

# Shpresim Sadiku

## Curriculum Vitae

Institut für Mathematik, TU Berlin  
Straße des 17. Juni 136, 10623, Berlin  
🌐 [www.shpresimsadiku.com](http://www.shpresimsadiku.com)  
☎ +49 (0)30 8418 5324  
✉ [sadiku@zib.de](mailto:sadiku@zib.de)

### 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 Interpretable Adversarial Attacks*
- 10/17 - 05/20 **M.Sc., Mathematics in Data Science**, Technische Universität München (TUM), Germany  
Advisor: Prof. Dr. Michael Wolf  
Master's thesis (in English):  
*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 **Artificial Intelligence in Portfolio Management**, *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

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