DUOLEI WANG

Email: wangdl2020@mail.sustech.edu.cn

EDUCATION

Southern University of Science and Technology (SUSTech) 2020 - 2024

Major: Mathematics and Applied Mathematics

GPA: 3.54 (23/41)

Courses:
Mathematics:

- Calculus, Mathematical Analysis, Real Analysis, Complex Analysis, Functional Analysis

- Linear Algebra, Advanced Linear Algebra, Abstract Algebra

- Differential Geometry, Numerical Analysis, ODE, PDE

Computer Science:

- Discrete Mathematics, Computer Programming A,

  Data Structures and Algorithm Analysis B, Algorithm Design and Analysis

- Machine Learning

Statistics:

- Probability Theory, Probability and Statistics

- Introduction to Data Science, Introduction to Theoretical and Practical Data Science

Projects:

- **n Body Simulation System**: A 2-D particles collision system based on K-D Tree and Queue Task Manager.

- **Traffic Sign Detection and Recognition**: A traffic sign detection and recognition system based on YOLOv5, including the Lane Detection based on LaneATT.

- **Minesweeper Game**: A simple minesweeper game based on JavaFx Framework.

- **Tetris Game**: The tetris game based on JavaFx Framework.

RESEARCH EXPERIENCE

Neural Network methods for PDE solving April 2023 - Now
University: Southern University of Science and Technology (SUSTech)
Mentoring Professor: Zhen Zhang, zhenz@sustech.edu.cn
Contents:

- The Physics-informed neural networks (PINNS), based on pytorch framework.

- The Operator Method of PDE solving.

- The Neural Galerkin Scheme method.

Global Education, Academics and Research Skills Program (GEARS) July 2022 - August 2022
University: North Carolina State University (NCSU)
Mentoring Professor: Zhilin Li, zhilin@ncsu.edu

Contents

- Numerical methods for Linear System and Interpolation Problem.

- Classic Clustering methods in Machine Learning.

AWARDS

Honorable Mention of Mathematical Contest in Modeling (MCM) in the United States	2022
Third Class of the Merit Student Scholarship	2022
Second Class of the Merit Student Scholarship	2021
Second Prize of The Chinese Mathematics Competitions in Guangdong Province (CMC)	2021
Recognition Award of the Freshmen Scholarship	2020

SKILLS

Code: Java (Practised), Python (Practised), Julia (Practised)

Editor: Latex (Practised)   Markdown (Practised)

Other: Github (Practised), Git (Middle Level), Linux (Beginner)

LANGUAGE

English: Fluent   **Chinese:** Native

EXTRA-CURRICULAR ACTIVITIES

Tennis   Chinese Rock music   Drawing and Painting