

# YULIN LIU

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<https://liuyulinn.github.io/>

## EDUCATION

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Ph.D. of CSE, University of California San Diego	2023.9-present
Bachelor of Physics, Peking University	2019.9 - 2023.7

- Grade Point Average: **3.85**/4.00 (Ranking Top 10%)

## HORNORS & REWARDS

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- National Scholarship (Top 1%), *Ministry of Education in China*
  - Merit Students (Every year), *Peking University*
  - Wu-Si Scholarship, highest scholarship in *Peking University*
  - First-Class Scholarship, *Peking University*
  - 1st Prize in Chinese Physics Olympiad, ranking 3rd among girls, *China*

## PUBLICATION

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- **Yulin Liu\***, Haoran Liu\*, Yingda Yin\*, Yang Wang, Baoquan Chen, He Wang, *Delving into Discrete Normalizing Flows on SO(3) Manifold for Probabilistic Rotation Modeling*, **CVPR 2023**

## RESEARCH EXPERIENCE

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### Delving into Discrete Normalizing Flows on SO(3) Manifold for Probabilistic Rotation Modeling

*Prof. He Wang, Peking University*

07/2022-11/2022

- Proposed the **first** discrete normalizing flows on SO(3) manifold which have no singularity.
- The proposed normalizing flows consist of two modules, a Mobius-transformation-based coupling layer and a quaternion affine transformation.
- The proposed normalizing flows significantly outperform all baselines on fitting distribution on SO(3) and on predicting poses given input images.

## SELECTED COURSE PROJECTS

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### One-dimensional Plasma Simulation

*Computational physics, course project, individual*

- Developed a program with python to simulate the motion of one-dimensional plasma in self-electric field.
- Applied frog-jump algorithms and observed chaotic phenomenon of plasma motion.

## SKILLS

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Programming and Software	C, Python, MATLAB	AI Framework	PyTorch, Jax
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## Extra-Curricular Activities

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- Bicycle ride from Kunming to Shangri-La(1000km) 07/2020-08/2020
  - Director of PKU Bicycle Club 09/2020-09/2021
  - Volunteer at International test events for the 2022 Winter Olympic and Paralympic Games 03/2021-04/2021