

# Wendong Li

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## EDUCATION

### University of Bonn

*M.Sc. Mathematics*

**Bonn, Germany**

Oct 2024 - Jul 2026

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 1*

**Birmingham, UK**

Sep 2021 - Jul 2024

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 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)

**Bonn, Germany**

Sep 2025 - Aug 2026

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)

**Bonn, Germany**

Oct 2025 - Jan 2026

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

**Bonn, Germany**

Sep 2025 – Oct 2025

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)

**Bonn, Germany**

Feb 2025 - May 2025

*Under the Supervision of Professor Jens Vygen*

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

(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**

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

**Cambridge, UK**

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**