

## Publications<sup>1</sup>

- 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<sup>†</sup>, **Sagar Malhotra**<sup>†</sup>, Andrea Passerini, Stefano Teso  
Beyond Topological Self-Explainable GNNs: A Formal Explainability Perspective  
<sup>†</sup>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](#) (Q1 Journal)
- 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 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)
- 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<sup>2</sup> 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**)

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<sup>1</sup>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<sup>1</sup>

- 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 Interpretability, 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<sup>1</sup>

- 2024 Davide Bizzaro, Luciano Serafini and **Sagar Malhotra**  
Towards Counting Markov Equivalence Classes with Logical Constraints  
[Arxiv](#)

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