# SOPHIE OSTMEIER

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## RESEARCH FOCUS

MD and CS PhD Fellow at ETH Zurich working on LLM training and evaluation for high-stakes environments. First-author papers at ICML and EMNLP. My work covers transformer architecture, LLM fine-tuning, and evaluation methods that detect when a model is incorrect.

## EDUCATION

**ETH Zurich**, Computer Science PhD Fellow at ETH AI Center — *Switzerland* 08/2026 - present
- Advised by Florian Tramèr and Yannis Chronis

**Stanford University**, Master's in Computer Science, AI specialization — *USA* 09/2024 - 09/2025
- GPA: 3.985/4

**Technical University of Munich**, MD — *Germany* 10/2015 - 11/2021
- Clinical Staatsexamen: Top 1.1% in Germany

## SELECTED PUBLICATIONS (1,000+ citations, h-index 14)

*Transformer architecture & LLM training*

Blankemeier, L. . . . **Ostmeier, S.** et al. 2026. "Merlin: A Computed Tomography Vision-Language Foundation Model and Dataset". In: *Nature*

**Ostmeier, S.** et al. 2025. "LieRE: Lie Rotational Positional Encodings". In: *ICML*. https://github.com/StanfordMIMI/LieRE

Delbrouck, J.-B. . . . **Ostmeier, S.** et al. 2025. "Automated Structured Radiology Report Generation". In: *ACL*

**Ostmeier, S.** et al. 2024. "GREEN: Generative Radiology Report Evaluation and Error Notation". In: *EMNLP, Findings*. https://github.com/Stanford-AIMI/GREEN

*Detecting when models are wrong*

**Ostmeier, S.** et al. 2026. "Gradient-Stable Attention Heads Signal LLM Correctness". In: *EMNLP, Findings*. https://github.com/StanfordMIMI/HeadEntropy

Varma, M. . . . **Ostmeier, S.** et al. 2026. "Symbal: Detecting Systematic Misalignments in Model-Generated Captions". In: *ICML*

Varma, M. . . . **Ostmeier, S.** et al. 2025. "TRoVe: Discovering Error-Inducing Static Feature Biases in Temporal Vision-Language Models". In: *NeurIPS*

*Clinical deep learning*

**Ostmeier, S.** et al. 2024. "Random expert sampling for deep learning segmentation of acute ischemic stroke on non-contrast CT". In: *Journal of NeuroInterventional Surgery*. US Patent

## EXPERIENCE

**University Hospital Zurich (USZ)**, Radiology Resident — *Switzerland* 10/2025 - 07/2026
- Completed neuroradiology rotation; part of emergency staff

**Stanford University**, Postgraduate Researcher, AIMI Center — *USA* 02/2022 - 09/2025
- Advised by Curtis Langlotz, Akshay Chaudhari and Jeremy Heit

**IQVIA** (formerly IMS Health), Working Student — *Germany* 01/2015 - 07/2017
- Healthcare consulting group, Munich

## TECHNICAL SKILLS

**ML:** Python, PyTorch, Hugging Face Transformers, scikit-learn, NumPy, SciPy, Pandas, R
**Infrastructure:** Git, Docker, Google Cloud Platform, SkyPilot, W&B, TensorBoard, SLURM

## AWARDS & SCHOLARSHIPS

**ETH AI Center PhD Fellowship** — 08/2026 - present
**DFG Walter Benjamin Fellowship**, German Research Foundation — 05/2023 - 05/2025
**DAAD RISE Worldwide Fellowship**, German Academic Exchange Service — 07/2019 - 10/2019