

Ziquan Wei, M.Sc.

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Employment History

2022 – 2023 📚 Fellow Trainee, University of North Carolina at Chapel Hill.

Education

- 2023 – … 📚 Ph.D., University of North Carolina at Chapel Hill in Computer Science.
Advisor: Dr. Guorong Wu
- 2019 – 2022 📚 M.Sc., Huazhong University of Science and Technology in Biomedical Engineering.
Thesis title: *Efficient Deep Learning-based Whole Slide Image Classification and Gland Cell Detection from Cervical Cytology.*
Advisors: Dr. Shaoqun Zeng and Dr. Shenghua Cheng
- 2015 – 2019 📚 B.Sc., Yunnan Normal University in Computer Science.
Thesis title: *Point Set Registration-based Non-rigid Image Registration.*
Advisor: Dr. Yang Yang

Research Publications

Journal Articles

- 1 T. Dan, J. Ding, Z. Wei, *et al.*, “Re-think and re-design graph neural networks in spaces of continuous graph diffusion functionals,” *arXiv preprint arXiv:2307.00222*, 2023.
- 2 Z. Wei, S. Cheng, J. Cai, S. Zeng, X. Liu, and Z. Wang, “Cervical glandular cell detection from whole slide image with out-of-distribution data,” *arXiv preprint arXiv:2205.14625*, 2022.
- 3 S. Cheng, S. Liu, J. Yu, *et al.*, “Robust whole slide image analysis for cervical cancer screening using deep learning,” *Nature communications*, vol. 12, no. 1, p. 5639, 2021.
- 4 Z. Wei, S. Cheng, X. Liu, and S. Zeng, “An efficient cervical whole slide image analysis framework based on multi-scale semantic and spatial deep features,” *arXiv preprint arXiv:2106.15113*, vol. 2, 2021.
- 5 S. Zhang, Y. Ding, Z. Wei, and C. Guan, “Audiovisual attentive fusion for continuous emotion recognition,” *arXiv preprint arXiv:2107.01175*, 2021.
- 6 Z. Yang, Y. Yang, K. Yang, and Z.-Q. Wei, “Non-rigid image registration with dynamic gaussian component density and space curvature preservation,” *IEEE Transactions on Image Processing*, vol. 28, no. 5, pp. 2584–2598, 2018.
- 7 S. Zhang, K. Yang, Y. Yang, Y. Luo, and Z. Wei, “Non-rigid point set registration using dual-feature finite mixture model and global-local structural preservation,” *Pattern Recognition*, vol. 80, pp. 183–195, 2018.
- 8 Z. Wei, Y. Han, M. Li, *et al.*, “A small uav based multi-temporal image registration for dynamic agricultural terrace monitoring,” *Remote Sensing*, vol. 9, no. 9, p. 904, 2017.

Conference Proceedings

- 1 Z. Wei, T. Dan, J. Ding, M. Dere, and G. Wu, “A general stitching solution for whole-brain 3d nuclei instance segmentation from microscopy images,” in *International Conference on Medical Image Computing and Computer-Assisted Intervention*, Springer Nature Switzerland Cham, 2023, pp. 46–55.

- 2 Z. Wei, T. Dan, J. Ding, *et al.*, “High throughput deep model of 3d nucleus instance segmentation by stereo stitching contextual gaps,” in *2023 IEEE 20th International Symposium on Biomedical Imaging (ISBI)*, IEEE, 2023, pp. 1–5.
- 3 S. Zhang, Y. Ding, Z. Wei, and C. Guan, “Continuous emotion recognition with audio-visual leader-follower attentive fusion,” in *Proceedings of the IEEE/CVF International Conference on Computer Vision*, 2021, pp. 3567–3574.

Skills

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|-----------|---|
| Languages | Strong reading, writing and speaking competencies for English, Mandarin Chinese. |
| Coding | Python, C++, Matlab, L ^A T _E X, ... |
| Web Dev | HTML, CSS, JavaScript, Apache Web Server, Vue Framework. |
| Misc. | Academic research, training, consultation, L ^A T _E X typesetting, and publishing. |

Miscellaneous Experience

Certification

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|------|-------------------------------|---|
| 2022 | Outstanding graduate student. | Awarded by Huazhong University of Science and Technology. |
| 2019 | Outstanding thesis. | Awarded by Yunnan Normal University. |