

# XINYI (CYNTHIA) FAN

Davidson, NC | cyfan@davidson.edu | (704) 307-0980

## EDUCATION

Davidson College

*Bachelor of Science in Mathematics(honors), Computer Science double major*

• GPA: 3.82/4.0; Major GPA:3.94/4.0

Davidson, NC

*Expected May 2022*

## PROFESSIONAL/RESEARCH EXPERIENCE

**Data Consultant** – The Hurt Hub

*August 2021 – present*

*Davidson College (Davidson, NC)*

- Counsel for students with questions on data processing and visualization among different areas of study
- Partner with a nonprofit Smithville to help them build a Shiny dashboard using R

**Research Fellow** – Summer Geometry Institute

*July 2021 – present*

*Massachusetts Institute of Technology (remote)*

- Research on areas within the field of geometry processing including hexahedral mesh decomposition, elastic shell simplification, and design optimization via shape morphing using MATLAB and C++
- Submitted a paper on the topic of Hexahedral Mesh Decomposition

**Resident Advisor** -- Residence Life Office

*August 2019 – May 2021*

*Davidson College (Davidson, NC)*

- Advised residents on campus life and personal well-being and planned programs to build a close community
- Received Residence Advisor of the Month award for outstanding work as an RA

**Attendee** – ACM Richard TAPIA Conference

*September 2020*

*Remote*

- Participated in academic panels in diverse areas of computing and connected with researchers from different backgrounds

**Presenter** -- Young Mathematicians Conference

*August 2020*

*Ohio State University (remote)*

- Presented the research results on “Optimal Addressing Schemes for Subfamilies of Block Graphs and related Graphs”

**Research Fellow** -- Research Challenges of Computational and Experimental Mathematics

*May 2020 – August 2020*

*Moravian College (remote)*

- Researched on the two projects on optimal addressing schemes for different families of graphs, and host-parasitoid population dynamic modeling for ten weeks.
- Prepared a paper for submission and presented on the topic of addressing graph in various occasion

**Attendee** – Nebraska Conference for Undergraduate Women in Mathematics

*January 2020*

*Lincoln, Nebraska*

- Attended academic talks and networked with various speakers from industry and academia

## EXTRACURRICULAR EXPERIENCE

**President** -- Women in Math

*August 2019 – present*

*Davidson College (Davidson, NC)*

- Organize, propose, and promote group meetings and workshops on topics including course selection advising, academic research, career development, and community support
- Contribute resources for research experiences and gave an academic talk on past REU research results

**President** -- Chinese Culture Club

*February 2020 – May 2021*

*Davidson College (Davidson, NC)*

- Organize and carry out responsibilities associated with the role as the chief executive officer of the largest Chinese student organization on campus
- Developed relationships with other organization and collaborate to organize events on campus

**Member** -- CatsStats

*August 2019 - May 2020*

*Davidson College (Davidson, NC)*

- Participated in the shot-chart team of Women's Basketball and attended games to collect sports data
- Implemented methods to process data and performed statistical analysis on players' performance

**Choreographer** -- Davidson Dance Ensemble

*August 2018 - March 2020*

*Davidson College (Davidson, NC)*

- Choreographed a K-pop dance and co-choreographed a Chinese-pop dance
- Performed on multiple campus Dance Ensemble showcases and attracted 300+ audience

## ADDITIONAL SKILLS

Languages: English, Chinese (fluent); Korean (intermediate)

Technical: Python, MATLAB (Proficient); C, C++, Java (Intermediate); R, SQL, Mathematica, Power BI (Basic)

Research: Mathematical Modeling, Data Visualization, Graph Processing

Application: Adobe Photoshop, Adobe Premiere, Final Cut Pro, Rhino 3D, Unity