

# Guanqun Ma

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🌐 <https://maguanqun.github.io/>

## Internship

- 2024.05 - 2024.08 📌 **Research Aide Technical**  
Argonne National Laboratory  
Develop new methods for identifying and preserving topological features in B-spline models of scientific data sets.

## Education

- 2022.08 - Present 📌 **Ph.D. in Computer Science**  
University of Utah  
Researching topological data analysis and computational geometry at the Scientific Computing and Imaging Institute (SCI)  
Advisor: Dr. Bei Wang Phillips
- 2016.09 - 2019.06 📌 **M.Sc. in Mathematics**  
University of Electronic Science and Technology of China  
Thesis title: *Local low-rank and sparse representation for hyperspectral image denoising.*  
Advisor: Dr. Tingzhu Huang
- 2012.09 - 2016.06 📌 **B.Sc. in Mathematics and Applied Mathematics**  
University of Electronic Science and Technology of China  
Undergrad Thesis title: *A study on vision algorithms based on deep learning.*

## Publications

- 1 **G. Ma**, D. Lenz, T. Peterka, H. Guo, and B. Wang, "Critical point extraction from multivariate functional approximation," in *2024 Topological Data Analysis and Visualization (TopoInVis)*, 2024.
- 2 Q. Wang, **G. Ma**, R. Sridharamurthy, and B. Wang, "Measure-Theoretic Reeb Graphs and Reeb Spaces," in *40th International Symposium on Computational Geometry (SoCG 2024)*, vol. 293, 2024, 80:1-80:18.  
🔗 DOI: 10.4230/LIPIcs.SocG.2024.80.
- 3 L. Lan, **G. Ma**, Y. Yang, C. Zheng, M. Li, and C. Jiang, "Penetration-free projective dynamics on the gpu," in *ACM Transa. Graph. (SIGGRAPH)*, vol. 41, Jul. 2022. 🔗 DOI: 10.1145/3528223.3530069.

## Skills

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|----------------------|---|
| Coding               | <span style="color: red;">📌</span> C++, Python, Matlab, $\LaTeX$                  |
| Graphics Programming | <span style="color: red;">📌</span> OpenGL   |
| Misc.                | <span style="color: red;">📌</span> Data Visualization, Topological data analysis. |