

Anselm Paulus

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✂ AnselmPaulus • [a-paulus](https://github.com/a-paulus) • Last updated on September 7, 2025

Current Position

Research Scientist Intern, *Meta, Fundamental AI Research (FAIR)*, Menlo Park, CA (with [Arman Zharmagambetov](#) on game-theoretical perspectives on LLM safety) 2025 – Present
Ph.D. Student in Machine Learning, *University of Tuebingen & Max-Planck-Institute for Intelligent Systems*, Tuebingen, Germany (supervised by [Georg Martius](#) on differentiable optimization and simulation) 2022 – Present

Education

M.Sc. in Computer Science, *University of Tuebingen* (4.00/4.00) 2021 – 2022
B.S. in Computer Science, *University of Tuebingen* (3.73/4.00) 2018 – 2021
B.S. in Physics, *University of Tuebingen* (3.80/4.00) 2015 – 2021

Previous Positions

Research Scientist Intern, *Meta, Fundamental AI Research (FAIR)*, New York City (with [Brandon Amos](#) on amortized optimization for LLM safety) 2023 – 2024
Research Assistant, *Max-Planck-Institute for Intelligent Systems*, Tuebingen, Germany (with [Georg Martius](#) on differentiable combinatorial optimization) 2016 – 2019

Publications [Google Scholar: 0.9k+ citations]

Selected publications I am a primary author on are highlighted.

2025.....

1. [AdvPrompter: Fast Adaptive Adversarial Prompting for LLMs](#) [code]
Anselm Paulus*, Arman Zharmagambetov*, Chuan Guo, Brandon Amos[†], and Yuandong Tian[†]
ICML 2025
2. [Hard Contacts with Soft Gradients: Refining Differentiable Simulators for Learning and Control](#)
Anselm Paulus*, Andreas René Geist*, Pierre Schumacher, Vít Musil, and Georg Martius
Under submission 2025

2024.....

3. [LPGD: A General Framework for Backpropagation through Embedded Optimization Layers](#) [code]
Anselm Paulus, Georg Martius, and Vít Musil
ICML 2024

2023.....

4. [Backpropagation through Combinatorial Algorithms: Identity with Projection Works](#) [code]
Anselm Paulus*, Subham Sekhar Sahoo*, Marin Vlastelica, Vít Musil, Volodymyr Kuleshov, and Georg Martius
ICLR 2023

2021.....

5. [CombOptNet: Fit the Right NP-Hard Problem by Learning Integer Programming Constraints](#) [code]
Anselm Paulus, Michal Rolínek, Vít Musil, Brandon Amos, and Georg Martius
ICML 2021 (Spotlight, Oral at LMCA NeurIPS 2020 workshop)

2020.....

6. [Differentiation of Blackbox Combinatorial Solvers](#) [code]
Anselm Paulus*, Marin Vlastelica P.*, Vít Musil, Georg Martius, and Michal Rolínek
ICLR 2020 (Spotlight)
7. [Optimizing Rank-based Metrics with Blackbox Differentiation](#) [code]
Michal Rolínek*, Vít Musil*, **Anselm Paulus**, Marin Vlastelica P., Claudio Michaelis, and Georg Martius
CVPR 2020 (Oral, best paper award nomination)
8. [Deep Graph Matching via Blackbox Differentiation of Combinatorial Solvers](#) [code]
Michal Rolínek, Paul Swoboda, Dominik Zietlow, **Anselm Paulus**, Vít Musil, and Georg Martius
ECCV 2020

Open Source Repositories

0.6k+ GitHub stars across all repositories.

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|---|------|
| 1. facebookresearch/advprompter — ★162 — <i>AdvPrompter (Adversarial attacks on LLMs)</i> | 2025 |
| 2. martius-lab/diffcp-lpgd — ★2 — <i>Lagrangian Proximal Gradient Descent (now merged into CVXPY)</i> | 2024 |
| 3. martius-lab/solver-differentiation-identity — ★10 — <i>Blackbox Identity Differentiation</i> | 2023 |
| 4. martius-lab/CombOptNet — ★72 — <i>CombOptNet</i> | 2021 |
| 5. martius-lab/blackbox-deep-graph-matching — ★88 — <i>Deep Graph Matching</i> | 2020 |
| 6. martius-lab/blackbox-backprop — ★346 — <i>Blackbox Differentiation</i> | 2020 |

Invited Talks

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| 1. <i>AdvPrompter: Fast Adaptive Adversarial Prompting for LLMs</i> — Masaryk University, Brno, Czechia | 2024 |
| 2. <i>On differentiable combinatorial optimization</i> — Dagstuhl Seminar: Machine Learning and Logical Reasoning: The New Frontier | 2022 |

Professional Activities

Reviewing.....

International Conference on Learning Representations (ICLR): 2022, 2023, 2024, 2025

International Conference on Machine Learning (ICML): 2022, 2023, 2024, 2025

Neural Information Processing Systems (NeurIPS): 2021, 2022, 2025

Neural Information Processing Systems (NeurIPS) DiffCoAlg Workshop: 2025

Skills

Programming	C++, Java, Python
Frameworks	JAX, NumPy, Pandas, PyTorch, SciPy, TensorFlow
Toolbox	Linux, emacs, git, tmux, zsh, uv, vscode