

List of Publications (in order of relevance to the application)¹

- 2025 Peter Blohm, Patrick Indri, Thomas Gärtner, **Sagar Malhotra**
Probably Approximately Global Robustness Certification
Accepted for publication at the International Conference of Machine Learning 2025.
[Preprint, To appear in 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
[†]Equal Contribution. Accepted for publication at the International Conference of Machine Learning 2025. [Arxiv, To appear in ICML 2025](#) (CORE Rank A*, 26.9% acceptance rate)
- 2025 **Sagar Malhotra**, Davide Bizzaro and Luciano Serafini
Lifted Inference beyond First Order Logic
Under Review at Artificial Intelligence Journal (Major Revision)
[Arxiv](#)
- 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 special track)
- 2024 Florian Chen, Felix Weitekämper, 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
[ECML PKDD 2024](#) (CORE Rank A, 24% acceptance rate)
- 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)
- 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](#) (Accepted as full paper with a spotlight presentation)
- 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
[ECML PKDD 2022](#)(CORE Rank A, 26% acceptance rate).
- 2022 **Sagar Malhotra** and Luciano Serafini
Weighted Model Counting in FO² 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)

¹Supervised student coauthors are underlined.

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 Gaurentees

Next Generation of AI Safety Workshop, ICML 2024

[NextGenAISafety, ICML 2024](#)

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