# **PENGYUN QIU**

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#### **EDUCATION**

### Nanjing University of Science and Technology

09/2018 - 06/2022

BS in Information and Computational Science (Elite Class) | Overall GPA: 86.65/100 (3.59/4.00) | Honors and Awards:

- Third-class Scholarship, 2020-2021 Spring Semester
- Third-class Scholarship, 2020-2021 Fall Semester
- Second-class Scholarship, 2019-2020 Spring Semester
- Second-class Scholarship, 2019-2020 Fall Semester
- First-class Scholarship,2021-2022 Fall Semester
- Second Prize, NUST Mathematical Modeling Competition in September 2020

### **PUBLICATIONS**

- "Modeling Wireframe Meshes with Discrete Equivalence Classes" is under review by ACM Transactions on Graphics
- "Urban Fabric Generation: A comparative analysis of multiple vector field methods." 721-730. 10.52842/conf.ecaade.2023.1.721
- "Masonry Shell Structures with Discrete Equivalence Classes." SIGGRAPH 2023 (journal track), ACM Transactions on Graphics (TOG) 42 (2023): 1 - 12.

### PROFESSIONAL EXPERIENCE

## Singapore University of Technology and Design

10/2022 - 03/2024

Research Assistant to Professor Peng Song

• Contributed to two geometry related projects and one parcel subdivision project.

#### Shanghai Sunlight IT Consulting CO. Ltd.

03/2022 - 05/2022

Database Development Engineer Intern

• Maintained the corporate data platform and updated the data warehouse platform.

### **RESEARCH PROJECTS**

# Modeling Wireframe Meshes with Discrete Equivalence Classes

02/2023 - 08/2023

 Modelled and fabricated wireframe mesh structures with reusable rods and nodes from given input meshes

## **Urban Fabric Generation**

01/2023 - 03/2023

 Mainly involved in the plot division and explained the relevant mathematical theory for the use of vector field.

## Masonry Shell Structures with Discrete Equivalence Classes

11/2022 - 01/2023

• Attacked the emerging problem of modeling freeform shell structures where the shell elements fall into a set of discrete equivalence classes.

# The Application of Radial Basis Function (RBF) in Solving Partial Differential Equations on the Sphere 11/2021 – 05/2022

 Applied the interpolation method of RBF to solve the Allen-Cahn equations on the sphere, and explored the changes in the mass and energy of the equations. Realized numerical algorithm for RBF-based equation solution and drew mass-change curves as well as energy-change curves.

# The Fusion of Hyperspectral Imagery and Multispectral Imagery Enabled by Tensor's Manifold Structure 04/2020 - 09/2021

• Led a team of four to fuse hyperspectral and multispectral imagery as a way of enhancing spatial and spectral resolution. Extracted the global features of two types of imagery using tensor's modeling patterns, and effectively conserved the local features by tapping into the complementarity of these two types of imagery.

#### SKILLSET

Languages: Mandarin (native), English (fluent)

批注 [colleen1]: 理论上页边距的左右不应低于 1 inch 即 2.54cm,要压缩页面,建议压缩上下页边距。 CV 的字体可以混合衬线字体(比如 new Roman)和非衬线字体(比如 arial),前者看起来更清晰,后者看起来更大气利落。一般标题会用非衬线,内容用衬线,更方

**批注 [colleen2]:** bachelor of science 是写这里的,这一行比较长,为了美观简写了 BS

便读者浏览密集复杂的内容。

**批注 [colleen3]:** 你看一下是否有更新的新奖学金、竞赛 及其他荣誉奖项?

批注 [colleen4]: 简历的 publications 一般有两种罗列方式, 1.用引号加 MLA 格式, 不提及几作。2.全部用 MLA 格式, 像论文引用一样列出作者姓名, 期刊等信息。鉴于你有四作排在比较后面, 索性都隐去冗长的姓名 list,直接用第一种表达方式, 简洁易懂。

**批注 [colleen5]:** 也是蛮纠结的,如果只写 submitted to for review,不太好意思放 publications 下,in press 可以表示已被 accepted 但尚未刊登出来。所以用比较模糊的 under review 好一些,暗示很大几率会 published。我估计发表得算在明年轮次了?

批注 [colleen6]: 必须按倒序排列三个 publication

批注[colleen7]: 参考了 https://sutdcgl.github.io/supp/Publication/projects/2023-SIGGRAPH-TileableShell/index.html

其实可以不标的,但是 siggraph 可以补充 conference track,journal track,方面不了解 TOG 的人知道它和 siggraph 的关系。

批注 [colleen8]:目前我们的实习和项目描述太简单了,肯定还需要扩展。你套磁先用这一份就够,因为老师看得到你的论文。申请得用比较详细的2页CV。

**Technical Skills:** C++ (proficient), MATLAB (proficient), SQL (proficient), Autodesk 3ds Max (familiar), Rhino 3D (familiar), AutoCAD (familiar), SPSS (familiar) **Core competencies:** graphics programming, mathematical modelling and computer-aided design