

EDUCATION

- **Southern University of Science and Technology (SUSTech)** Shenzhen, China
Honor Class in Mathematics and Applied Mathematics (Bachelor) GPA: 3.66/4.0; rank: 16/41 Sep 2020-Jun 2024 (expected)

RESEARCH EXPERIENCES

- **Topological analysis of time series with a case study in phonetic data** *Jun 2022-Present*
Project Leader. Supervisor: Prof. Zhu Yifei
 - **Classified phonetic data using topological features:** Conducted classification of voiced/voiceless natural sound records, utilizing persistent homology to extract topological features to achieve a 95%+ accuracy.
 - **Developed coding and presentation skills:** Engaged in comprehensive programming code design employing Python and Matlab, with regular presentations and discussions to develop, refine, and assess the models.
 - **Academic exposition and writing:** Cultivated the ability to articulate scientific concepts effectively and honed the skill of efficient literature review.
- **Geometric visualization for moduli spaces of quantum mechanical systems** *Jun 2022-Mar 2023*
Assistant. Supervisor: Prof. Zhu Yifei
 - **Computed and visualized surfaces with singularity arising from condensed matter physics:** Computed distinguished curves of discriminant surfaces of high degree using Mathematica.
 - **Built 3D printable models for moduli spaces:** Designed 3D models to better visualize the characteristic surfaces.
 - **Participated and collaborated in an interdisciplinary exhibition:** Collaborated with technicians to produce 3D-printed models, developing the ability communicate with researchers from diverse interdisciplinary backgrounds.

ADDITIONAL EXPERIENCES

- **iGEM Competition: improvement of drug resistance in temperate phages** *Jan 2023-Oct 2023 (expected)*
Data Analyst. Supervisor: Prof. Yang Liang of School of Medicine at SUSTech
 - **Analyzed medical data:** Conducted an in-depth analysis of trends and factors underlying the data obtained by team members, characterized and visualized their findings. Collaborated with students from diverse backgrounds, demonstrating the ability to communicate effectively and efficiently.
- **Seminar on Riemannian geometry** *Sep 2022-Jan 2023*
Lecturer. Supervisor: Prof. Liu Bochen
 - **Presented topics in Riemannian geometry:** Developed interactive lecture skills, acquired fundamental knowledge in Riemannian geometry.
- **Microbiology lab work-study job** *Jun 2022-Aug 2022*
Assistant. Supervisor: Prof. Dong Tao of School of Life Sciences at SUSTech
 - **Interdisciplinary communication:** Provided assistance to group members with cell culture and data recording, and contributed to experimental procedures as needed.
- **Seminar on computational topology** *Feb 2022-Jun 2022*
Lecturer. Supervisor: Prof. Zhu Yifei
 - **Introduced to computational topology:** Acquired fundamental knowledge in computational topology and presented on various topics within this subject.

SKILLS

- **English proficiency** TOEFL: 85 (Aug, 2022)
- **Computer skills** Python, Matlab, Mathematica

HONORS AND AWARDS

- Third Prize Scholarship for Excellent Students at SUSTech, 2022
- First Prize in Contemporary Undergraduate Mathematical Contest in Modeling, 2021
- Third Prize Scholarship for Excellent Freshmen at SUSTech, 2020