

Publications – Dr. Sagar Malhotra

The following is a list of my peer-reviewed publications, ordered as conference, journal and selected (peer-reviewed) workshop contributions. I indicate the conference ranking using the [CORE ranking system](#) in parentheses: A* denotes a flagship international conference (top ~8% of all computer science conferences), while A signifies an internationally excellent conference (top ~15%). The *Artificial Intelligence Journal* is widely recognized as one of the leading journals in the fields of artificial intelligence and machine learning.

Since 2022, I have produced **9 top-tier publications** (i.e. in conferences ranked A* or A, or in Q1 journals) and **2 award winning publications**. Additionally, I have supervised multiple students, in different roles, leading to publications. I have underlined such supervised student coauthors.

Conference Publications

- 2025 Alexander Pluska and **Sagar Malhotra**
On Local Limits of Sparse Random Graphs:
Color Convergence and the Refined Configuration Model
Neural Information Processing Systems 2025.
[NeurIPS 2025](#) (CORE Rank A*, 24.52% acceptance rate)
- 2025 Peter Blohm, Patrick Indri, Thomas Gärtner, **Sagar Malhotra**
Probably Approximately Global Robustness Certification
International Conference of Machine Learning 2025.
[ICML 2025](#) (CORE Rank A*, 26.9% acceptance rate)
- 2025 Steve Azzolin[†], **Sagar Malhotra**[†], Andrea Passerini, Stefano Teso
Beyond Topological Self-Explainable GNNs: A Formal Explainability Perspective
International Conference of Machine Learning 2025.
[ICML 2025](#) ([†]Equal Contribution, CORE Rank A*, 26.9% acceptance rate)
- 2024 Alexander Pluska, Pascal Welke, Thomas Gärtner and **Sagar Malhotra**.
Logical Distillation of Graph Neural Networks
International Conference on Principles of Knowledge Representation and Reasoning 2024
[KR 2024](#) (CORE Rank A*, 17% acceptance rate in the special track. **Honorable Mention**)
- 2024 Florian Chen, Felix Weitkämper, and **Sagar Malhotra**.
Understanding Domain-Size Generalization in Markov Logic Networks
Machine Learning and Knowledge Discovery in Databases. Research Track - European Conference ECML PKDD 2024 (CORE Rank A, 24% acceptance rate)
- 2024 Alessandro Daniele, Tommaso Campari, **Sagar Malhotra** and Luciano Serafini
Simple and Effective Transfer Learning for Neuro-Symbolic Integration
International Conference on Neural-Symbolic Learning and Reasoning, NeSy 2024
[NeSy 2024](#) (**Best Paper Award**)
- 2023 Alessandro Daniele, Tommaso Campari, **Sagar Malhotra** and Luciano Serafini.
Deep Symbolic Learning: Discovering Symbols and Rules from Perception
International Joint Conference on Artificial Intelligence 2023
[IJCAI 2023](#) (CORE Rank A*, 15% acceptance rate)

2022 **Sagar Malhotra** and Luciano Serafini
On Projectivity in Markov Logic Networks
Machine Learning and Knowledge Discovery in Databases. Research Track - European Conference ECML PKDD 2022 (CORE Rank A, 26% acceptance rate).

2022 **Sagar Malhotra** and Luciano Serafini
Weighted Model Counting in FO^2 with Cardinality Constraints and Counting Quantifiers:
A Closed Form Formula
AAAI Conference on Artificial Intelligence 2022
[AAAI 2022](#) (CORE Rank A*, 15% acceptance rate, accepted as oral presentation)

2021 **Sagar Malhotra** and Luciano Serafini
A Combinatorial Approach to Weighted Model Counting in the Two Variable Fragment
with Cardinality Constraints
International Conference of the Italian Association for Artificial Intelligence 2019
[AlxIA 2021](#)

Journal Publications

2025 **Sagar Malhotra**, Davide Bizzaro and Luciano Serafini
Lifted Inference beyond First Order Logic
Artificial Intelligence Journal.
[AIJ \(Q1 Journal\)](#)

Under Review

2025 Steve Azzolin, Stefano Teso, Bruno Lepri, Andrea Passerini, and **Sagar Malhotra**
GNN Explanations that do not Explain and How to find Them
Under Review at International Conference on Learning Representations 2025.
Pre-rebuttal Score: Accept (8), Weak Accept (6) and Weak Reject (4)
[ICLR 2025](#)

Selected Workshop Publications (Peer-reviewed)

2025 Anton Zamyatin, Patrick Indri, **Sagar Malhotra** and Thomas Gärtner
Is BatchEnsemble a Single Model? On Calibration and Diversity of Efficient Ensembles
Epistemic Intelligence in Machine Learning Workshop, EurIPS 2025
[EIML@EurIPS2025](#)

2025 Klaus Weinbauer, Tieu-Long Phan, Peter F. Stadler, Thomas Gärtner, and **Sagar Malhotra**
Prime Implicant Explanations for Reaction Feasibility Prediction
Workshop on Advances in Interpretable ML and AI, ECML-PKDD 2025
[AIMLAI, ECML PKDD 2025](#)

2024 Patrick Indri, Peter Blohm, Anagha Athavale, Ezio Bartocci, Georg Weissenbacher, Matteo Maffei, Dejan Nickovic, Thomas Gärtner, **Sagar Malhotra**
Distillation based Robustness Verification with PAC Guarantees
Next Generation of AI Safety Workshop, ICML 2024
[NextGenAISafety, ICML 2024](#)

2023 Alessandro Daniele, Tommaso Campari, **Sagar Malhotra** and Luciano Serafini.
Deep Symbolic Learning: Discovering Symbols and Rules from Perception
International Workshop on Neural-Symbolic Learning and Reasoning 2023
[NeSy 2023](#) (Accepted for spotlight presentation)