

# BO ZHOU

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## EDUCATION

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<b>Yale University</b> Ph.D. in Biomedical Engineering	2019 - 2024
<b>Carnegie Mellon University, Robotics Institute</b> M.S. in Computer Vision	2017 - 2019
<b>Case Western Reserve University</b> M.S. in Biomedical Engineering	2014 - 2016

## ACADEMIC APPOINTMENT

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<b>Northwestern University</b> Assistant Professor (Research) of Radiology Director of Advanced AI in Medicine and Physics Lab (AIMP-Lab)	2024 - now
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## AWARDS & HONORS

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2024	Harding Bliss Prize (Highest Honor Awarded to one Yale PhD Graduate Annually)
2024	SNMMI PIDSC First Place Young Investigator Award (Co-author)
2024	SNMMI PIDSC Second Place Best Poster Award (Co-author)
2023	Rising Star at SNMMI 2023 - Ones to Watch
2023	ICMA Ph.D. Fellowship (5 Fellows Elected Annually Worldwide)
2023	IEEE TMI Distinguished Reviewer
2022	SNMMI PIDSC Third Place Young Investigator Award (Co-author)
2022	MICCAI Student Travel Awards (Co-author)
2021	ASNC Young Investigator Award Finalist (Co-author)
2019	Yale PhD Fellowship
2016	Outstanding Master Award, Case Western Reserve University
2014	Guo-Zhewei Technology Innovation Award, Southern Medical University

## EXPERIENCE

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<b>PET Center &amp; IPAG, Yale University</b> Research Assistant	Aug. 2019 - Apr. 2024
<b>Alibaba DAMO Academy USA</b> Research Intern	Jun. 2022 - Aug. 2022
<b>Hyperfine</b> Research Intern	Jun. 2021 - Aug. 2021
<b>Z<sup>2</sup>W Corporation</b> Research Intern	May. 2019 - Aug. 2019
<b>Ping An AI Institute (PAII)</b> Research Intern	Jan. 2019 - May. 2019
<b>Merck &amp; Co., Inc.</b> Image Data Scientist Intern	May. 2018 - Aug. 2018
<b>School of Computer Science, Carnegie Mellon University</b> Research Assistant	Aug. 2017 - Dec. 2018
<b>IDEAL Lab, Radiology, Weill Cornell Medicine</b> Advanced Medical Imaging Data Analyst	Feb. 2017 - Jul. 2017
<b>Biomedical Imaging Lab, Case Western Reserve University</b> Research Assistant	Aug. 2014 - Dec. 2016

## PUBLICATIONS

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1. FedFTN: Personalized Federated Learning with Deep Feature Transformation Network for Multi-institutional Low-dose PET Denoising  
**Bo Zhou**, Huidong Xie, Xueqi Guo, Xiongchao Chen, Zhicheng Feng, Biao Li, Axel Rominger, Kuangyu Shi, James D. Duncan, Chi Liu  
**Medical Image Analysis**, 2023.
2. DuDoCFNet: Dual-Domain Coarse-to-Fine Progressive Network for Simultaneous Denoising, limited-View Reconstruction, and Attenuation Correction of Cardiac SPECT.  
Xiongchao Chen, **Bo Zhou**, Xueqi Guo, Huidong Xie, Qiong Liu, James S. Duncan, Albert J. Sinusas, Chi Liu  
**IEEE Transactions on Medical Imaging**.
3. TAI-GAN: Temporally and Anatomically Informed GAN for Early-to-late Frame Conversion in Dynamic Cardiac PET Motion Correction.  
Xueqi Guo, Luyao Shi, Xiongchao Chen, **Bo Zhou**, Qiong Liu, Huidong Xie, Yi-Hwa Liu, Richard Palyo, et al.,  
**Medical Image Analysis**, 2024.
4. Population-based Deep Image Prior for Dynamic PET Denoising: A Data-driven Approach to Improve Parametric Quantification.  
Qiong Liu, Yu-Jung Tsai, Jean-Dominique Gallezot, Xueqi Guo, Ming-Kai Chen, Darko Pucar, Colin Young, Vladimir Panin, Michael Casey, Tianshun Miao, Huidong Xie, Xiongchao Chen, **Bo Zhou**, Richard Carson, Chi Liu  
**Medical Image Analysis**, 2024.
5. DuSFE: Dual-Channel Squeeze-Fusion-Excitation Co-Attention for Cross-Modality Registration of Cardiac SPECT and CT.  
Xiongchao Chen\*, **Bo Zhou\***, Huidong Xie, Xueqi Guo, Jiazhen Zhang, James S. Duncan, Edward J. Miller, Albert J. Sinusas, John A. Onofrey, Chi Liu  
**Medical Image Analysis**, 2023.
6. MCP-Net: Introducing Patlak Loss Optimization to Whole-body Dynamic PET Inter-frame Motion Correction.  
Xueqi Guo, **Bo Zhou**, Xiongchao Chen, Ming-Kai Chen, Chi Liu, Nicha C. Dvornek  
**IEEE Transactions on Medical Imaging**, 2023.
7. DuDoUFNet: Dual-domain Under-to-fully-complete Progressive Restoration Network for Simultaneous Metal Artifact Reduction and Low-dose CT Reconstruction.  
**Bo Zhou**, Xiongchao Chen, Huidong Xie, S. Kevin Zhou, James S. Duncan, Chi Liu  
**IEEE Transactions on Medical Imaging**, 2022.
8. Dual-domain Self-supervised Learning for Accelerated Non-Cartesian MRI Reconstruction.  
**Bo Zhou**, Jo Schlemper, Neel Dey, Seyed Sadegh Mohseni Salehi, Kevin Sheth, Chi Liu, James S. Duncan, Michal Sofka  
**Medical Image Analysis**, 2022.
9. DuDoDR-Net: Dual-Domain Data Consistent Recurrent Network for Simultaneous Sparse View and Metal Artifact Reduction in Computed Tomography.  
**Bo Zhou**, Xiongchao Chen, S. Kevin Zhou, James S. Duncan, Chi Liu  
**Medical Image Analysis**, 2022.
10. Unified Noise-aware Network for Low-dose PET Denoising with Varying Count Levels.  
Huidong Xie, Qiong Liu, **Bo Zhou**, Xiongchao Chen, Hanzhong Wang, Biao Li, Axel Rominger, Kuangyu Shi, Chi Liu  
**IEEE Transactions on Radiation and Plasma Medical Sciences**, 2023.
11. Generation of Whole-Body FDG Parametric Ki Images from Static PET Images Using Deep Learning.  
Tianshun Miao, **Bo Zhou**, Juan Liu, Xueqi Guo, Xiongchao Chen, Ming-Kai Chen, Jing Wu, Richard E. Carson, Chi Liu  
**IEEE Transactions on Radiation and Plasma Medical Sciences**, 2023.

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\*Equal Contribution

12. Federated Transfer Learning for Low-dose PET Denoising: A Pilot Study with Simulated Heterogeneous Data.  
**Bo Zhou**, Tianshun Miao, Niloufar Mirian, Xiongchao Chen, Huidong Xie, Zhicheng Feng, Xueqi Guo, Xiaoxiao Li, S. Kevin Zhou, James S. Duncan, Chi Liu  
**IEEE Transactions on Radiation and Plasma Medical Sciences**, 2022.
13. Unsupervised Inter-frame Motion Correction for Whole-body Dynamic PET using Convolutional Long Short-term Memory in a Convolutional Neural Network.  
Xueqi Guo, **Bo Zhou**, David Pigg, Bruce Spottiswoode, Michael E. Casey, Chi Liu, Nicha C. Dvornek  
**Medical Image Analysis**, 2022.
14. Direct and Indirect Strategies of Deep-learning-based Attenuation Correction for General Purpose and Dedicated Cardiac SPECT.  
Xiongchao Chen, **Bo Zhou**, Huidong Xie, Luyao Shi, Hui Liu, Wolfgang Holler, MingDe Lin, Yi-Hwa Liu, Edward J. Miller, Albert J. Sinusas, Chi Liu  
**European Journal of Nuclear Medicine and Molecular Imaging**, 2022.
15. Cross-vender, cross-tracer, and cross-protocol deep transfer learning for attenuation map generation of cardiac SPECT.  
Xiongchao Chen, P. Hendrik Pretorius, **Bo Zhou**, Hui Liu, Karen Johnson, Yi-Hwa Liu, Michael A. King, Chi Liu  
**Journal of Nuclear Cardiology**, 2022.
16. Segmentation-free Partial Volume Correction for Cardiac SPECT using a Multi-dimensional Dynamic Network.  
Huidong Xie, Zhao Liu, Luyao Shi, Kathleen Greco, Xiongchao Chen, **Bo Zhou**, Attila Feher, John C. Stendahl, Nabil Boutagy, Tassos C. Kyriakides, Albert J. Sinusas, Chi Liu  
**IEEE Transactions on Medical Imaging**, 2022.
17. Increasing Angular Sampling Through Deep Learning for Stationary Cardiac SPECT Image Reconstruction.  
Huidong Xie, Stephani Thorn, Xiongchao Chen, **Bo Zhou**, Hui Liu, Zhao Liu, Supum Lee, Ge Wang, Yi-Hwa Liu, Albert J. Sinusas, Chi Liu  
**Journal of Nuclear Cardiology**, 2022.
18. Structure Detection in 3D Cellular Cryo-electron Tomograms by Reconstructing 2D Annotated Tilt-series.  
Xiangrui Zeng, Ziqian Lin, Mostofa Rafid Uddin, **Bo Zhou**, Chao Cheng, Jing Zhang, Zachary Freyberg, Min Xu  
**Journal of Computational Biology**, 2022.
19. DuDoSS: Deep-Learning-Based Dual-Domain Sinogram Synthesis from Sparsely-Sampled Projections of Cardiac SPECT.  
Xiongchao Chen, **Bo Zhou**, Huidong Xie, Tianshun Miao, Hui Liu, Wolfgang Holler, MingDe Lin, Edward J. Miller, Albert J. Sinusas, John A. Onofrey, Chi Liu  
**Medical Physics**, 2022.
20. MDPET: A Unified Motion Correction and Denoising Adversarial Network for Low-dose Gated PET.  
**Bo Zhou**, Yu-Jung Tsai, Xiongchao Chen, James S. Duncan, Chi Liu  
**IEEE Transactions on Medical Imaging**, 2021.
21. Anatomy-guided Multimodal Registration by Learning Segmentation without Ground Truth: Application to Intraoperative CBCT/MR Liver Segmentation and Registration.  
**Bo Zhou**, Zachary Augenfeld, Julius Chapiro, S. Kevin Zhou, Chi Liu, James S. Duncan  
**Medical Image Analysis**, 2021.
22. Limited View Tomographic Reconstruction using a Cascaded Residual Dense Spatial-Channel Attention Network with Projection Data Fidelity Layer.  
**Bo Zhou**, S. Kevin Zhou, James S. Duncan, Chi Liu  
**IEEE Transactions on Medical Imaging**, 2021.
23. CT-free Attenuation Correction for Dedicated Cardiac SPECT using a 3D Dual Squeeze-and-excitation Residual Dense Network.  
Xiongchao Chen, **Bo Zhou**, Luyao Shi, Hui Liu, Yulei Pang, Rui Wang, Edward J Miller, Albert J Sinusas, Chi Liu  
**Journal of Nuclear Cardiology**, 2021.

24. Detection of Coronary Calcifications with Dual Energy Chest X-rays: Clinical Evaluation.  
Yingnan Song, Hao Wu, Di Wen, **Bo Zhou**, Philipp Graner, Leslie Ciancibello, Haran Rajeswaran, Karma Salem, Mehrdad Hajmomenian, Robert C Gilkeson, David L Wilson  
**The International Journal of Cardiovascular Imaging**, 2021.
25. One-shot Learning with Attention-guided Segmentation in Cryo-Electron Tomography.  
**Bo Zhou**, Haisu Yu, Xiangrui Zeng, Xiaoyan Yang, Min Xu  
**Frontier in Molecular Biosciences**, 2020.
26. Few-shot Learning for Classification of Novel Macromolecular Structures in Cryo-electron Tomograms.  
Ran Li, Liangyong Yu, **Bo Zhou**, Xiangrui Zeng, Zhenyu Wang, Xiaoyan Yang, Jing Zhange, Xin Gao, Rui Jiang, Min Xu  
**PLOS Computational Biology**, 2020.
27. A Protease-Activated Fluorescent Probe Allows Rapid Visualization of Keratinocyte Carcinoma during Excision.  
Ethan Walker, Yiqiao Liu, InYoung Kim, Mark Biro, Sukanya Raj Iyer, Harib Ezaldein, Jeffrey Scott, Miesha Merati, Rachel Mistur, **Bo Zhou**, Brian Straight, Joshua J Yim, Matthew Bogyo, Margaret Mann, David L Wilson, James P Babilion, Daniel L Popkin  
**Cancer Research**, 2020.
28. Molecular Imaging and Validation of Margins in Surgically Excised Nonmelanoma Skin Cancer Specimens.  
Yiqiao Liu, Ethan Walker, Sukanya Raj Iyer, Mark Biro, InYoung Kim, **Bo Zhou**, Brian Straight, Matthew Bogyo, James P Babilion, Daniel L Popkin, David L Wilson  
**Journal of Medical Imaging**, 2019.
29. Coronary Calcium Visualization and Detection from Dual Energy Chest X-rays with Sliding Organ Registration.  
Di Wen, Katelyn Nye, **Bo Zhou**, Robert C Gilkeson, Amit Gupta, Shiraz Ranim, Spencer Couturier, David L Wilson  
**Computerized Medical Imaging and Graphics**, 2018.
30. Detection and Quantification of Coronary Calcium from Dual Energy Chest X-rays: Feasibility Phantom Study.  
**Bo Zhou**, Di Wen, Katelyn Nye, Robert C Gilkeson, Brendan Eck, David Jordan, David L Wilson  
**Medical Physics**, 2017.

#### CONFERENCES (PEER-REVIEWED FULL-LENGTH PROCEEDING)

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1. Fast-MC-PET: A Novel Deep Learning-aided Data-driven Motion Reduction Pipeline for Accelerated PET Reconstruction.  
**Bo Zhou**, Xueqi Guo, Xiongchao Chen, Jiazhen Zhang, Yihuan Lu, James S. Duncan, Chi Liu  
Information Processing in Medical Imaging (**IPMI**) 2023.
2. Meta-information-aware Dual-path Transformer for Differential Diagnosis of Multi-type Pancreatic Lesions in Multi-phase CT.  
**Bo Zhou**, Yingda Xia, Jiawen Yao, James S. Duncan, Chi Liu, Le Lu, Ling Zhang  
Information Processing in Medical Imaging (**IPMI**) 2023.
3. Transformer-based Dual-domain Network for Few-view Dedicated Cardiac SPECT Image Reconstructions.  
Huidong Xie, **Bo Zhou**, Xiongchao Chen, Xueqi Guo, Stephanie Thorn, Yi-Hwa Liu, Ge Wang, Albert J. Sinusas, Chi Liu  
**2023 Medical Image Computing and Computer Assisted Interventions (MICCAI)** 2023.
4. Towards a Single Unified Model for Effective Detection, Segmentation, and Diagnosis of Eight Major Cancers Using a Large Collection of CT Scans.  
Jieneng Chen, Yingda Xia, Jiawen Yao, Ke Yan, Jianpeng Zhang, Le Lu, Fakai Wang, **Bo Zhou**, et al.,  
**2023 International Conference on Computer Vision (ICCV)** 2023.
5. DSFormer: A Dual-domain Self-supervised Transformer for Accelerated Multi-contrast MRI Reconstruction.  
**Bo Zhou**, Jo Schlemper, Neel Dey, Seyed Sadegh Mohseni Salehi, Chi Liu, James S. Duncan, Michal Sofka  
IEEE Winter Conference on Applications of Computer Vision (**WACV**) 2023.
6. Dual-domain Iterative Network with Adaptive Data Consistency for Joint Denoising and Few-angle Reconstruction of Low-dose Cardiac SPECT.

- Xiongchao Chen, **Bo Zhou**, Huidong Xie, Xueqi Guo, Qiong Liu, Albert J. Sinusas, John A. Onofrey, Chi Liu  
**MICCAI Workshop on Learning with Noisy and Limited Data (MICCAI-MILLanD)** 2023.
7. Cross-Domain Iterative Network for Simultaneous Denoising, Limited-angle Reconstruction, and Attenuation Correction of Cardiac SPECT.  
Xiongchao Chen, **Bo Zhou**, Huidong Xie, Xueqi Guo, Qiong Liu, Albert J. Sinusas, Chi Liu  
**MICCAI Workshop on Machine Learning in Medical Imaging (MICCAI-MLMI)** 2023.
  8. TAI-GAN: Temporally and Anatomically Informed GAN for early-to-late frame conversion in dynamic cardiac PET motion correction.  
Xueqi Guo, Luyao Shi, Xiongchao Chen, **Bo Zhou**, Qiong Liu, Huidong Xie, Yi-Hwa Liu, Richard Palyo, et al.,  
**MICCAI Workshop on Simulation and Synthesis in Medical Imaging (MICCAI-SASHIMI)** 2023.
  9. Dual-domain Iterative Network with Adaptive Data Consistency for Joint Denoising and Few-angle Reconstruction of Low-dose Cardiac SPECT.  
Xiongchao Chen, **Bo Zhou**, Huidong Xie, Xueqi Guo, Qiong Liu, Albert J. Sinusas, John A. Onofrey, Chi Liu  
**MICCAI Workshop on Learning with Noisy and Limited Data (MICCAI-MILLanD)** 2023.
  10. DuSFE: Dual-Channel Squeeze-Fusion-Excitation Co-Attention for Cross-Modality Registration of Cardiac SPECT and CT.  
Xiongchao Chen, **Bo Zhou**, Huidong Xie, Xueqi Guo, Jiazhen Zhang, Albert J. Sinusas, John A. Onofrey, Chi Liu  
Medical Image Computing and Computer Assisted Interventions (**MICCAI**), 2022.
  11. MCP-Net: Inter-frame Motion Correction with Patlak Regularization for Whole-body Dynamic PET.  
Xueqi Guo, **Bo Zhou**, Xiongchao Chen, Chi Liu, Nicha C. Dvornek  
Medical Image Computing and Computer Assisted Interventions (**MICCAI**), 2022.
  12. ContraReg: Contrastive Learning of Multi-modality Unsupervised Deformable Image Registration.  
Neel Dey, Jo Schlemper, Seyed Sadegh Mohseni Salehi, **Bo Zhou**, Guido Gerig, Michal Sofka  
Medical Image Computing and Computer Assisted Interventions (**MICCAI**), 2022.
  13. Synthesizing Multi-Tracer PET Images for Alzheimer’s Disease Patients using a 3D Unified Anatomy-aware Cyclic Adversarial Network.  
**Bo Zhou**, Rui Wang, Ming-Kai Chen, Adam Mecca, Ryan O’Dell, Christopher Van Dyck, Richard Carson, James S. Duncan, Chi Liu  
Medical Image Computing and Computer Assisted Interventions (**MICCAI**), 2021.
  14. Anatomy-Constrained Contrastive Learning for Synthetic Segmentation without Ground-truth.  
**Bo Zhou**, Chi Liu, James S. Duncan  
Medical Image Computing and Computer Assisted Interventions (**MICCAI**), 2021.
  15. Simultaneous Denoising and Motion Estimation for Low-dose Gated PET using a Siamese Adversarial Network with Gate-to-Gate Consistency Learning.  
**Bo Zhou**, Yu-Jung Tsai, Chi Liu  
Medical Image Computing and Computer Assisted Interventions (**MICCAI**), 2020.
  16. DuDoRNet: Learning a Dual-Domain Recurrent Network for Fast MRI Reconstruction with Deep T1 Prior.  
**Bo Zhou**, S. Kevin Zhou  
IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2020.
  17. A Deep Learning-Facilitated Radiomics Solution for the Prediction of Lung Lesion Shrinkage in Non-Small Cell Lung Cancer Trials.  
Antong Chen, Jennifer Saouaf, **Bo Zhou**, Randolph Crawford, Jianda Yuan, Junshui Ma, Richard Baumgartner, Shubing Wang, Gregory Goldmacher  
IEEE International Symposium on Biomedical Imaging (**ISBI**), 2020.
  18. CT Data Curation for Liver Patients: Phase Recognition in Dynamic Contrast-Enhanced CT.  
**Bo Zhou**, Adam P Harrison, Jiawen Yao, Chi-Tung Cheng, Jing Xiao, Chien-Hung Liao, Le Lu  
MICCAI Workshop on Image Learning with Less Labels and Imperfect Data (**MICCAI-MIL3ID**), 2019.
  19. Open-set Recognition of Unseen Macromolecules in Cellular Electron Cryo-Tomograms by Soft Large Margin Centralized Cosine Loss.

- Xuefeng Du, Xiangrui Zeng, **Bo Zhou**, Alex Singh, Min Xu  
British Machine Vision Conference (**BMVC**), 2019.
20. Semi-supervised Macromolecule Structural Classification in Cellular Electron Cryo-Tomograms using 3D Autoencoding Classifier.  
Siyuan Liu, Xuefeng Du, Rong Xi, Fuya Xu, Xiangrui Zeng, **Bo Zhou**, Min Xu  
British Machine Vision Conference (**BMVC**), 2019.
  21. Limited Angle Tomography Reconstruction: Synthetic Reconstruction via Unsupervised Sinogram Adaptation.  
**Bo Zhou\***, Xunyu Lin\*, Brendan Eck  
Information Processing in Medical Imaging (**IPMI**), 2019.
  22. A Progressively-Trained Scale-Invariant and Boundary-Aware Deep Neural Network for the Automatic 3D Segmentation of Lung Lesions.  
**Bo Zhou**, Antong Chen, Randolph Crawford, Belma Dogdas, Gregory Goldmarcher  
IEEE Winter Conference on Applications of Computer Vision (**WACV**), 2019.
  23. Generation of virtual dual-energy images from standard single-shot radiographs using multi-scale and conditional adversarial network.  
**Bo Zhou\***, Xunyu Lin\*, Brendan Eck, Jun Hou, David L Wilson  
Asian Conference on Computer Vision (**ACCV**), 2018.
  24. Respond-CAM: Analyzing Deep Models for 3D Imaging Data by Visualizations.  
Guannan Zhao\*, **Bo Zhou\***, Kaiwen Wang, Rui Jiang, Min Xu  
Medical Image Computing and Computer-Assisted Intervention (**MICCAI**), 2018.
  25. Model Compression for Faster Structural Separation of Macromolecules Captured by Cellular Electron Cryo-Tomography.  
Jialiang Guo\*, **Bo Zhou\***, Xiangrui Zeng, Zachary Freyberg, Min Xu  
International Conference Image Analysis and Recognition (**ICIAR**), 2018.

## UNDER REVIEW

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1. POUR-Net: A Population-Prior-Aided Over-Under-Representation Network for Low-Count PET Attenuation Map Generation.  
**Bo Zhou**, Jun Hou, Tianqi Chen, Xiongchao Chen, Huidong Xie, Xueqi Guo, Qiong Liu, James S. Duncan, Chi Liu  
Under review at **IEEE Transactions on Medical Imaging**.
2. 2.5D Multi-view Averaging Diffusion Model for 3D Medical Image Translation: Application to CT-less Attenuation Correction and Reconstruction of Low-count PET  
Tianqi Chen, Jun Hou, Huidong Xie, Xiongchao Chen, Xueqi Guo, Qiong Liu, Yinchu Zhou, James S. Duncan, Chi Liu, **Bo Zhou**  
**IEEE Transactions on Medical Imaging**.
3. An Investigation on Cross-Tracer Generalizability of Deep Learning-based PET Attenuation Correction: A Multi-tracer Study with  $^{18}\text{F}$ -FDG,  $^{68}\text{Ga}$ -DOTATATE, and  $^{18}\text{F}$ -Fluciclovine  
Jun Hou, Tianqi Chen, Huidong Xie, Xiongchao Chen, Yinchu Zhou, Yu-Jung Tsai, Vladimir Y. Panin, Takuya Toyonaga, James S. Duncan, Chi Liu, **Bo Zhou**  
**IEEE Transactions on Radiation and Plasma Medical Science**.
4. An Multi-tracer Unified Attenuation Map Generation Network for PET Attenuation Correction  
Jun Hou, Tianqi Chen, Huidong Xie, Xiongchao Chen, Yinchu Zhou, Yu-Jung Tsai, Vladimir Y. Panin, Takuya Toyonaga, James S. Duncan, Chi Liu, **Bo Zhou**  
**IEEE Transactions on Radiation and Plasma Medical Science**.
5. Noise-aware Dynamic Image Denoising and Positron Range Correction for Rubidium-82 Cardiac PET Imaging via Self-supervision.  
Huidong Xie, Liang Guo, Alexandre Velo, Qiong Liu, Xueqi Guo, **Bo Zhou**, Xiongchao Chen, Yu-Jung Tsai, Tianshun Miao, Menghua Xia, Ian S Armstrong, Ge Wang, Richard E. Carson, Albert J. Sinusas, Chi Liu Under review at **IEEE Transactions on Medical Imaging**.

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\*Equal Contribution

6. Parametric  $^{18}\text{F}$ -flutemetamol PET Imaging for ATTR Cardiac Amyloidosis Patients.  
Qiong Liu, Tiantian Shi, Paul Gravel, Aakanksha Sharma, Cinthia De Freitas, Ramesh Fazzzone-Chettiar, Koen Van Laere, Andrea Baldick, Cesia Gallegos Kattan, Xueqi Guo, Liang Guo, Huidong Xie, Xiongchao Chen, **Bo Zhou**, Yi-Hwa Liu, Richard Carson, Chi Liu, Edward Miller  
Under review at **Journal of Nuclear Medicine**

## PATENTS

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1. Medical image classification method and related device.  
US Patent No.10,997,720  
**Bo Zhou**, Adam P. Harrison, Jiawen Yao, Le Lu.
2. Progressively-trained scale-invariant and boundary-aware deep neural network for the automatic 3d segmentation of lung lesions.  
US Patent No.11,232,572  
Antong Chen, Gregory Goldmacher, **Bo Zhou**
3. Dual-domain self-supervised learning for MRI reconstruction.  
US Patent Pending  
**Bo Zhou**, Neel Dey, Jo Schlemper, Michal Sofka.
4. CT-free attenuation correction for SPECT using deep learning.  
US Patent Pending  
Chi Liu, **Bo Zhou**, Xiongchao Chen.
5. Meta-information-aware Transformer for Cancer Classification  
US Patent Pending  
**Bo Zhou**, Yingda Xia, Le Lu, Ling Zhang.

## TEACHING

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YALE BENG 406: Medical Software Design	2022
YALE ENAS 510: Physical and Chemical Basis of Bioimaging and Biosensing	2021
YALE ENAS 912: Biomedical Image Processing and Analysis	2020
CWRU EBME 410: Medical Imaging Fundamentals	2016

## GUEST LECTURE

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<i>Deep Learning for Medical Image Reconstruction</i>	Mar. 2023
Class: EECE 570 Fundamentals of Visual Computing - The University of British Columbia (UBC)	

## PROFESSIONAL ACTIVITIES

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### Ad-hoc Journal Review:

Medical Image Analysis  
IEEE Transactions on Medical Imaging  
IEEE Transactions on Pattern Analysis and Machine Intelligence  
IEEE Transactions on Radiation and Plasma Medical Sciences  
IEEE Transactions on Computational Imaging  
IEEE Transactions on Circuits and Systems for Video Technology  
IEEE Transactions on Industrial Informatics  
IEEE Journal of Biomedical and Health Informatics  
IEEE Access  
EJNMMI Physics  
International Journal of Computer Vision  
Information Fusion  
Medical Physics  
Artificial Intelligence in Medicine  
Quantitative Imaging in Medicine and Surgery  
The Journal of Machine Learning for Biomedical Imaging  
International Journal of Computer Assisted Radiology and Surgery

Physica Medica  
PLOS ONE  
Frontiers in Radiology  
Frontiers in Medicine  
Frontiers in Oncology  
Frontiers in Neurorobotics  
Frontiers in Human Neuroscience  
Frontiers in Cancer Interception  
Pattern Recognition  
Machine Vision and Application  
Computer Methods and Programs in Biomedicine  
Computational and Mathematical Methods in Medicine  
American Journal of Diagnostic Imaging  
Digital Signal Processing  
Patterns  
Complex & Intelligent Systems  
ACM Transactions on Multimedia Computing, Communications and Applications  
Engineering Applications of Artificial Intelligence  
Computational Intelligence and Neuroscience

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**Ad-hoc Conference Review:**

IEEE Medical Imaging Conference (IEEE-MIC)  
Medical Image Computing and Computer Assisted Intervention (MICCAI)  
Conference on Computer Vision and Pattern Recognition (CVPR)  
European Conference on Computer Vision (ECCV)  
International Conference on Computer Vision (ICCV)  
International Conference on Machine Learning (ICML)  
Neural Information Processing Systems (NeurIPS)  
AAAI Conference on Artificial Intelligence (AAAI)  
Winter Conference on Application of Computer Vision (WACV)  
International Conference on Information Processing in Computer-Assisted Interventions (IPCAI)

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**Admission Committee:**

Robotics Institute, Carnegie Mellon University (RI-CMU) '2020 '2021 '2022

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**Other Services:**

Professional Events Officer, MICCAI Student Board (MSB) '2022'2023  
Educational Officer, MICCAI Student Board (MSB) '2021'2022  
Co-organizer, IAIHI Workshop in Conjunction with Brain Informatics 2023  
Research Topic Coordinator, Frontier in Radiology '2022

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**Membership:**

IEEE, MICCAI, SNM, SPIE, RSNA