



ZHUOFAN XIA | 夏卓凡

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[Personal Homepage](#)

EDUCATION

Ph.D. | Control Science and Engineering

Tsinghua University, advised by Prof. Gao Huang and Prof. Shiji Song

Aug. 2020 – 2026 (Expected)

Beijing, China

B.Eng. | Automation

Tsinghua University

Aug. 2016 – June 2020

Beijing, China

PUBLICATIONS

*Equal Contribution. †Corresponding Author.

Accepted Papers

First & Co-first Authors:

Bridging the Divide: Reconsidering Softmax and Linear Attention

Dongchen Han*, Yifan Pu*, **Zhuofan Xia***, Yizeng Han, Xuran Pan,
Xiu Li, Jiwen Lu, Shiji Song, Gao Huang[†]

NeurIPS 2024

Efficient Diffusion Transformer with Step-wise Dynamic Attention Mediators

Yifan Pu*, **Zhuofan Xia***, Jiayi Guo*, Dongchen Han, Qixiu Li, Duo Li,
Yuhui Yuan, Ji Li, Yizeng Han, Shiji Song, Gao Huang[†], Xiu Li[†]

ECCV 2024

GSVA: Generalized Segmentation via Multimodal Large Language Models

Zhuofan Xia*, Dongchen Han*, Yizeng Han, Xuran Pan, Shiji Song, Gao Huang[†]

CVPR 2024

Budgeted Training for Vision Transformer

Zhuofan Xia*, Xuran Pan*, Xuan Jin*, Yuan He, Hui Xue, Shiji Song, Gao Huang[†]

ICLR 2023

Vision Transformer with Deformable Attention

Zhuofan Xia*, Xuran Pan*, Shiji Song, Li Erran Li, Gao Huang[†]

CVPR 2022

Best Paper Finalists, 0.4%

3D Object Detection with Pointformer

Xuran Pan*, **Zhuofan Xia***, Shiji Song, Li Erran Li, Gao Huang[†]

CVPR 2021

Other Papers:

Demystify Mamba in Vision: A Linear Attention Perspective

Dongchen Han, Ziyi Wang, **Zhuofan Xia**, Yizeng Han, Yifan Pu, Chunjiang Ge,
Jun Song, Shiji Song, Bo Zheng, Gao Huang[†]

NeurIPS 2024

Training an Open-Vocabulary Monocular 3D Detection Model without 3D Data

Rui Huang, Henry Zheng, Yan Wang, **Zhuofan Xia**, Marco Pavone, Gao Huang[†]

NeurIPS 2024

Agent Attention: On the Integration of Softmax and Linear Attention

Dongchen Han*, Tianzhu Ye*, Yizeng Han, **Zhuofan Xia**, Shiji Song, Gao Huang[†]

ECCV 2024

Slide-Transformer: Hierarchical Vision Transformer with Local Self-Attention

Xuran Pan*, Tianzhu Ye*, **Zhuofan Xia**, Shiji Song, Gao Huang[†]

CVPR 2023

Adaptive Rotated Convolution for Rotated Object Detection

Yifan Pu*, Yiru Wang*, **Zhuofan Xia**, Yizeng Han, Yulin Wang, Weihao Gan,
Zidong Wang, Shiji Song, Gao Huang[†]

ICCV 2023

In Submission

DAT++: Spatially Dynamic Vision Transformer with Deformable Attention

Preprint

Zhuofan Xia, Xuran Pan, Shiji Song, Li Erran Li, Gao Huang[†]

- Extended journal version of *Vision Transformer with Deformable Attention*.

Generalized Activation via Multivariate Projection

Preprint

Jiayun Li, Yuxiao Cheng, Yiwen Lu, Zhuofan Xia, Yilin Mo[†], Gao Huang

HONORS AND AWARDS

Friend of Tsinghua – Ubiquant Scholarship of Tsinghua University

Fall 2023

Comprehensive excellence

Friend of Tsinghua – Hefei Talent Scholarship of Tsinghua University

Fall 2022

Comprehensive excellence

Friend of Tsinghua – Samsung Scholarship of Tsinghua University

Fall 2021

Comprehensive excellence

Friend of Tsinghua – Evergrand Scholarship of Tsinghua University

Fall 2019

Academic excellence

Outstanding Social Work Scholarship of Tsinghua University

Fall 2019

Outstanding social work

Friend of Tsinghua – ZhangRonghua Scholarship of Tsinghua University

Fall 2018

Academic excellence

Outstanding Social Work Scholarship of Tsinghua University

Fall 2018

Outstanding social work

Academic Excellence Scholarship of Tsinghua University

Fall 2017

Academic excellence

TEACHING ASSISTANT EXPERIENCE

Modeling and Optimization of Complex Networked Systems

80250463

Instructor: Prof. Shiji Song and Prof. Gao Huang

Tsinghua University

- Nonlinear optimization algorithms and network optimization algorithms.
- Worked as TA in 2021–2024 Fall.

SKILLS

- **Languages:** Chinese (Native), English
- **Programming:** C/C++, C#, Python, MATLAB
- **Deep Learning Toolkits:** TensorFlow, PyTorch, Caffe
- **Document Creation:** Microsoft Office Suite, \LaTeX , Markdown