

## 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

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
2022-23	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

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 Co-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

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

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

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*  
 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*  
 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

### Student Supervision

Pedro Bassi University of Bologna (PhD Student), 2024-  
*Achievement: RSNA'24*  
Jie Liu City University of Hong Kong (PhD Student), 2022-2024  
*Achievement: ICCV'23, RSNA'23, MEDIA'24, Rank First in MSD Competition*  
Yuanhao Cai Johns Hopkins University (PhD Student), 2023-  
*Achievement: CVPR'24, ECCV'24*  
Junfei Xiao Johns Hopkins University (PhD Student), 2022-23  
*Achievement: WACV'23, CVPR'23, ICCV'23, RSNA'22-23*  
Yixiao Zhang Johns Hopkins University (PhD Student), 2022-23  
*Achievement: CVPR'23, MICCAI'23, ICCV'23, RSNA'23-24, TPAMI'23*  
Wei Ji University of Alberta (PhD Student), 2022-23

Wenxuan Li *Achievement: CVPR'23*  
Johns Hopkins University (Master Student), 2023-  
*Achievement: RSNA'23, ICLR'24, MEDIA'24, RSNA'24*

Yuxiang Lai Southeast University (Undergraduate), 2023-  
*Achievement: MICCAI'24, RSNA'24*

Qi Chen University of Science and Technology of China (Master Student), 2023-  
*Achievement: CVPR'24, RSNA'24*

Chongyu Qu Johns Hopkins University (Master Student), 2023  
*Achievement: RSNA'23, NeurIPS'23*

Tiezheng Zhang Johns Hopkins University (Master Student), 2023  
*Achievement: RSNA'23, ISBI'24*

Shiyi Du Sichuan University (Undergraduate), 2023  
*Achievement: ISBI'24*

Hualin Qiao Rutgers University (Master Student), 2023  
*Achievement: RSNA'23, NeurIPS'23*

Shuojue Yang Johns Hopkins University (Master Student), 2022  
*Achievement: RSNA'22*

Qixin Hu Huazhong University of Science and Technology (Master Student), 2022-24  
*Achievement: CVPR'23, NeurIPS'22, RSNA'24*

Yu-Cheng Chou Wuhan University (Undergraduate), 2022-  
*Achievement: RSNA'22-24, MIR'24, MICCAI'24*

Yixiong Chen Fudan University (Undergraduate), 2022-24  
*Achievement: ICLR'23, CVPR'23, MICCAI'23, NeurIPS'22*

Zengle Zhu Tongji University (Undergraduate), 2022-23  
*Achievement: ISBI'23, NeurIPS'22, RSNA'22*

Bowen Li Johns Hopkins University (PhD Student), 2021-2023  
*Achievement: ISBI'23, NeurIPS'22, RSNA'22, MICCAI'23*

Tiange Xiang University of Sydney (Undergraduate), 2021-23  
*Achievement: CVPR'23, TPAMI'24*

Liangyu Chen Nanyang Technological University (Undergraduate), 2021-23  
*Achievement: MIDL'23, NeurIPS'22, RSNA'24*

Mintong Kang Zhejiang University (Undergraduate), 2021-22  
*Achievement: ISBI'23, NeurIPS'22, RSNA'22*

### Patents

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

- 2024 *MedShapeNet: A Large Repository of 3D Medical Shapes and a Python Toolbox for 3D Medical Shape Analysis*  
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 *Body Maps: Towards 3D Atlas of Human Body*  
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 *Body Maps: Towards 3D Atlas of Human Body*  
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. 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.
2. **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

3. 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.
9. **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.
10. 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.
11. **Z. Zhou**, V. Sodha, J. Pang, M. Gotway, and J. Liang\*. "Models Genesis." Medical Image Analysis, 2020. (**MedIA Best Paper Award**)
12. **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**)
13. **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.

14. 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
15. 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

16. 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.
17. Y. Chou, **Z. Zhou\***, A. Yuille. "Embracing Massive Medical Data." International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI'24), 2024.
18. 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.
19. 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.
20. 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.
21. 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.
22. 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**)
23. 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**)
24. 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**).
25. 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**)
26. 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**)
27. 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**)
28. 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.
29. 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.
30. 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.
31. 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.
32. 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.
33. 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**)

34. 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.
35. 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.
36. 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.
37. 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.
38. 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**)
39. 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.
40. 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.
41. 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**)
42. 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**)
43. 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**)
44. 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.
45. **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**)
46. **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**)
47. **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

48. 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**)
49. W. Li, A. Yuille, **Z. Zhou\***. "AbdomenAtlas: AI and Radiologists Unite to Map the Abdomen." Radiological Society of North America (RSNA), 2024. (**Oral Presentation**)
50. P. R. A. S. Bassi, W. Li, Y. Tang, S. Decherchi, A. Cavalli, A. Yuille, **Z. Zhou\***. "Are We on the Right Way for Evaluating AI Algorithms for Medical Segmentation?" Radiological Society of North America (RSNA), 2024.
51. Y. Lai, A. Yuille, **Z. Zhou\***. "Towards Label-Free Tumor Segmentation Training: Simulating Tumor Growth and Generating Synthetic Tumors in Healthy Computed Tomography Images." Radiological Society of North America (RSNA), 2024.
52. Q. Chen, A. Yuille, **Z. Zhou\***. "Developing Synthetic Tumors in Liver, Pancreas, and Kidney using Generative AI." Radiological Society of North America (RSNA), 2024.
53. Q. Hu, X. Chen, A. Yuille, **Z. Zhou\***. "Label-Free Liver Tumor Segmentation for AI Development and Validation." Radiological Society of North America (RSNA), 2024.
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