

Anselm Paulus

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𝕏 [AnselmPaulus](#) • [a-paulus](#) • Last updated on December 15, 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.

1. [a-paulus/softjax](#) — ★0 — *Softjax (library for differentiable operations in JAX)* 2025
2. [facebookresearch/advprompter](#) — ★162 — *AdvPrompter (Adversarial attacks on LLMs)* 2025
3. [martius-lab/diffcp-lpgd](#) — ★2 — *Lagrangian Proximal Gradient Descent (now merged into CVXPY)* 2024
4. [martius-lab/solver-differentiation-identity](#) — ★10 — *Blackbox Identity Differentiation* 2023
5. [martius-lab/CombOptNet](#) — ★72 — *CombOptNet* 2021
6. [martius-lab/blackbox-deep-graph-matching](#) — ★88 — *Deep Graph Matching* 2020
7. [martius-lab/blackbox-backprop](#) — ★346 — *Blackbox Differentiation* 2020

Invited Talks

1. *AdvPrompter: Fast Adaptive Adversarial Prompting for LLMs* — Masaryk University, Brno, Czechia 2024
2. *On differentiable combinatorial optimization* — 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