

Wendong Li

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EDUCATION

University of Bonn

M.Sc. Mathematics

Year 1: Current average grade: 1.3 (1.0 is the full score, top 15%)

Core courses: Combinatorial Optimization (1.0); Combinatorics, Graphs, Matroids (1.7); Control Systems and Reinforcement Learning(1.0); Practical Lab Numerical Simulation - Algorithms in Machine Learning and Their Application(1.3); Cognitive Robotics Lab (1.7)

University of Birmingham

B.Sc. Mathematics with Honours, Class I

Year 3: Scored 85.1 out of 100, awarded *The Kuttner Prize* for 2023/2024 best performance by a graduating student in Pure Mathematics area.

Year 2: Scored 87.5 out of 100, ranked in the top 1% of the class

Year 1: Scored of 89.5 out of 100, ranked in the top 1% of the class

Core courses: Real and Complex Analysis (91); Algebra and Combinatoric (94); Multivariable and Vector Analysis (94); Differential Equations (95); Linear Algebra and Linear Programming (96); Statistic (94); Metric space and Topology (92); Algebraic and Differential Topology (87); Functional and Fourier Analysis (94); Group theory (91)

Huazhong University of Science and Technology

B.Sc. Finance

Wuhan, China

Sep 2019 – Jun 2024

PROJECT & RESEARCH EXPERIENCE

(AI, MACHINE LEARNING & ROBOTICS)

University of Bonn

Master Thesis(in progress)

Under the Supervision of Professor Jochen Garcke

Topic: Applications of Diffusion Reinforcement Learning in Crowd Navigation

- Proposed a diffusion-based reinforcement learning framework for crowd navigation tasks.
- Completed major experimental studies and achieved state-of-the-art results compared to existing methods.
- Currently preparing a conference submission to a top-tier reinforcement learning venue, targeting Spring 2026.

University of Bonn

Data Mining and Learning System Lab(in progress)

Under the Supervision of Dr. Ramses J. Sanchez

Topic: Discrete Diffusion for Time Series Imputation

- Explored a novel framework that discretizes continuous time series via tokenization and leverages discrete diffusion models for time series imputation tasks.

University of Bonn

Cognitive Robotics Lab

Under the Supervision of Professor Sven Behnke

Topic: Training Inline-Skating Policies for a Unitree G1 Humanoid Robot(obtain grade 1.7)

- Developed a curriculum learning framework for training inline-skating locomotion policies for a Unitree G1 humanoid robot in simulation using the Genesis simulation environment.
- Designed hybrid locomotion policies enabling coordinated control of wheeled skates and legged motion.
- Achieved skating-walking behaviors through progressive task difficulty and reward shaping.

(OPTIMIZATION & ALGORITHMIC RESEARCH)

University of Bonn

Graduate Seminar on Discrete Optimization(obtain grade 1.3)

Under the Supervision of Professor Jens Vygen

Topic: Steiner Tree and Steiner Forest: LP Relaxations and Approximation Algorithms

Bonn, Germany

Sep 2025 - Aug 2026

Bonn, Germany

Oct 2025 - Jan 2026

Bonn, Germany

Sep 2025 – Oct 2025

Bonn, Germany

Feb 2025 - May 2025

(PURE MATHEMATICS)

University of Birmingham

Summer Research Project Funded by the Department of Mathematics (£1668 in total)

Under the Supervision of Professor Sergey Shpectorov

Topic: Commutative Algebra

Birmingham, UK

Jul 2023 - Sep 2023

University of Birmingham

LH Research Skills in Mathematics Module

Under the Supervision of Professor Sergey Shpectorov

Topic: Algebraic Geometry

Birmingham, UK

Sep 2023 - Jun 2024

(ACADEMIC PROGRAMS)

University of Cambridge

Summer Program at Pembroke College

Cambridge, UK

Core Courses: Advanced Microeconomics (72%); Optimisation and Decision Mathematics(70%)

Jul 2022 - Aug 2022

SKILLS & INTERESTS

Technical Skills

- **Programming: Python**
- **Machine Learning: Deep Learning, Reinforcement Learning, Diffusion Models**
- **Frameworks & Tools: PyTorch, NumPy, Gym, MuJoCo**

Interests

- **Swimming, Badminton, Table Tennis, Long-Distance Running**