Xianglong Guo

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Education

- **BeiHang University** Sep. 2021 - Jun. 2025 (expected)
  Bachelor in Engineering Mechanics (Strengthening Basic Disciplines Program) *Beijing, China*

  GPA: 88.5/100 Rank: 5/29
  Courses: Mathematical Analysis for Mathematical Sciences (94), Fundamental Physics (100), Data Structures and Programming (92), Computing Method (93), Water Wave Equation and Nonlinear Integrable system (92), Automatic Control Theory (94), Computational Soild Mechanics (88).

Research Interests

- Formerly, I have been working on the problem of **heat haze effects with Digital Image Correlation (DIC)**, which includes the study of how to dehaze,the effects of traditional dehaze algorithm and the mothods based on deep learning.
- Recently, I have been working on a project of **DeepLearning-based DIC network for local displacement measurement**, which includes establishing a benchmark for optical flow model used in DIC.
- I am also strongly interested in **Computer vision for science**, actively looking for opportunities to work on projects related to it.

Research Experience

- **BeiHang University** Nov. 2022 - present
  Research Assistant, School of Aeronautic Science and Engineering *Beijing, China*
  Advisor: Prof. Bing Pan & Prof. Liping Yu
  - Benchmark the performance of various traditional physical defogging methods and deep learning defogging methods in the thermal fog effect, and test whether the defogging method is effective in the DIC field.
  - Summarize and learn the DeepLearning-based DIC network for local displacement and strain measurement.

Internship Experience

- **Samsung Inc. (SAIT - Samsung Advanced Institute of Technology (SRCX))** Jun. 2023 - Sep. 2023
  Computer Vision Algorithm Engineer *Xi'an, China*
  Advisor: M.E. Yunfeng Gong
  - Search for a network of detection Models in Autonomous Driving.
  - Use quantization or pruning to accelerate model inference on AGX.

Honors and Awards

- First Prize in National Physics Competition for college student in China (2023)
- First Provincial-level Prize in Chinese Physics Olympiad (CPHO) (2020)
- Second Prize in National Mathematical Competition for college student in China (2023)
- Second Prize and Thrid Prize in China Undergraduate Physics Tournament (2022 & 2023)
- Special Prize and Thrid Prize in China North China Regional Competition Undergraduate Physics Tournament (2023 & 2022)
- Third Prize in The 14th Zhou Peiyuan's Competition of Mechanics for College Students in China (2023)
- Study Excellence Scholarship Second Prize (2022 & 2023)
- Discipline Competition Scholarship Special Prize and First prize (2023 & 2022)

Skills Summary

- **Languages**: C++, Python, Matlab, Mathematica
- **Tools**: Git, Visual Studio Code, Ansys Mechanical APDL, Ansys fluid, SoildWorks, Catia, Markdown
- **Libraries**: PyTorch, NumPy, Matplotlib, TensorRT