束童 TONG SHU

Hefei University of Technology
t.shu@mail.hfut.edu.cn

EDUCATION

Hefei University of Technology (Recommended Exam-Free postgraduate) Anhui, China
Supervisor: Prof. Jun Shi
Co-Supervisor: Prof. Yushan Zheng (Beihang University)
M.Sc. in Software Engineering; Sep 2022 – July 2025

Hefei University of Technology Anhui, China
B.E. in Software Engineering (Overall mark of 87.29%); Sep 2018 – July 2022

PUBLICATIONS

* indicates equal contribution

[TMI]	**Slide-based Graph Collaborative Training for Histopathology Whole Slide Image Analysis** Jun Shi, **Tong Shu**, Zhiguo Jiang, Wei Wang, Haibo Wu and Yushan Zheng *IEEE Transactions on Medical Imaging (TMI),* May 2025
[MICCAI 2024]	**SlideGCD: Slide-based Graph Collaborative Training with Knowledge Distillation for Whole Slide Image Classification** **Tong Shu**, Jun Shi, Dongdong Sun, Zhiguo Jiang, Yushan Zheng *Medical Image Computing and Computer Assisted Intervention (MICCAI)*, October 2024
[CMPB]	**Masked hypergraph learning for weakly supervised histopathology whole slide image classification** Jun Shi, **Tong Shu**, Kun Wu, Zhiguo Jiang, Liping Zheng, Wei Wang, Haibo Wu, Yushan Zheng *Computer Methods and Programs in Biomedicine (CMPB)*, May 2024
[EMBC 2023]	**A Key-Points Based Anchor-Free Cervical Cell Detector** **Tong Shu**, Jun Shi, Yushan Zheng, Zhiguo Jiang, Lanlan Yu *2023 45th Annual International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC)*, **Oral**, July 2023

RESEARCH EXPERIENCE

● *Jun SHI's Lab, Hefei University of Technology* *Anhui, China*

Master candidate, supervised by Prof. Jun Shi and Prof. Yushan Zheng Sept. 2022 – Jun. 2025

● Explore the application of the Graph/Hypergraph structure in Histopathology Whole Slide Image Analysis to achieve explainable and accurate computer-aided diagnosis;
● Work closely with clinical pathologists (from the First Affiliated Hospital of USTC) and participate in most aspects of the relevant cooperation projects, including slide selection, scanning, preprocessing, algorithm experiment, and visualization;
● Experience in handling multimodal pathological data, including clinical textual data, visual histopathological images, and gene mutation annotation data for specific loci;
● **Achievements**: Two accepted publications in CMPB and MICCAI'24, one unpublished manuscript, and one authorized Invention Patent.

Research assistant, supervised by Prof. Jun Shi Feb. 2020 – Jun. 2022

● Develop an AI-based Cervical Cancer Screening Algorithm, technically based on Object Detection, accepted by the partner company (Motic China Group Co., Ltd.);
● Participate in the lab's data collection and preprocessing work, familiar with the preprocessing workflow of multiple data formats (e.g. jpeg, svs, tiff, XML, JSON);
● Participate in multiple innovation and entrepreneurship competitions for college students, responsible for survey, design, and integration of algorithm sections.
● **Achievements**: One publication in EMBC'23 and three awards in college students' innovation and entrepreneurship competition.

SELECTED AWARDS AND HONORS

- **National Scholarship for Postgraduates** (Certificate No. SSY202416084), Chinese Ministry of Education. 2024
- Graduate Study Scholarship, Hefei University of Technology. 2022-2024
- **National Silver Award** of the 7th China International College Students' "Internet+" Innovation and Entrepreneurship Competition, National Award. 2021
- **National Bronze Award** of the 6th China International College Students' "Internet+" Innovation and Entrepreneurship Competition, National Award. 2020
- **Gold Award in the School Competition** of the "Challenge Cup" Chinese College Student Entrepreneurship Plan Competition, Hefei University of Technology. 2021
- Scholarship of Outstanding Student (Third-class, Top 14%), Hefei University of Technology. 2018 - 2021

PATENTS

- Jun Shi, **Tong Shu**, Dongdong Sun, Xuyang Ding, Zihao Xu, Siming Xia. A hypergraph learning based weakly supervised histopathology whole slide image analysis method, ZL 2023 1 1255102.3, authorized, Jun. 28, 2024.