

## Conference Publications<sup>1</sup>

- 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)
- 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](#) (Accepted as full paper with a spotlight presentation)
- 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)
- 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](#)

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<sup>1</sup>Supervised student coauthors are underlined.

- 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](#)
- 2023 **Sagar Malhotra**, Davide Bizzaro and Luciano Serafini  
 Lifted Inference beyond First Order Logic  
*Under Review at Artificial Intelligence Journal (Major Revision)*  
[Arxiv](#)

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