

# Shpresim Sadiku

## Curriculum Vitae

Institut für Mathematik, TU Berlin  
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### Personal Data

Place and date of birth Preshevë (Serbia), March 9, 1996  
Citizenship Serbian citizen, German permanent resident

### Education

- 09/20 - **Ph.D., Mathematics**, Technische Universität Berlin (TU Berlin), Germany  
Phase II of Berlin Mathematical School (BMS)  
Advisor: Prof. Dr. Sebastian Pokutta  
Topic: *Sparse and Explainable Adversarial Attacks*
- 10/17 - 05/20 **M.Sc., Mathematics in Data Science**, Technische Universität München (TUM), Germany  
Advisor: Prof. Dr. Michael Wolf  
M.Sc. Thesis: *Adversarial Deformations for Neural Ordinary Differential Equations*
- 10/14 - 07/17 **B.Sc., Mathematics**, University of Tirana, Albania  
Advisor: Prof. Dr. Artur Baxhaku
- 09/10 - 06/14 **High School Diploma**, Gymnasium Skënderbeu, Serbia

### Publications and Preprints

- 10/23 **Group-wise Sparse and Explainable Adversarial Attacks**  
Submitted, available on [arxiv.org/abs/2311.17434](https://arxiv.org/abs/2311.17434).  
Joint with Moritz Wagner and Sebastian Pokutta.

### Employment History

#### Research Positions

- 09/20 - **Scientific Assistant**, Zuse Institute Berlin (ZIB), Germany  
Department AI in Society, Science, and Technology (AIS<sup>2</sup>T)  
Research Group Interactive Optimization and Learning (IOL)
- 09/19 - 03/20 **Student Assistant**, Infineon Technologies AG, Munich, Germany
- 11/18 - 06/19 **Student Assistant**, TUM, Department of Electrical and Computer Engineering, Munich, Germany

#### Internships

- 06/20 - 08/20 **AI in Portofolio Management Intern**, Assenagon Asset Management, Munich, Germany

## Teaching

- 08/23 **Workshop Instructor**, Calculus and Linear Algebra for Data Science, *Hertie School, Data Science Summer School*, Berlin, Germany
- 04/19 - 08/19 **Teaching Assistant**, Computational Statistics (MA3402), *TUM, Department of Mathematics*, Munich, Germany

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## Attended Conferences and Workshops

- 03/24 Deep Learning: Theory, Applications, and Implications, *RIKEN Center for Advanced Intelligence Project (AIP)*, Tokyo, Japan
- 08/23 10<sup>th</sup> ICIAM Conference, *Waseda University*, Tokyo, Japan
- 03/23 Workshop on Optimization and Machine Learning in Industry, *Friedrich-Alexander-Universität Erlangen-Nuremberg*, Nuremberg, Germany
- 09/22 BMS - BGSMATH Junior Meeting, *Universitat de Barcelona*, Barcelona, Spain
- 06/22 Workshop on First-Order Methods in Optimization, *Université catholique de Louvain*, Louvain-la-Neuve, Belgium
- 08/21 Deep Learning Theory Summer School, *Princeton*, NJ, US (online)
- 03/21 9<sup>th</sup> BMS Student Conference, *BMS*, Berlin, Germany (online)
- 08/19 ERGO Machine Learning Workshop, *ERGO Group*, Düsseldorf, Germany

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## Activities

- 06/23 Co-organizer, Lange Nacht der Wissenschaften (LNdW), *ZIB*
- 03/21 - 03/22 Co-organizer, MAI Division Seminar, *ZIB*
- 10/20 - 08/21 Co-organizer, IOL-COGA Research Seminar, *TU Berlin*

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## Talks

- 08/23 AIP Seminar, *RIKEN Center for Advanced Intelligence Project (AIP)*, Tokyo  
*Minimally Distorted Interpretable Adversarial Attacks*
- 02/23 What is ...? Seminar, *BMS*, Berlin  
*What is Backpropagation?*
- 09/22 BMS - BGSMATH Junior Meeting, *Universitat de Barcelona*, Barcelona  
*Wavelet-based Low Frequency Adversarial Attacks*
- 03/21 9th BMS Student Conference, *BMS*, Berlin (online)  
*Neural Network Approximation Theory*
- 01/21 IOL-COGA Research Seminar, *TU Berlin/ZIB*, Berlin (online)  
*Neural Network Approximation Theory*

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## Scientific Reviewing Activities

### Journals Referee

- 11/22 Constructive Approximation

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## Supervision of B.Sc. Theses

05/22 Moritz Wagner, *TU Berlin*  
*Low-Frequency Adversarial Attacks*

03/22 Maria Bulychev, *TU Berlin*  
*Sparse Adversarial Attacks*

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## Distinctions

05/20 Admission to BMS

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

03/11 - 03/14 Three first prizes and one third prize at Kosovo Mathematical Olympiad

02/11 Third prize at Serbian National Mathematical Olympiad

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## Languages

### Human

Albanian Native

English Fluent

German Intermediate

Serbian Intermediate

*TOEFL: C1*

*Goethe-Zertifikat: B1*

### Machine

Python Advanced

R Intermediate

MATLAB Intermediate