
Curriculum Vitae

of Ziquan WEI (PhD applicant for Fall—2022)

About me

Ziquan WEI, Second-year Master Student
Wuhan National Laboratory for Optoelectronics (WNLO)
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Education

Sept. 2019 - Now	Huazhong Univ. of Science and Technology, China M.Sc., Biomedical Engineering, Advisor: Shaoqun Zeng
Sept. 2015 - Jul. 2019	Yunnan Normal Univ., China B.Sc., Computer Science Advisor: Yang Yang

Research Experience

Sept. 2019 - Now	Collaborative Innovation Center for Biomedical Engineering Wuhan National Laboratory for Optoelectronics (WNLO) Huazhong Univ. of Science and Technology (HUST)
Sept. 2015 - Jul. 2019	Lab of Pattern Recognition and Artificial Intelligence (PRAI) School of Information Science and Technology Yunnan Normal Univ.

Awards

Oct. 2019	First-class: Academic Scholarship for Postgraduate, CNY 12000
Oct. 2020	Second-class: Academic Scholarship for Postgraduate, CNY 8000

English Proficiency

IELTS	6.0 (still working on it)
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Research Interests

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| • Image Registration | • Gaussian Mixture Model |
| • Deep Learning | • Whole Slide Image Analysis |

Skills

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| • MATLAB | • Python |
| • JavaScript | • Linux |

Papers

My contributions are indicated in the brackets. **AD**: algorithm design; **EC**: experimental conduct; **PW**: paper writing.

1. Shenghua Cheng, Sibao Liu, Jingya Yu, Gong Rao, Yuwei Xiao, Wei Han, Wenjie Zhu, Xiaohua Lv, Ning Li, Jing Cai, Zehua Wang, Xi Feng, Fei Yang, Xiebo Geng, Jiabo Ma, Xu Li, **Ziquan Wei** et al.: *Robust Whole Slide Image Analysis for Cervical Cancer Screening Using Deep Learning*, submitted to **Nature Communications**; **IF:12.121**; PREPRINT, 2021. (**EC**) [\[pdf\]](#)
2. **Ziquan Wei**, Xiuli Liu, Shenghua Cheng, Shaoqun Zeng: *An Efficient Cervical Whole Slide Image Analysis Framework Based on Multi-scale Semantic and Spatial Features Using Deep Learning*, submitted to **Medical Image Analysis**; **IF:11.148**; PRIPRINT, 2021. (**AD+PW+EC**) [\[pdf\]](#)
3. Zhuoqian Yang, Yang Yang, Kun Yang, **Ziquan Wei**: *Non-Rigid Image Registration With Dynamic Gaussian Component Density and Space Curvature Preservation*, **IEEE Transactions on Image Processing**; **IF:9.34**; 2018, 28:2584-2598. (**AD+PW+EC**) [\[pdf\]](#)
4. Su Zhang, Yang Yang, Kun Yang, **Ziquan Wei**: *Non-rigid Point Set Registration Using Dual-feature Finite Mixture Model and Global-local Structural Preservation*, **Pattern Recognition**; **IF:7.196**, 2018, 80:183-195. (**EC**) [\[pdf\]](#)
5. **Ziquan Wei**, Yang Yang, Kun Yang, Su Zhang: *Dual-feature Gaussian Mixture Model and Dual-constraint Spatial Transformation based Non-rigid Point Set Registration*, **Journal of Software**; Journal of Software is a top-level Chinese journal on Computer Science and Computer Engineering, EI index searching; 2018, 29(11):341-359. (**AD+PW+EC**) [\[pdf\]](#)
6. **Ziquan Wei**, Yifeng Han, Mengya Li, Kun Yang, Yang Yang, Yi Luo, Sim-Heng Ong: *A Small UAV Based Multi-Temporal Image Registration for Dynamic Agricultural Terrace Monitoring*, **Remote Sensing**; **IF:4.509**; 2017, 9(9). (**AD+PW+EC**) [\[pdf\]](#)

Research Funding

As the first applicant:

1. **National College Students' innovation and entrepreneurship training program**, *Feature points based real-time non-rigid registration method on multi-view multi-temporal UAV image*, CNY 20000.
2. **Yunnan Normal University Undergraduate Academic Research Program**, *Remote sensing image registration based on Gaussian mixture model and Newtonian annealing optimization*, CNY 1500.

Competitions

1. **Proceeding, ICCV 2021 workshop: 2nd Affective Behavior Analysis in-the-wild Competition** (ABAW, 06/2021 - Present).
2. **Season 1: 111/1681**, CVPR 2021 Security AI Challenger VI Track1: *White-box Adversarial Attacks on ML Defense Models* (02/2021 - 02/2021).
3. **Season 2: 54/1563**, Security AI Challenger Program Phase V - CIKM-2020 Alibaba-Tsinghua Adversarial Challenge on Object Detection (11/2020 - 11/2020).
4. **Season 1: 50/1757**, Security AI Challenger Program Phase IV - CIKM-2020 Alibaba-Tsinghua Adversarial Challenge on Object Detection (07/2020 - 07/2020).
5. **Season 1: 23/2360 Season 2: 42/2360**, "Digitized Human Body" Visual Challenge - Intelligence Diagnosis of Cervical Cancer Risk (11/2019 - 01/2020).

Hobbies

- Kendo
- Climbing
- Violin