

STEFAN KOLEK

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EDUCATION

- Ludwig-Maximilians-Universität München**, Munich, Germany since May 2021
PhD Candidate in Computer Science
- Technische Universität Berlin**, Berlin, Germany March 2021
MS in Mathematics
- Ludwig-Maximilians-Universität München**, Munich, Germany August 2018
BS in Mathematics

RESEARCH INTERESTS

My research focuses on Explainable AI and Differentially Private Machine Learning.

PUBLICATIONS

- G. Kaissis, A. Ziller, **S. Kolek**, A. Riess, D. Rückert. *Optimal Privacy Guarantees Against Sub-Optimal Adversaries in Differentially Private Machine Learning*. **NeurIPS 2023**
- S. Kolek**, R. Windesheim, H. Andrade Loarca, G. Kutyniok, R. Levie. *Explaining Image Classifiers with Multiscale Directional Image Representation*. **CVPR 2023**
- S. Kolek**, D. Nguyen, R. Levie, J. Bruna, G. Kutyniok. *Cartoon Explanations of Image Classifiers*. **ECCV 2022 (Oral)**

PREPRINTS

- S. Kolek**, A. Chattopadhyay, K. Chan, G. Kutyniok, R. Vidal. *Learning Interpretable Queries for Explainable Image Classification with Information Pursuit*. December 2023.

WORKSHOP PAPERS

- T. Mueller, **S. Kolek**, F. Jungmann, A. Ziller, D. Usynin, M. Knolle, D. Rueckert, G Kaissis. *How Do Input Attributes Impact the Privacy Loss in Differential Privacy?* **AAAI 2023**, Workshop on Privacy-Preserving Artificial Intelligence.
- S. Kolek**, D. Nguyen, R. Levie, J. Bruna, G. Kutyniok. *A Rate-Distortion Framework for Explaining Black-Box Model Decisions*. xxAI-Beyond Explainable AI. International Workshop, Held in Conjunction with **ICML 2020**.

RESEARCH VISITS

- Technion**, Israel. *Invitation by Prof. Ron Levie*. March 2023

INVITED TALKS

- Technion**, Israel. *Applied Math Seminar, Invitation by Prof. Ron Levie*. March 2023
- Tel Aviv University**, Israel. *EE-Computer Vision Seminar, Invitation by Prof. Raja Giryes*. March 2023

ACADEMIC SERVICE

Reviewer

- Transactions on Machine Learning Research (TMLR)*. Oct 2023

TEACHING

- Ludwig-Maximilians-Universität München**, Munich, Germany. Teaching Assistant.
High Dimensional Probability (MS Mathematics) Fall 2023

<i>Modern Mathematics of Deep Learning Seminar (MS Mathematics)</i>	<i>Summer 2023</i>
<i>Mathematical and Statistical Foundations of Machine Learning (MS Mathematics)</i>	<i>Summer 2023</i>
<i>High Dimensional Probability (MS Mathematics)</i>	<i>Fall 2022</i>
<i>Mathematics 2 (BS Mathematics Teacher Track)</i>	<i>Summer 2022</i>
<i>Mathematics 1 (BS Mathematics Teacher Track)</i>	<i>Fall 2021</i>
<i>Analysis 2 (BS Mathematics)</i>	<i>Summer 2021</i>

SCHOLARSHIPS

Ludwig-Maximilians-Universität München PhD Mentoring Scholarship February 2023

- *Mentorship program for scientists on their way to an academic career.*
- *Annual Travel Grant.*

Associate of the Konrad Zuse School of Excellence in Reliable AI March 2023

- *Mentorship by transdisciplinary thesis advisory committee.*
- *Annual Travel Grant.*

SUMMER SCHOOLS

International Computer Vision Summer School, Italy. July 2023

TECHNICAL SKILLS

Computer Programming: *Python, PyTorch, Unix, Git*

Languages: *German (native/bilingual), Spanish (fluent/bilingual), English (fluent)*