programming and Other Computing Paradigms

19th Workshop on Answer Set Programming and Other Computing Paradigms (ASPOCP 2026)

The *Workshop on Answer Set Programming and Other Computing Paradigms* (ASPOCP) has been running for almost twenty years, providing a well-established forum with a strong program committee and active community. ASPOCP covers ASP and its connections to other paradigms such as SAT, SMT, QBF, FO(ID), and constraint programming, as well as applications and extensions. The nineteenth edition of ASPOCP comprises a total of fourteen works, consisting of twelve regular papers, one short paper from an already published paper and an extended abstract corresponding to the invited talk.

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2. Cognitive Architectures for Robotics: LLMs and Logic in Action

2nd Workshop on Cognitive Architectures for Robotics: LLMs and Logic in Action (CARLA 2026)

The 2nd Workshop on Cognitive Architectures for Robotics: LLMs and Logic in Action (CARLA) explored the integration of large language models, symbolic reasoning, and logic-based systems to advance intelligent robotics. Emphasizing hybrid approaches that combine the adaptability of data-driven models with the precision of symbolic solvers, CARLA featured five papers: four regular papers (including one pre-published paper) and one short paper. These contributions addressed declarative multi-robot coordination using DALI2 and vision-capable LLMs, ASP-guided extraction of executable plans from visual assembly manuals, and hierarchical LLM-symbolic planning under temporal constraints. They also explored knowledge-based ad hoc teamwork with incremental natural-language learning and neuro-symbolic video anomaly detection combining object recognition, rule-based reasoning, and selective VLM consultation. Together, they demonstrated the potential of cognitive architectures for enabling robust, explainable, and adaptable robotic behavior in complex domains.

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3. End-User Logic Programmning

1st Workshop on End-User Logic Programmning (EULP 2026)

The End-user Logic Programming (EULP 2026) workshop focuses on making logic programming more *accessible* for non-experts. By fostering research in this direction, logic programming can gain more traction in industry, with adoption becoming more of an industry pull rather than an academic push. Our first edition of EULP was a success, with six works in total: four short papers, one regular paper, and an abstract for the invited talk.

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4. Prolog Education

4th Prolog Education Workshop (PEG 2026)

This part of the volume contains the papers presented at the Forth Prolog Education Workshop, PEG 2026, one of the initiatives of the Prolog Education Group 2.0 (PEG 2.0). We received 14 submissions, all of which were reviewed by at least two referees. All 14 submissions were accepted as regular papers. In addition to the technical papers, the workshop included an invited talk given by Robert A. Kowalski (Imperial College, UK) together with Miguel Calejo (Logical Contracts) titled "Teaching Logical Thinking through Logic Programming using Logical English, Argumentation Games and Animations."

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5. Experimental Evaluation of Algorithms for Solving Problems with Combinatorial Explosion

33rd Workshop on Experimental Evaluation of Algorithms for Solving Problems with Combinatorial Explosion (RCRA 2026)

Many problems in Artificial Intelligence show an exponential explosion of the search space, and are addressed with algorithms that aim at an effective exploration. Research in Artificial Intelligence has focused on experimental evaluation of algorithms, and the implementation of systems for solving such problems. The scope of the 33rd International Workshop on Experimental Evaluation of Algorithms for Solving Problems with Combinatorial Explosion (RCRA 2026) is fostering the cross-fertilisation of ideas from different areas, analyzing and comparing models and algorithms from an experimental viewpoint. Out of 6 papers presented at RCRA 2026, this volume contains 6 regular papers.

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6. Doctoral Consortium

22nd Doctoral Consortium on Logic Programming

The Doctoral Consortium (DC) on Logic Programming provides students and early-career researchers with the opportunity to present and discuss their research directions and obtain feedback from both peers and experts in the field. The DC is designed for students at any stage of their doctoral studies, or who are about to start it. Applicants conduct research in areas related to logic and constraint programming, where the topics of interest include (but are not limited to): Foundations, Languages, Declarative Programming, Implementation, Applications, Related Paradigms and Synergies. The 22nd edition of the DC has been combined with the Summer School on Logic Programming and it comprises a total of 11 short papers.

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