Publications[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
Artificial Intelligence Journal. AIJ

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
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
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**)

[1]Supervised student coauthors are underlined.

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
AIxIA 2021

Workshop Publications[1]

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

2024 Alexander Pluska, Pascal Welke, Thomas Gärtner and **Sagar Malhotra**.
Logical Distillation of Graph Neural Networks
Workshop on Mechanistic Interpratability, ICML 2024
MI Workshop, 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**)

2022 **Sagar Malhotra** and Luciano Serafini
On Projectivity in Markov Logic Networks
International Workshop on Probabilistic Logic Programming 2022
PLP 2022

2021 **Sagar Malhotra** and Luciano Serafini. Weighted Model Counting in FO^2 with Cardinality Constraints and Counting Quantifiers: A Closed Form Formula
International Workshop on Statistical Relational AI, IJCLR 2021.
StarAI, IJCLR 2021

2020 **Sagar Malhotra** and Luciano Serafini. Weighted Model Counting in C^2 (Abstract)
Workshop on Machine Learning and Data Mining, AIxIA 2020
MLDM 2020

Preprints[1]

2025 Peter Blohm, Patrick Indri, Thomas Gärtner, **Sagar Malhotra**
Probably Approximately Global Robustness Certification
Link

2025 Steve Azzolin*, **Sagar Malhotra***, Andrea Passerini, Stefano Teso
Beyond Topological Self-Explainable GNNs: A Formal Explainability Perspective
*Equal Contribution. Arxiv

2024 Davide Bizzaro, Luciano Serafini and **Sagar Malhotra**
Towards Counting Markov Equivalence Classes with Logical Constraints
Arxiv

[1]Supervised students coauthors are underlined