

Berkant Cünnük

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RESEARCH INTERESTS

- Mathematical Biology
- Mathematical Modeling
- Combinatorics
- Computer Algebra

EDUCATION

University of Manitoba, Winnipeg/Canada
Mathematics
Master of Science

September 2024 - Present

Boğaziçi University, Istanbul/Turkey
Mathematics
Honours, Bachelor of Science

September 2019 - July 2024
GPA: 3.42/4

PROJECTS

Math Project

Supervised by *Assoc. Prof. Müge Taşkın Aydın*

An Approach to Calculating Kazhdan-Lustzig Polynomials

2023 Fall

- We developed a program to calculate these algebraic objects and wrote a permutations library from scratch for this specific purpose using C++. The program is *open source*, and it can be accessed from *here*.
- A detailed report explaining our implementation can be accessed *here*. It includes a brief introduction to the topic as well.

Independent Math Project

Finding all reduced words for a given permutation

2023 Spring

- This is a program that implements an algorithm created by two of my professors from Boğaziçi University. The relevant article can be found *here*.
- The program is *open source*, and it can be accessed from *here*.

EXPERIENCE

Boğaziçi University, Department of Mathematics
Teaching Assistant

2024 Spring

Held office hours for the following courses:

- MATH 101-102 *Calculus I-II*
- MATH 111 *Introduction to Mathematical Structures*
- MATH 131 *Calculus of a single variable*
- MATH 132 *Calculus of several variables*
- MATH 201 *Matrix Theory*
- MATH 222 *Group Theory*

Boğaziçi University, Department of Mathematics
Teaching Assistant

2023 Spring

GRANTS & FELLOWSHIPS

TUBITAK-BIDEB 2205

September 2019 - July 2024

- Grants for Mathematics Undergraduate Students

TECHNICAL SKILLS

- **Linux server management**
 - I have experience maintaining both binary based (Debian, Ubuntu, RHEL, and their derivatives) and source based Linux distributions.
 - I have experience using various Unix shells to handle system services and automate tasks.
 - I have experience setting up proxy, mail, database, VOIP, and web servers.
- **Database management software:** PostgreSQL, Redis
- **Programming languages:** GNU Assembly, C/C++, PHP, Python, R
- **Computer algebra systems:** SageMath, MATLAB
- **Document creation software:** \LaTeX , MS Office