

CURRICULUM VITAE

Zongwei Zhou, PhD

Assistant Research Scientist
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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

2025	Finalist, Whiting School of Engineering Trainee Award, Johns Hopkins University
2025	Mentor, MICCAI Young Researcher Excellence Training Program
2024	President's Awards for Innovation, Arizona State University
2024	Principal Investigator, Microsoft Health AI (\$10,000 GPU credits & data storage)
2023	Team Investigator, Lustgarten Foundation (\$1,922,421); PI: A. Yuille
2023	Team Investigator, Patrick J. McGovern Foundation (\$400,000); PI: A. Yuille
2022-24	Top 2% Scientists Worldwide, Stanford University
2022	AMIA Doctoral Dissertation Award
2022	MICCAI Young Scientist Publication Impact Award Finalist
2022-23	IEEE TMI Distinguished Reviewer
2020-21	University Graduate Fellowship, Arizona State University
2020	Co-PI, Bridges AI Project (135,360 GPU hours, 12,000 GB Storage); PI: J. Liang
2020	Elsevier-MedIA Best Paper Award
2020	SUN Award, Arizona State University
2020	MICCAI Student Participation Award
2020	First places in Annual Student Poster Competition, BMI/BMD Symposium
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

Employment, Research, and Academic Positions

2024-	Assistant Research Scientist, Johns Hopkins University, Baltimore, MD, USA
2021-2024	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

2022-	North American Training/Student Membership
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

Frontiers in Radiology, Special Issue on “Learning Disentangled Representation in Radiological Images”
Diagnostics, Special Issue on “Machine Learning in Medical Images Segmentation”
Journal of Imaging, Special Issue on “Imaging Informatics: Computer-aided Diagnosis”
Applied Sciences, Special Issue on “Artificial Intelligence in Biomedical Image Processing”
Machine Intelligence Research, Special Issue on “Multi-Modal Representation Learning”
Frontiers in Radiology, Special Issue on “AI Applications for Cancer Diagnosis in Radiology”
Sensors, Special Issue on “Advances of Deep Learning in Medical Image Interpretation”

Journal Reviewer

Nature Communications
IEEE Transactions on Pattern Analysis and Machine Intelligence
IEEE Transactions on Neural Networks and Learning Systems
International Journal of Computer Vision
Medical Image Analysis
Artificial Intelligence in Medicine
Information Fusion
IEEE Transactions on Medical Imaging
Pattern Recognition
Computer Methods and Programs in Biomedicine
IEEE Transactions on Biomedical Engineering
Journal of Biomedical and Health Informatics
IEEE Access
Journal of Biomedical Informatics

Workshop Organizer

ICML’23 Workshop on Interpretable Machine Learning in Healthcare (IMLH), Hawaii, USA
ICML’22 Workshop on Interpretable Machine Learning in Healthcare (IMLH), Baltimore, USA

Conference Area Chair

IEEE International Symposium on Biomedical Imaging (ISBI’25), Houston, USA
Medical Imaging with Deep Learning (MIDL’25), Salt Lake City, USA
Conference on Computer Vision and Pattern Recognition (CVPR’25), Nashville, USA
Medical Image Computing and Computer Assisted Intervention (MICCAI’24), Marrakesh, Morocco
Conference on Computer Vision and Pattern Recognition (CVPR’24), Seattle, USA

Conference Program Committee

Medical Image Computing and Computer Assisted Intervention (MICCAI’25), Daejeon, South Korea
International Conference on Machine Learning (ICML’25), Vancouver, Canada
International Conference on Learning Representations (ICLR’24), Singapore
Conference on Neural Information Processing Systems (NeurIPS’24), Vancouver, Canada
European Conference on Computer Vision (ECCV’24), Milano, Italy
International Conference on Learning Representations (ICLR’24), Vienna Austria
AAAI Conference on Artificial Intelligence (AAAI’24), Vancouver, Canada
Conference on Neural Information Processing Systems (NeurIPS’23), New Orleans, USA

Medical Image Computing and Computer Assisted Intervention (MICCAI'23), Vancouver, Canada
 International Conference on Computer Vision (ICCV'23), Paris, France
 Medical Imaging with Deep Learning (MIDL'23), Nashville, USA
 IEEE International Symposium on Biomedical Imaging (ISBI'23), Cartagena, Colombia
 Conference on Computer Vision and Pattern Recognition (CVPR'23), Vancouver, Canada
 AAAI Conference on Artificial Intelligence (AAAI'23), Washington DC, USA
 IEEE/CVF Winter Conference on Applications of Computer Vision (WACV'23), Hawaii, USA
 Medical Image Computing and Computer Assisted Intervention (MICCAI'22), Singapore
 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
 Medical Image Computing and Computer Assisted Intervention (MICCAI'21), Strasbourg, France
 AAAI Conference on Artificial Intelligence (AAAI'21), Vancouver, Canada
 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

Press Coverage

02/19/2025 JHU News-Letter: AbdomenAtlas: an AI-based approach for early cancer diagnosis
 02/17/2025 JHU CS News: A touchstone of medical artificial intelligence
 02/04/2025 JHU News: AI-Powered Map of the Abdomen Could Help Find Cancer Early On
 08/22/2024 JHU CS News: Forget-Me-Not: Selective Memory Can Help AI Remember More, Not Less
 06/10/2024 Center for Intelligent Imaging News: Zongwei Zhou's, PhD, Visionary Approach to Medical Imaging
 05/30/2024 JHU News: Fake Tumors, Real Results
 02/06/2024 JHU WSE News: AI and Radiologists Unite to Map the Abdomen
 10/13/2019 MICCAI News: Models Genesis: Generic Autodidactic Models for 3D Medical Image Analysis

Invited Talks

Interpreting Medical Images
 07/15/2024 Venue: Special Lecture @WSE Pre-College Programs, Host: Laura Henneman

Analysis of Cancerous Tumors by Synthesis
 10/10/2024 Venue: MICCAI 2024 Workshop AIPAD Keynote, Host: Dr. Ulaş Bağcı

AbdomenAtlas: Radiologists and AI Unite to Map the Abdomen
 03/27/2025 Venue: Invited Lecture @Stony Brook University, Host: Chenyu You
 02/27/2025 Venue: Invited Lecture @UCSF, Host: Dr. Yang Yang
 02/25/2025 Venue: Invited Lecture @Emory, Host: Dr. Xiaofeng Yang
 01/24/2025 Venue: Beyond the Patterns, Host: Dr. Andreas Maier
 10/06/2024 Venue: MICCAI 2024 MedShapeNet Tutorial, Host: Gijs Luijten
 05/22/2024 Venue: VALSE Webinar, Host: Dr. Yong Xia
 04/08/2024 Venue: Invited Lecture @UCSF, Host: Dr. Yang Yang
 03/27/2024 Venue: BIGSS Seminar @Johns Hopkins University, Host: Dr. Mehran Armand

Scaling Datasets, Annotations, and Algorithms for Medical Image Analysis
 10/03/2024 Venue: Invited Lecture @University of California, Santa Cruz, Host: Dr. Cihang Xie
 01/17/2024 Venue: Invited Lecture @University of British Columbia, Host: Dr. Xiaoxiao Li
 01/16/2024 Venue: Invited Lecture @University of California, Santa Cruz, Host: Dr. Yuyin Zhou
 01/12/2024 Venue: Image Analysis Seminar @Yale University, Host: Dr. John Onofrey and Dr. Nicha Dvornek

11/17/2023 Venue: BMI Seminar @Arizona State University, Host: Dr. Anita Murcko
10/19/2023 Venue: Stanford MedAI @Stanford, Host: Dr. Amara Tariq
09/26/2023 Venue: Human-centered AI conference, Host: Dr. Fabien Scalzo
07/06/2023 Venue: Weill Cornell Radiology, Host: Dr. Mert Sabuncu

Towards Annotation-Efficient Deep Learning for Computer-Aided Diagnosis
05/08/2023 Venue: CMLR at Peking University, Host: Dr. Bin Dong
12/16/2022 Venue: HIT (Healthcare, Intelligence, Technology) Webinar, Host: Dr. Jiancheng Yang
11/07/2022 Venue: AMIA 2022 Annual Symposium, Host: Dr. Jeffrey J. Williamson
11/05/2021 Venue: BMI Seminar @Arizona State University, Host: Dr. Anita Murcko
08/03/2021 Venue: Medical Image Computing Seminar (MICS), Host: Dr. Hongkai Wang
04/26/2021 Venue: DLML Journal Club @Mayo Clinic, Host: Cindy Dilworth
12/06/2020 Venue: Arizona Physiological Society's (AZPS) Annual Meeting, Host: Dr. Dawn Coletta
11/06/2020 Venue: CIDSE Invited Talk @Arizona State University, Host: Dr. Yalin Wang
09/04/2020 Venue: BMI Seminar @Arizona State University, Host: Dr. Anita Murcko
08/13/2020 Venue: Phoenix Symposium on Data Analytics in Healthcare, Host: Dr. Claire Pascavis

How to develop a quality organization of doctoral dissertations and thesis defenses?
12/08/2022 Venue: Seminar @University of Missouri-Columbia, Host: Dr. Robert Sanders

Synthetic Tumors Make AI Segment Real Tumors Better
11/26/2022 Venue: Du'Shu Forum/The 2nd Youth Academic Forum, Host: Dr. S. Kevin Zhou

Data Assemble: Towards Efficient Medical Image Analysis
10/01/2021 Venue: MICCAI 2021 FLARE Challenge Keynote, Host: Dr. Jun Ma

The Will of Computer Vision
01/28/2021 Venue: VALSE Student Webinar, Host: Dr. Yong Xia

Models Genesis: Generic Autodidactic Models for 3D Medical Image Analysis
11/11/2019 Venue: Mila – Quebec Artificial Intelligence Institute, Host: Dr. Joseph Paul Cohen
10/24/2019 Venue: AI Research Club
09/24/2019 Venue: MICS Webinar, Host: Dr. Yong Xia, Dr. Huiguang He

UNet++: A Nested U-Net Architecture for Medical Image Segmentation
09/18/2018 Venue: AI Research Club

How to Cut Annotation Cost in Biomedical Imaging
05/22/2018 Venue: Centre Hospitalier de l'Université de Montréal, Host: Dr. Catherine Huet

Teaching

2021 BMI 505: Foundations of BMI Methods II
Position: Teaching Assistant, Instructor: Dr. Sen Peng
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

2025	US Patent, 12,236,592, Systems, Methods, and Apparatuses for Systematically Determining an Optimal Approach for Computer-Aided Diagnosis of Pulmonary Embolism
2025	US Patent, 12,229,920, Systems, Methods, and Apparatuses for Implementing Fixed-Point Image-to-Image Translation using Improved Generative Adversarial Networks (GANS)
2025	US Patent, 12,216,737, Systems, Methods, and Apparatuses for Actively and Continually Fine Tuning Convolutional Neural Networks to Reduce Annotation Requirements
2024	US Patent 12,118,455, Systems, Methods, and/or Media, for Selecting Candidates for Annotation for Use In Training a Classifier
2024	US Patent 11,922,628, Systems, Methods, and Apparatuses for the Generation of Self-Taught Models Genesis Absent Manual Labeling for the Processing of Medical Imaging
2024	US Patent 11,915,417, Systems, Methods, and Apparatuses for Training a Deep Model to Learn Contrastive Representations Embedded within Part-whole Semantics via a Self-supervised Learning Framework
2023	US Patent 11,763,952, Systems, Methods, and Apparatuses for Learning Semantics-Enriched Representations via Self-Discovery, Self-Classification, and Self-Restoration in the Context of Medical Imaging
2022	US Patent 11,328,430, Methods, Systems, And Media for Segmenting Images
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
2021	US Patent 10,956,785, Methods, Systems, and Media for Selecting Candidates for Annotation for Use in Training Classifiers

Challenges and Tutorials

2025	<i>Challenge for Vision-Language Modeling in 3D Medical Imaging</i> Venue: Medical Image Computing and Computer Assisted Intervention (MICCAI) Organizers: I. E. Hamamci, S. Shit, Z. Zhou , ..., A. Sekuboyina, M. Xu, C. Prabhakar, B. Menze
2024-25	<i>MedShapeNet: A Large Repository of 3D Medical Shapes and a Python Toolbox for 3D Medical Shape Analysis</i> Venue: Medical Image Computing and Computer Assisted Intervention (MICCAI) Organizers: J. Li, G. Luijten, Z. Zhou , J. Yang, J. Fragemann, M. Balzer, B. Paniagua, ..., J. Egger
2024	<i>Body Maps: Towards 3D Atlas of Human Body</i> Venue: Medical Image Computing and Computer Assisted Intervention (MICCAI) Organizers: W. Li, P. R. A. S. Bassi, Y. Tang, X. Chen, J. Li, ..., A. Yuille, Z. Zhou*
2024	Venue: IEEE International Symposium on Biomedical Imaging (ISBI) Organizers: W. Li, X. Chen, Y. Chou, Q. Chen, Y. Lai, Y. Chen, A. Wang, Y. Liu, ..., A. Yuille, Z. Zhou*

Publications

*Corresponding author

Book Chapters

1. Q. Chen, Y. Lai, X. Chen, Q. Hu, A. Yuille, **Z. Zhou***. "Analyzing Tumors by Synthesis." Generative Machine Learning Models in Medical Image Computing. L. Zhang, Z. Li and G. Slabaugh (eds.).
2. Y. Tang, J. Liu, **Z. Zhou**, X. Yu, Y. Huo*. "Efficient 3D Representation Learning for Medical Image Analysis." Towards Realistic 3D Deep Learning: Algorithms and Applications. X. Li, X. Yang, and H. Su (eds.). World Scientific Annual Review of Artificial Intelligence, 2024.

3. **Z. Zhou**, M. Gotway, J. Liang*. "Interpreting Medical Images." Intelligent Systems in Medicine and Health: The Role of AI. T. Cohen, V. Patel and E. Shortliffe (eds.). Springer Nature, 2022.

Peer-refereed Journal Publications

4. J. Li, **Z. Zhou**, A. Pepe, C. Gsaxner, G. Luijten, C. Qu, T. Zhang, X. Chen, W. Li, ..., A. Yuille, J. Kleesiek, J. Egger. "MedShapeNet - A Large-Scale Dataset of 3D Medical Shapes for Computer Vision." *Biomedical Engineering / Biomedizinische Technik*, 2024.
5. J. Liu, Y. Zhang, K. Wang, M. Yavuz, X. Chen, Y. Yuan, H. Li, Y. Yang, A. Yuille, Y. Tang*, **Z. Zhou***. "Universal and Extensible Language-Vision Models for Organ Segmentation and Tumor Detection from Abdominal Computed Tomography." *Medical Image Analysis*, 2024.
6. W. Li, C. Qu, ..., A. Yuille, **Z. Zhou***. "AbdomenAtlas: A Large-Scale, Detailed-Annotated, & Multi-Domain Dataset for Efficient Transfer Learning and Open Algorithmic Benchmarking." *Medical Image Analysis*, 2024. **(Covered by JHU News and JHU News-Letter; WSE Trainee Award Finalist)**
7. T. Xiang, Y. Zhang, Y. Lu, A. Yuille, C. Zhang, W. Cai, **Z. Zhou***. "Exploiting Structural Consistency of Chest Anatomy for Unsupervised Anomaly Detection in Radiography Images." *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 2024.
8. J. Gan, H. Wang, H. Yu, Z. He, W. Zhang, K. Ma, L. Zhu, Y. Bai, **Z. Zhou**, A. Yuille, X. Bai, M. Wang, D. Yang, Y. Chen, G. Chen, J. Lasenby, C. Cheng, J. Wu, J. Zhang, X. Wang*, Y. Chen*, G. Wang*, T. Xia*. "Focalizing regions of biomarker relevance facilitates biomarker prediction on histopathological images." *iScience*, 2023.
9. Y. Chou, B. Li, D. Fan, A. Yuille, **Z. Zhou***. "Acquiring Weak Annotations for Tumor Localization in Temporal and Volumetric Data." *Machine Intelligence Research*, 2023.
10. N. Islam, **Z. Zhou**, S. Gehlot, M. Gotway, J. Liang*. "Seeking an Optimal Approach for Computer-aided Diagnosis of Pulmonary Embolism." *Medical Image Analysis*, 2023.
11. **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.
12. F. Haghghi, 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.
13. **Z. Zhou**, V. Sodha, J. Pang, M. Gotway, and J. Liang*. "Models Genesis." *Medical Image Analysis*, 2020. **(Media Best Paper Award)**
14. **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)**
15. **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.
16. 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
17. 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

18. X. Zhou, Y. Zhao, C. Zhuang, D. Yu, A. Yuille, **Z. Zhou***. "Efficient Human-in-the-Loop Pancreatic Tumors Annotation via Large-Scale Pre-Trained Model With Adaptive Post-Processing." *IEEE International Symposium on Biomedical Imaging (ISBI'25)*, 2025.
19. P. R. A. S. Bassi, Q. Wu, W. Li, S. Decherchi, A. Cavalli, A. Yuille, **Z. Zhou***. "Label Critic: Design Data Before Models." *IEEE International Symposium on Biomedical Imaging (ISBI'25)*, 2025.
20. P. R. A. S. Bassi, W. Li, Y. Tang, F. Isensee, ..., A. Yuille, **Z. Zhou***. "Touchstone Benchmark: Are We on the Right Way for Evaluating AI Algorithms for Medical Segmentation?" *Conference on Neural Information Processing Systems (NeurIPS'24)*, 2024. **(Covered by JHU CS News)**

21. Y. Cai, Y. Liang, J. Wang, A. Wang, Y. Zhang*, X. Yang, **Z. Zhou***, A. Yuille. "Radiative Gaussian Splatting for Efficient X-ray Novel View Synthesis." European Conference on Computer Vision (ECCV'24), 2024.
22. Y. Chou, **Z. Zhou***, A. Yuille. "Embracing Massive Medical Data." International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI'24), 2024. **(Covered by JHU CS News)**
23. Y. Lai, X. Chen, A. Wang, A. Yuille, **Z. Zhou***. "From Pixel to Cancer: Cellular Automata in Computed Tomography." International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI'24), 2024.
24. Q. Chen, X. Chen, A. Yuille, Z. Xiong, C. Wei*, **Z. Zhou***. "Towards Generalizable Tumor Synthesis." Conference on Computer Vision and Pattern Recognition (CVPR'24), 2024.
25. Y. Cai, J. Wang, A. Yuille, **Z. Zhou***, A. Wang*. Structure-Aware X-ray Neural Radiodensity Fields." Conference on Computer Vision and Pattern Recognition (CVPR'24), 2024.
26. T. Zhang, X. Chen, C. Qu, A. Yuille, **Z. Zhou***. Leveraging AI Predicted and Expert Revised Annotations in Interactive Segmentation: Continual Tuning or Full Training? IEEE International Symposium on Biomedical Imaging (ISBI'24), 2024.
27. S. Du, X. Wang, Y. Lu, Y. Zhou, S. Zhang, A. Yuille, K. Li, **Z. Zhou***. Boosting Dermatoscopic Lesion Segmentation via Diffusion Models with Visual and Textual Prompts. IEEE International Symposium on Biomedical Imaging (ISBI'24), 2024. **(Oral Presentation)**
28. W. Li, A. Yuille, **Z. Zhou***. "How Well Do Supervised 3D Models Transfer to Medical Imaging Tasks?" International Conference on Learning Representations (ICLR'24), 2024. **(Oral Presentation)**
29. B. Li*, **Z. Zhou***, A. Yuille, M. Allan, J. McLeod. "Ultra-TransUNet: Ultrasound segmentation framework with spatial-temporal context feature fusion." SPIE Medical Imaging, 2024 **(Oral Presentation)**.
30. C. Qu, T. Zhang, H. Qiao, J. Liu, Y. Tang, A. Yuille, and **Z. Zhou***. "Annotating 8,000 Abdominal CT Volumes for Multi-Organ Segmentation in Three Weeks." Conference on Neural Information Processing Systems (NeurIPS'23), 2023. **(Covered by JHU WSE News)**
31. B. Li, Y. Chou, S. Sun, H. Qiao, A. Yuille, **Z. Zhou***. "Early Detection and Localization of Pancreatic Cancer by Label-Free Tumor Synthesis." MICCAI Workshop on Big Task Small Data, 1001-AI, 2023. **(Oral Presentation)**
32. J. Liu, Y. Zhang, J. Chen, Y. Lu, Y. Yuan, A. Yuille, Y. Tang*, **Z. Zhou***. "CLIP-Driven Universal Model for Organ Segmentation and Tumor Detection." International Conference on Computer Vision (ICCV'23), 2023. **(Rank First in Medical Segmentation Decathlon Competition)**
33. Y. Zhang, X. Li, H. Chen, A. Yuille, Y. Liu*, **Z. Zhou***. "Learning without Forgetting for Continual Abdominal Multi-Organ and Tumor Segmentation." International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI'23), 2023.
34. Y. Chen, L. Liu*, J. Li, H. Jiang, C. Ding, **Z. Zhou***. "MetaLR: Meta-tuning of Learning Rates for Transfer Learning in Medical Imaging." International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI'23), 2023.
35. L. Chen, Y. Bai, S. Huang, Y. Lu, B. Wen, A. Yuille, **Z. Zhou***. "A Guide to Your First Choice: Addressing Cold Start Problem in Vision Active Learning." Medical Imaging with Deep Learning (MIDL'23), 2023.
36. T. Xiang, Y. Zhang, Y. Lu, A. Yuille, C. Zhang, W. Cai, **Z. Zhou***. "SQUID: Deep Feature In-Painting for Unsupervised Anomaly Detection." Conference on Computer Vision and Pattern Recognition (CVPR'23), 2023.
37. W. Ji, J. Li, B. Cheng, **Z. Zhou***, J. Zhao, A. Yuille, L. Cheng*. "Multispectral Video Semantic Segmentation: A Benchmark Dataset and Baseline." Conference on Computer Vision and Pattern Recognition (CVPR'23), 2023.
38. Q. Hu, Y. Chen, J. Xiao, S. Sun, J. Chen, A. Yuille, **Z. Zhou***. "Label-Free Liver Tumor Segmentation." Conference on Computer Vision and Pattern Recognition (CVPR'23), 2023. **(Covered by JHU News)**
39. M. Kang, B. Li, Z. Zhu, Y. Lu, E. Fishman, A. Yuille, **Z. Zhou***. "Label-Assemble: Leveraging Multiple Datasets with Partial Labels." IEEE International Symposium on Biomedical Imaging (ISBI'23), 2023.
40. Y. Chen, A. Yuille, **Z. Zhou***. "Which Layer is Learning Faster? A Systematic Exploration of Layer-wise Convergence Rate for Deep Neural Networks". International Conference on Learning Representations (ICLR'23), 2023.
41. L. Chen, Y. Bai, S. Huang, Y. Lu, B. Wen, A. Yuille, **Z. Zhou***. "A Guide to Your First Choice: Addressing Cold Start Problem in Vision Active Learning." NeurIPS Workshop on Human in the Loop Learning, 2022.
42. J. Xiao, Y. Bai, A. Yuille, **Z. Zhou***. "Delving into Masked Autoencoders for Multi-Label Chest X-ray Classification." Winter Conference on Applications of Computer Vision (WACV'23), 2023.

43. J. Xiao, L. Yu, **Z. Zhou**, Y. Bai, L. Xing, A. Yuille, Y. Zhou*. "CateNorm: Categorical Normalization for Robust Medical Image Segmentation." Domain Adaptation and Representation Transfer (DART'22), 2022. (**Best Paper Award Honorable Mention, Oral Presentation**)
44. 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." Conference on Computer Vision and Pattern Recognition (CVPR'22), 2022.
45. Y. Yao, F. Liu, **Z. Zhou**, Y. Wang, W. Shen, A. Yuille, Y. Lu*. "Unsupervised Domain Adaptation through Shape Modeling for Medical Image Segmentation." Medical Imaging with Deep Learning (MIDL'22), 2022.
46. 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. (**Oral Presentation**)
47. R. Feng, **Z. Zhou**, M. Gotway, J. Liang*. "Self-supervised Learning: From Parts to Whole." Domain Adaptation and Representation Transfer (DART'20), 2020. (**Oral Presentation**)
48. 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 Presentation**)
49. 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.
50. **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; Young Scientist Publication Impact Award Finalist; Oral Presentation**)
51. **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 Presentation**)
52. **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.

Peer-refereed Conference Abstracts

53. P. R. A. S. Bassi, Z. Zhou. "Feasibility of Automated Liver Metastasis Detection and Report Generation in Gadoteric-enhanced Abdominal MRI using Vision-Language Models." ISMRM & ISMRT Annual Meeting & Exhibition, 2025 (**Oral Presentation**)
54. P. R. A. S. Bassi, K. Wang, X. Chen, S. Decherchi, A. Cavalli, Y. Yang, A. Yuille, **Z. Zhou***. "Segment2Report: Enhancing AI-Assisted Radiology Report Generation with Per-Voxel Organ and Tumor Segmentation." Radiological Society of North America (RSNA), 2024. (**Oral Presentation**)
55. P. R. A. S. Bassi, W. Li, M. Rokuss, Y. Kirchhoff, C. Ulrich, S. Roy, Y. Tang, S. Decherchi, A. Cavalli, K. Maier-Hein, F. Isensee, A. Yuille, **Z. Zhou***. "Dataset Profile: Study Traceback, Error Detection, And Label Refinement for Multicenter Radiology Datasets." Radiological Society of North America (RSNA), 2024. (**Oral Presentation**)
56. X. Zhou, J. Chen, Y. Chou, W. Li, A. Yuille, **Z. Zhou***. "Generalizing AI Algorithms to Multicenter Abdominal CT Scans for Pancreatic Tumor Detection." Radiological Society of North America (RSNA), 2024. (**Oral Presentation**)
57. Y. Zhang, X. Chen, A. Yuille, **Z. Zhou***. "Learning without Forgetting for Continual Abdominal Multi-Organ and Tumor Segmentation." Radiological Society of North America (RSNA), 2024. (**Oral Presentation**)
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