

## CURRICULUM VITAE

### Zongwei Zhou, PhD

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Born: Shaoxing, Zhejiang, China  
Date of Birth: 03 December 1993  
Citizenship: China

### Education

From	To	Degree	Institution and Location	Field of Study
08/2017	05/2021	Ph.D.	Arizona State University, USA	Biomedical Informatics
09/2012	06/2016	B.Sc.	Dalian University of Technology, China	Computer Science

### Awards and Honors

2020 Elsevier-MEDIA Best Paper Award  
2020 MICCAI Student Participation Award  
2020 First places in Annual Student Poster Competition, BMI/BMD Symposium  
2020 University Graduate Fellowship, Arizona State University  
2019 MICCAI Young Scientist Award  
2019 MICCAI Best Presentation Award Finalist  
2019 MICCAI Graduate Student Travel Award  
2019 First place in the Annual Student Poster Competition, Mayo Clinic Symposium  
2016 Outstanding Graduate, Dalian University of Technology

### Positions and Employment

2021- Postdoctoral Researcher, Johns Hopkins University, Baltimore, MD, USA  
2018 Research Intern, Centre Hospitalier de l'Université de Montréal, Montreal, Canada  
2017 Research Intern, Mayo Clinic, Rochester, MN, USA

### Professional Memberships

2021- Student Member, Association for Computing Machinery (ACM)  
2021- Member, American Medical Informatics Association (AMIA)  
2017- Young Professionals, the Institute of Electrical and Electronics Engineers (IEEE)  
2017- Student Member, the Institute of Electrical and Electronics Engineers (IEEE)

### Professional Services

Guest Editor

Special Issue in Sensors: “Advances of Deep Learning in Medical Image Interpretation”

Journal Reviewer

IEEE Transactions on Pattern Analysis and Machine Intelligence  
Medical Image Analysis  
Information Fusion  
IEEE Transactions on Medical Imaging  
Pattern Recognition  
IEEE Transactions on Biomedical Engineering  
Journal of Biomedical and Health Informatics  
IEEE Access  
Journal of Biomedical Informatics

#### Conference Program Committee

Conference on Computer Vision and Pattern Recognition (CVPR'22), New Orleans, USA  
AAAI Conference on Artificial Intelligence (AAAI'22), Vancouver, Canada  
ICCV'21 Workshop on Computer Vision for Automated Medical Diagnosis (CVAMD), Montreal, Canada  
International Conference on Computer Vision (ICCV'21), Montreal, Canada  
International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI'21), Strasbourg, France  
AAAI Conference on Artificial Intelligence (AAAI'21), Vancouver, Canada  
International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI'20), Lima, Peru  
AAAI Conference on Artificial Intelligence (AAAI'20), New York, USA  
ICCV'19 Workshop on Visual Recognition for Medical Images (VRMI), Seoul, Korea

#### Invited Talks

11/05/2021	Imaging Informatics: Computer-Aided Diagnosis with Annotation-Efficient Deep Learning. Venue: Biomedical Informatics (BMI) Seminar, Host: Dr. Anita Murcko
10/01/2021	Data Assemble: Towards Efficient Medical Image Analysis. Venue: MICCAI 2021 FLARE Challenge Keynote, Host: Dr. Jun Ma
08/03/2021	Towards Annotation-Efficient Deep Learning for Computer-Aided Diagnosis. Venue: Medical Image Computing Seminar (MICS), Host: Dr. Hongkai Wang
04/26/2021	Towards Annotation-Efficient Deep Learning for Computer-Aided Diagnosis. Venue: DLML Journal Club @Mayo Clinic, Host: Cindy Dilworth
01/28/2021	The Will of Computer Vision. Venue: VALSE Student Webinar, Host: Dr. Yong Xia
12/06/2020	Cost-Effective Deep Learning in Medical Image Analysis. Venue: Arizona Physiological Society's (AZPS) Annual Meeting, Host: Dr. Dawn Coletta
11/06/2020	Annotation-efficient Deep Learning for Computer-aided Diagnosis in Medical Imaging. Venue: CIDSE Invited Talk @Arizona State University, Host: Dr. Yalin Wang
09/04/2020	Computer-aided Diagnosis and Therapy in Medical Imaging. Venue: BMI Seminar @Arizona State University, Host: Dr. Anita Murcko
08/13/2020	Cost-Effective Computer-Aided Diagnosis of Lung Cancer in Chest Computed Tomography. Venue: Phoenix Symposium on Data Analytics in Healthcare, Host: Dr. Claire Pascavis
11/11/2019	Models Genesis: Generic Autodidactic Models for 3D Medical Image Analysis. Venue: Mila – Quebec Artificial Intelligence Institute, Host: Dr. Joseph Paul Cohen
10/24/2019	3D Transfer Learning in Medical Image Analysis. Venue: AI Research Club
09/24/2019	Models Genesis: Generic Autodidactic Models for 3D Medical Image Analysis. Venue: MICS Webinar, Host: Dr. Yong Xia, Dr. Huiguang He
09/18/2018	UNet++: A Nested U-Net Architecture for Medical Image Segmentation. Venue: AI Research Club
05/22/2018	How to Cut Annotation Cost in Biomedical Imaging. Venue: Centre Hospitalier de l'Université de Montréal, Host: Dr. Catherine Huet

## Teaching

- 2020 BMI 598: NLP Methods for Biomedical Text Mining. Position: Teaching Assistant, Instructor: Dr. Murthy Devarakonda
- 2020 BMI 598: Imaging in Diagnostics. Position: Teaching Assistant, Instructor: Dr. Jianming Liang
- 2019 BMI 507: Intro Digital Image Processing. Position: Teaching Assistant, Instructor: Dr. Jianming Liang

## Patents

- 2021 US Patent 11,164,021, Methods, Systems, and Media for Discriminating and Generating Translated Images
- 2021 US Patent 11,164,067, Systems, Methods, and Apparatuses for Implementing a Multi-resolution Neural Network for Use with Imaging Intensive Applications Including Medical Imaging

## Publications

### Book Chapters

1. Z. Zhou, J. Liang\*. "Models Genesis." In Deep Learning for Medical Image Analysis (2nd Edition). S. K. Zhou, H. Greenspan, D. Shen (eds.). Springer. (under contract).
2. Z. Zhou, M. Gotway, J. Liang\*. "Interpreting Medical Images." In Cognitive Informatics in Biomedicine and Healthcare. Intelligent Systems in Medicine and Health: The Role of AI. T. Cohen, V. Patel and E. Shortliffe (eds.). Springer, 2022.

### Peer-refereed Journal Publications

3. Z. Zhou, J. Shin, S. Gurudu, M. Gotway, and J. Liang\*. "Active, Continual Fine Tuning of Convolutional Neural Networks for Reducing Annotation Efforts." Medical Image Analysis, 2021.
4. F. Haghighi, M. R. Hosseinzadeh Taher, Z. Zhou, M. Gotway, J. Liang\*. "Transferable Visual Words: Exploiting the Semantics of Anatomical Patterns for Self-supervised Learning." IEEE Transactions on Medical Imaging, 2021.
5. Z. Zhou, V. Sodha, J. Pang, M. Gotway, and J. Liang\*. "Models Genesis." Medical Image Analysis, 2020. (MedIA Best Paper Award)
6. Z. Zhou, M. M. Rahman Siddiquee, N. Tajbakhsh, and J. Liang\*. "UNet++: Redesigning Skip Connections to Exploit Multi-Resolution Features in Image Segmentation." IEEE Transactions on Medical Imaging, 2020. (IEEE TMI Most Popular Articles)
7. Z. Zhou, J. Shin, R. Feng, R. Hurst, C. Kendall, and J. Liang\*. "Integrating Active Learning and Transfer Learning for Carotid Intima-Media Thickness Video Interpretation." Journal of Digital Imaging, 2019.
8. H. Wang, Z. Chen, Z. Zhou, Y. Li, P. Lu, W. Wang, W. Liu, L. Yu\*. "Evaluation of Machine Learning Classifiers for Diagnosing Mediastinal Lymph Node Metastasis of Lung Cancer from PET/CT Images." Journal of ZheJiang University (Engineering Science), 2018
9. H. Wang, Z. Zhou, Y. Li, Z. Chen, P. Lu, W. Wang, W. Liu, and L. Yu\*. "Comparison of Machine Learning Methods for Classifying Mediastinal Lymph Node Metastasis of Non-Small Cell Lung Cancer from 18 F-FDG PET/CT Images." EJNMMI Research, 2017. (EJNMMI Research Highest-Cited Article, 2017-18)

### Peer-refereed Conference Proceedings

10. N. Islam, S. Gehlot, Z. Zhou, M. Gotway, J. Liang\*. "Seeking an Optimal Approach for Computer-Aided Diagnosis Pulmonary Embolism Detection." Machine Learning in Medical Imaging (MLMI'21), 2021.
11. R. Feng, Z. Zhou, M. Gotway, J. Liang\*. "Self-supervised Learning: From Parts to Whole." Domain Adaptation and Representation Transfer (DART'20), 2020.
12. F. Haghighi, M. R. Hosseinzadeh Taher, Z. Zhou, M. Gotway, J. Liang\*. "Learning Semantics-enriched Representation via Self-discovery, Self-classification, and Self-restoration." International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI'20), 2020. (Oral)

13. M. M. Rahman Siddiquee, Z. Zhou, R. Feng, N. Tajbakhsh, M. Gotway, Y. Bengio, and J. Liang\*. "Learning Fixed Points in Generative Adversarial Networks: From Image-to-Image Translation to Disease Detection and Localization." International Conference on Computer Vision (ICCV'19), 2019.
14. Z. Zhou, V. Sodha, M. M. Rahman Siddiquee, R. Feng, N. Tajbakhsh, M. Gotway, and J. Liang\*. "Models Genesis: Generic Autodidactic Models for 3D Medical Image Analysis." International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI'19), 2019. (Young Scientist Award; Best Presentation Award Finalist; Oral)
15. Z. Zhou, M. M. Rahman Siddiquee, N. Tajbakhsh, and J. Liang\*. "UNet++: A Nested U-Net Architecture for Medical Image Segmentation." Deep Learning in Medical Image Analysis (DLMIA'18), 2018. (Oral)
16. Z. Zhou, J. Shin, L. Zhang, S. Gurudu, M. Gotway, and J. Liang\*. "Fine-tuning Convolutional Neural Networks for Biomedical Image Analysis: Actively and Incrementally." Conference on Computer Vision and Pattern Recognition (CVPR'17), 2017.

#### Arxiv and Conference Abstracts

17. Y. Yao, F. Liu, Z. Zhou, Y. Wang, W. Shen, A. Yuille, Y. Lu\*. "Unsupervised Domain Adaptation through Shape Modeling for Medical Image Segmentation." 2021.
18. J. Xiao, L. Jing, L. Zhang, J. He, Q. She, Z. Zhou, A. Yuille, Y. Li\*. "Learning from Temporal Gradient for Semi-supervised Action Recognition." arXiv preprint arXiv:2111.13241, 2021.
19. T. Xiang, Y. Lu, A. Yuille, C. Zhang, W. Cai, Z. Zhou\*. "In-painting Radiography Images for Unsupervised Anomaly Detection." arXiv preprint arXiv:2111.13495, 2021.
20. M. Kang, Y. Lu, A. Yuille, Z. Zhou\*. "Data-Assemble: Leveraging Multiple Datasets with Partial Labels." arXiv preprint arXiv:2109.12265, 2021.
21. J. Chen, J. Chen, Z. Zhou, A. Yuille, Y. Lu\*. "MT-TransUNet: Mediating Multi-Task Tokens in Transformers for Skin Lesion Segmentation and Classification." arXiv preprint arXiv:2112.01767, 2021.
22. Z. Zhou, Z. Akkus, M. S. Warner, M. N. Stan, J. Liang, and B. J. Erickson\*. "A Preliminary Study of Using Machine Learning to Reduce Biopsies of Thyroid Nodules Based on Ultrasound Images." The 2nd SIIM Conference on Machine Intelligence in Medical Imaging, 2017.
23. P. D. Korfiatis, Z. Zhou, J. Liang, and B. J. Erickson\*. "Fully Automated IDH Mutation Prediction in MRI Utilizing Deep Learning." The 2nd SIIM Conference on Machine Intelligence in Medical Imaging, 2017.
24. Z. Zhou, J. Shin, R. T. Hurst, C. B. Kendall, and J. Liang\*. "Integrating Active Learning and Transfer Learning for Carotid Intima-Media Thickness Video Interpretation." The 2nd SIIM Conference on Machine Intelligence in Medical Imaging, 2017.
25. L. Zhang, Z. Zhou, H. Siddiki, N. S. Madiraju, F. C. Ramirez, S. R. Gurudu, and J. Liang\*. "Approaching Medical Fellow-Level Performance on Colonoscopy Frame Classification with Deep Neural Networks." WP Time, the 82rd Annual Meeting, 2017.

#### References

Alan L. Yuille	Bloomberg Distinguished Professor, Johns Hopkins University; ayuille1@jhu.edu
Jianming Liang	Associate Professor, Arizona State University; Jianming.Liang@asu.edu
Edward H. Shortliffe	Adjunct Professor, Arizona State University; Ted.Shortliffe@asu.edu
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