Chaoyun Wang

PhD Candidate

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SUMMARY

I am a PhD candidate at the Institute of Artificial Intelligence and Robotics at Xi' an Jiaotong University. My research focuses on the intelligent optimization and application of developable surfaces. I leverage deep learning methods to solve complex geometric optimization problems and apply geometric constraint properties to computer vision tasks. My academic journey has spanned diverse fields, from aviation models and intelligent medical systems to intelligent security and geometric optimization. This interdisciplinary experience has not only equipped me with a versatile skill set but has also provided me with the confidence to tackle a wide array of future research challenges.

EDUCATION

- **The University of Tokyo** *Sep. 2024–Sep. 2025*

  Joint PhD in Creative Informatics (Takeo Igarashi) Tokyo, Japan

- **Xi 'an Jiaotong University** *Sep. 2022–Present*

  PhD in Control Science and Engineering (Caigui Jiang) Xi 'an, China

- **Harbin Engineering University** *Sep. 2018–Mar. 2021*

  Master of Control Science and Engineering (Hongwei Mo) Harbin, China

- **Heilongjiang University of Science and Technology** *Sep. 2014–Jun. 2018*

  Bachelor of Electrical Engineering and Automation Harbin, China

EXPERIENCE

- **Zhejiang Dahua Technology Co., Ltd.** *Apr. 2021–Jul. 2022*

  Intelligent Algorithm Engineer Hangzhou, China

PUBLICATIONS

- **Wang C**, Huang Q, Shen I, et al. Cascaded Robust Rectification for Arbitrary Document Images. *IEEE Transactions on Multimedia (TMM)*, 2026. (Accepted)

- **Wang C**, Shen I, Igarashi T, et al. Axis-Aligned Document Dewarping. *AAAI Conference on Artificial Intelligence (AAAI)*, 2026. **(Oral Presentation)**

- **Wang C**, Wang J, Tang C, et al. Interactive Design of Developable Surfaces by Patch-based Learning. *Computer-Aided Design (CAD)*, 2025: 103970.

- Ding Y, Wei Z, **Wang C**, et al. Using Deep Learning to Screen for Hypertension in OCTA Image to Reduce the Risk of Serious Complications. *Frontiers in Cell and Developmental Biology*, 2025, 13: 1581785.

- **Wang C**, Xin J, Zheng N, et al. GSO-Net: Grid Surface Optimization via Learning Geometric Constraints. *AAAI Conference on Artificial Intelligence (AAAI)*, 2024, 38(8): 8163-8171.

- Zhang X, Li H, **Wang C**, et al. Evaluating the Accuracy of Breast Cancer and Molecular Subtype Diagnosis by Ultrasound Image Deep Learning Model. *Frontiers in Oncology*, 2021, 11: 623506.

- **Wang C**, Mo H. Breast Ultrasound Image Analysis based on Transfer Learning. *International Conference on Computer Science and Artificial Intelligence (CSAI)*, 2020: 115-121.

- **Wang C**, Mo H. Breast Cancer Diagnosis Method Based on Multitask Learning and BI-RADS Assessments. *Conference on Artificial Intelligence and Healthcare (AIH)*, 2020: 264-269.

- Mo W, Zhu Y, **Wang C**. A Method for Localization and Classification of Breast Ultrasound Tumors. *International Conference on Swarm Intelligence (ICSI)*, 2020: 564-574.

PATENTS

- A Robust Cascaded Rectification Method for Arbitrary Document Images. Caigui Jiang, **Chaoyun Wang**, Jianlei Wang, Nanning Zheng. CN202511312711.7

- A Document Rectification Method Based on Axis-Alignment Properties. Caigui Jiang, **Chaoyun Wang**, Nanning Zheng. CN202510382541.3

- A Method for the Optimization and Design of Developable Surfaces, and the Piecewise Developable Approximation of Models. Caigui Jiang, **Chaoyun Wang**, Jianlei Wang, Nanning Zheng. CN202411304939.7

- A Grid Surface Optimization Method Based on Deep Learning. Caigui Jiang, **Chaoyun Wang**, Jingmin Xin, Nanning Zheng. CN202311410329.0

- A neural network training method, an image detection method and a device thereof. **Chaoyun Wang**, He Sun, Huadong Pan, Jun Yin. CN202210632202.2

- An image processing method, device, electronic device and storage medium. **Chaoyun Wang**, He Sun, Huadong Pan, Jun Yin. CN202210591631.X

- The detection method of the placement state of the target object and related equipment. **Chaoyun Wang**, He Sun, Huadong Pan, Jun Yin. CN202210604674.7

- The invention relates to a data cleaning method, device and system. **Chaoyun Wang**, Jun Yin, Huadong Pan, He Sun. CN202111526828.7

- Image acquisition, object recognition, model training methods and equipment. **Chaoyun Wang**, Jun Yin, Huadong Pan, He Sun. CN202111339344.1

- Object identification method, electronic equipment and storage media. **Chaoyun Wang**, Jun Yin, Huadong Pan, He Sun. CN202111342318.4

FUNDED PROJECTS

Project/Research Project Leader

- 2023.01–2024.12 **Surface Optimization and Application Combining Artificial Intelligence Methods**, Funded by The Fundamental Research Funds for the Central Universities (Program for Free Exploration and Innovation, Student Category) (Project No: xzy022023109).

COMPETITIONS AND AWARDS

- Excellent Postgraduate of Xi 'an Jiaotong University in 2025

- Excellent Postgraduate Cadre of Xi 'an Jiaotong University in 2024

- Honorary Title of Excellent Graduate of Harbin Engineering University in 2021

- Team leader of the "Huawei Cup" Second China Graduate Artificial Intelligence Innovation Competition in 2020

- The second prize of the International College Student Brain-like Computing Competition in 2019

- The second prize of the first "CCI Cup Camel People Medical Science and Technology Innovation Award" in 2019

- HIT International Summer School on Artificial Intelligence Completion Certificate in 2018

- The second prize of the ground Reconnaissance Project of the National Scientific Research Aerospace Model Championship in 2016

- The third prize of Scientific and technological innovation of the National Scientific Research Aerospace Model Championship in 2016

- The second prize of Vertical takeoff and Landing Project of the National Scientific Research Aerospace Model Championship in 2015