

Shpresim Sadiku

Education

09/20 - 09/25 Ph.D., Mathematics, Technische Universität Berlin (TU Berlin)

Advisor: Prof. Dr. Sebastian Pokutta

Thesis: Explaining Deep Neural Networks Through Inverse Classification

10/17 - 05/20 M.Sc., Mathematics in Data Science, Technical University of Munich (TUM)

Advisor: Prof. Dr. Michael Wolf

Thesis: Adversarial Deformations for Neural Ordinary Differential Equations

10/14 - 07/17 B.Sc., Mathematics, University of Tirana

Advisor: Prof. Dr. Artur Baxhaku

Publications

Sadiku, S., Wagner, M., Nagarajan, S. G., and Pokutta, S. (2025). S-CFE: Simple Counterfactual Explanations. In *Proceedings of International Conference on Artificial Intelligence and Statistics (AISTATS)*.

Sadiku, S., Wagner, M., and Pokutta, S. (2025). GSE: Group-wise Sparse and Explainable Adversarial Attacks. In *Proceedings of International Conference on Learning Representations (ICLR)*.

Employment

09/20 - Scientific Assistant, Zuse Institute Berlin (ZIB)

Research Group: Interactive Optimization and Learning (IOL)

Research Area: Efficient and Sustainable Artificial Intelligence (AI)

11/18 - 06/19 **Student Assistant**, TUM, Department of Electrical and Computer Engineering Sentiment Analysis using tensors to enhance Feature Representations

06/20 - 08/20 AI in Portfolio Management Intern, Assenagon

Developed signals from crawled news headlines using Natural Language Processing (NLP)

09/19 - 03/20 Student Assistant in Machine Learning (ML), Infineon Technologies
Applied ML methods to support process optimization in the automotive department

Conferences and Seminars

05/25 28th AISTATS, Mai Khao, Thailand

04/25 13^{th} ICLR, Singapore EXPO, Singapore

POSTER

02/25 University of Prishtina (UP) Math Seminar, UP, Prishtina, Kosovo

Explaining Deep Neural Networks Through Fooling

03/24 Deep Learning: Theory, Applications, and Implications, RIKEN Center for Advanced Intelligence Project (AIP), Tokyo, Japan

Minimally Distorted Explainable Adversarial Attacks

08/23	$10^{\rm th}$ International Congress on Industrial and Applied Mathematics, Waseda University, Tokyo, Japan	POSTER
03/23	Workshop on Optimization and ML in Industry, Friedrich-Alexander Universität Erlangen-Nuremberg, Nuremberg, Germany	POSTER
02/23	What is? Seminar, BMS, Berlin, Germany What is Backpropagation?	TALK
09/22	3^{rd} BMS - BGSMath Junior Meeting, Universitat de Barcelona, Spain Wavelet-based Low Frequency Adversarial Attacks	TALK
06/22	Workshop on First-Order Methods in Optimization, <i>Université</i> catholique de Louvain, Louvain-la-Neuve, Belgium	INVITEI
08/21	Deep Learning Theory Summer School, Princeton, NJ, US	PARTICIPANT
03/21	9 th BMS Student Conference, BMS, Berlin, Germany Neural Network Approximation Theory	TALK
01/21	IOL-COGA Research Seminar, TU Berlin/ZIB, Berlin, Germany Neural Network Approximation Theory	TALK
08/19	ERGO ML Workshop, ERGO, Düsseldorf, Germany	PARTICIPANT
	Activities	
- 06/24	Co-organizer, Long Night of the Sciences (LNdW), ZIB	
08/23	Lecturer, Calculus and Linear Algebra for Data Science, Hertie School	1
- 03/22	Co-organizer, MAI Division Seminar, ZIB	
- 08/21	Co-organizer, IOL-COGA Research Seminar, TU Berlin	
- 08/19	Teaching Assistant, Computational Statistics, TUM	
	Supervision of B.Sc. and M.Sc. Theses	
03/25	Kartikeya Chitranshi, M.Sc., TU Berlin On the Robustness of Multi-Modal Foundational Models	
09/24	Moritz Wagner, M.Sc., TU Berlin Sparse Adversarial Attacks: A Survey	
05/22	Moritz Wagner, B.Sc., TU Berlin Low-Frequency Adversarial Attacks	
03/22	Maria Bulychev, B.Sc., TU Berlin Sparse Adversarial Attacks	
	Distinctions	

05/20 Admission to Berlin Mathematical School (BMS)

10/15 - 09/16 University scholarship for achieving the highest GPA of the class

03/11 - 03/13 Three first prizes at Kosovo Mathematical Olympiad

02/11 Third prize at Serbian National Mathematical Olympiad

IT Skills

06/23

03/21 10/20 04/19

Languages Python (Advanced)

R (Intermediate)

Other Git, LATEX