

## Chen Zhao, PhD

Tenure-Track Assistant Professor at Department of Computer Science, Kennesaw State University

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## RESEARCH GRANTS

### Ongoing and recently completed projects

- 1. AIM-AHEAD Research Fellowship Program Mentor, \$10,800**, 10/01/2025 – 07/31/2026.  
Title: Mentorship for AIM-AHEAD Research Fellowship Cohort 4.  
Role: Mentor (Program funded through AIM-AHEAD Coordinating Center, subaward via UNTHSC).
  - 2. 2025 AHA Institutional Research Enhancement Award (AIREA), \$194,032** 01/01/2025-12/31/2026  
Title: Non-invasive Fractional Flow Reserve Evaluation using Coronary Computed Tomography Angiography  
Role: PI (co-I: Michele Esposito from Medical University of South Carolina)  
Link: [\[KSU News\]](#) [\[AHA Proposal Central\]](#); **25AIREA1377168**
  - 3. Board of Regents of the University System of Georgia (BOR), \$5,000** 01/01/2025-12/31/2025  
Title: Affordable Learning Georgia Transformative Grant - CS3626  
Role: co-PI (PI: Xinyue Zhang from Kennesaw State University)
  - 4. 2025 KSU Summer Undergraduate Research Program, \$8,000** 06/01/2025-07/31/2025  
Title: Blood Flow Prediction Using UNET and VNET Architectures  
Role: Awardee's Supervisor (Undergraduate student: Pedro Henrique Goncalves Silva Pinto)
  - 5. KSU First year scholar program, FY24. \$3,000** 10/30/2024-05/01/2025  
Title: Enhancing Alzheimer's Disease Staging Prediction through Multi-Modal Data Integration  
Role: PI
  - 6. 2024 KSU Summer Undergraduate Research Program, \$8,000** 06/01/2024-07/31/2024  
Title: Federated Learning for Left Ventricle Segmentation and Function Assessment in Myocardial Perfusion SPECT images  
Role: Awardee's Supervisor (Undergraduate student: Yehong Huang from Kennesaw State University)
  - 7. KSU Interdisciplinary Initiatives Seed Grants Program, \$9,960** 07/01/2024-06/30/2024  
Title: Non-invasive Fractional Flow Reserve Evaluation using Coronary Computed Tomography Angiography  
Role: PI (co-I: Pengcheng Xiao from Kennesaw State University)
  - 8. SynterMed Inc, \$9,952** 04/01/2024-07/31/2025  
Title: Dynamic cardiac PET motion correction using 3D normalized gradient fields  
Role: PI
  - 9. Michigan Technological University** 09/01/2023-12/31/2023  
Title: Finishing Fellowship by Graduate Dean Awards Advisory Panel  
Role: PI
  - 10. Michigan Technological University** 09/01/2022-12/21/2022  
Title: Graduate Fellowship by the Health Research Institute  
Role: PI
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## EDUCATION

- Ph.D.** Michigan Technological University, Houghton, MI 2019-2023  
Department of Applied Computing, Ph.D. in Computer Science and Engineering GPA: 4.0/4.0
- MSc.** Xi'an University of Posts and Telecommunications, Xi'an, China 2016-2019  
School of Computer Science and Technology, Master of Computer Science GPA: 3.8/4.0
- B.S.** Xi'an University of Posts and Telecommunications, Xi'an, China 2012-2016  
School of Computer Science and Technology, Bachelor of Computer Science GPA: 3.6/4.0
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## HONORS AND AWARDS

- Dean's Award for Outstanding Scholarship, Michigan Tech 10/2023
  - Finishing Fellowship by Graduate Dean Awards Advisory Panel, Michigan Tech 07/2023
  - Health Research Institute Forum Awards (second place), Michigan Tech 03/2023
  - 2022 graduate fellowship by the Health Research Institute, Michigan Tech 07/2022
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## RESEARCH EXPERIENCE

**Tenure-Track Assistant Professor**, Kennesaw State University

01/2024-present

- Research interest: medical imaging and bioinformatics, computer vision and deep learning

**Graduate Research Assistant**, Michigan Technological University

08/2019-12/2023

Primary projects:

- Topology-based Image Semantic Segmentation
  - Image Segmentation using Shape Priors
  - Multi-view Information Fusion for Multi-omics Data Integration
  - Graph matching for Alzheimer's Disease Diagnosis
  - Physics-informed Neural Network for Blood Flow Simulation
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## **TEACHING EXPERIENCE**

### **Lecture Instructor @ Kennesaw State University**

- 2025 Fall, CS6045. Advanced Algorithm, Graduate Level (26 students)
- 2025 Fall, CS4270. Intelligent System in Bioinformatics, Undergraduate (6 students)
- 2025 Summer, CS4277. Deep Learning, Undergraduate Level (13 students)
- 2025 Spring, CS7265. Big Data Analytics, Graduate Level (14 students)
- 2025 Spring, CS4732. Machine Vision, Undergraduate Level (29 students)
- 2024 Fall, CS6045. Advanced Algorithm, Graduate Level (31 students)
- 2024 Fall, CS7050. Data Warehousing and Mining, Graduate Level (35 students)
- 2024 Spring, CS3642. Artificial Intelligence, Undergraduate Level (35 students)
- 2024 Spring, CS4277. Deep Learning, Undergraduate Level (21 students)

### **Teaching Assistant @ Michigan Technological University**

- 2023 Spring, SAT 5114. Artificial Intelligence in Healthcare, Graduate Level
- 2022 Spring, SAT 4650. Applied Computing in Python, Graduate Level

### **Student Mentored @ Kennesaw State University**

- Huan Huang, since Fall 2025, PhD in Computer Science
  - Ruoqi Zhang, Fall 2025, MSCS
  - Yehong Huang, Fall 2024 to Spring 2025, **Outstanding Student Award** in the BSCS, **Summer Research Fellowship** in 2024
  - Rene Lisasi, Fall 2024 to Fall 2025, MSCS, **Outstanding Student Award** in the MSAI.
  - Akshay Krishna Varma Buddharaju, Fall 2024 to Spring 2025, MSCS
  - Pedro Henrique Goncalves Silva Pinto, since Fall 2024, BSCS, **Summer Research Fellowship** in Summer 2025
  - Shrikar Kolla, Fall 2024, Wheeler High School, **Oral presentation and paper published in ACMSE 2025, April**
  - Dina Xu Callaway, Maya Castillo, Richard Haynes, BSCS, FY 2025, **First-Year Scholars Program**
  - Dina Xu Callaway, Oral presentation and poster presentation in **Georgia Undergraduate Research Conference (GURC) 2025**, Undergraduate Research and Creative Activities Funds (URCA) and Sophomore Undergraduate Research Program in FY 2026.
  - Julia Johnson and Jordan Rainford, First Place in Undergraduate Capstone in CCSE C-Day at KSU, Fall 2025.
  - Valencia, Evan, Martinez, Chris, BSCS, **Third Place in Undergraduate Capstone** in CCSE C-Day at KSU, Spring 2025.
  - Francis Madu, Naga Janaki Madhav Kadiyala, Nivesh Thallapally, MSCS, **Second Place in Graduate Project** in CCSE C-Day at KSU, Fall 2025.
  - William A Stigall, BSCS, **Third Place in Undergraduate Research** in CCSE C-Day at KSU, Spring 2024.
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## **PUBLICATIONS AND PATENTS (\* Corresponding Author[s])**

## Preprint, under review, or in revision

1. Jia Z, Yao N, Sun D, Han C, Li Y, Nan J, Zhu F, **Zhao C**, Zhou W. UPMAD-Net: A Brain Tumor Segmentation Network with Uncertainty Guidance and Adaptive Multimodal Feature Fusion. arXiv preprint [arXiv:2505.03494]. 2025 May 6.
2. Mu N, Song R, Li X, Xu Z, Jiang J, **Zhao C\***. FAD-Net: Frequency-Domain Attention-Guided Diffusion Network for Coronary Artery Segmentation using Invasive Coronary Angiography. arXiv preprint [arXiv:2506.11454]. 2025 June 15.
3. Mu N, Song R, Xu Z, Jiang J, **Zhao C\***. SFD-Mamba2Net: Structure-Guided Frequency-Enhanced Dual-Stream Mamba2 Network for Coronary Artery Segmentation. [arXiv: 2509.08934]. 2025 September 11.
4. Sun S, Zhou M, **Zhao C**, Keyak JH, Lane NE, Deng JD, Su KJ, Shen H, Deng HW, Zhang K, Zhou W. An Advanced Two-Stage Model with High Sensitivity and Generalizability for Prediction of Hip Fracture Risk Using Multiple Datasets. [arXiv:2510.15179]. 2025 Oct 16.

## Published

2026:

1. Huang Y, **Zhao C\***, Dhakal R, Zhao M, Hung GU, Jiang Z, Zhou W. FedDA-TSformer: Federated Domain Adaptation with Vision TimeSformer for Left Ventricle Segmentation on Gated Myocardial Perfusion SPECT Image. *BMC Methods*. 2026

2025:

1. **Zhao C**, Esposito M, Xu Z, Zhou W. HAGMN-UQ: Hyper association graph matching network with uncertainty quantification for coronary artery semantic labeling. *Medical Image Analysis*. 2025 Jan 1;99:103374. [PMID: 39413456]
2. Larsen K, He Z, **Zhao C**, Zhang X, Sha Q, Mesquita, CT, Garcia EV, Paez D, Zou J\*, Peix A\*, Zhou W\*. A new method using deep learning to predict the response to cardiac resynchronization therapy. *Journal of Imaging Informatics in Medicine*. 2025. [PMID: 39979759][DOI: 10.1007/s10278-024-01380-8]
3. Huang H, Qiu L, Yang S, Li L, Nan J, Li Y, Han C, Zhu F\*, **Zhao C\***, Zhou W. Vision Transformer based Multimodal Feature Fusion Network for Lymphoma Segmentation on PET/CT Images. 2025. *Medical Physics*. [doi.org/10.1002/mp.17763]
4. Kolla S, Lo D, **Zhao C\***. Staged Multi-Omics Data Classification for Breast Cancer Diagnosis. *In 2025 ACM Southeast Conference (ACMSE 2025)*, April 24–26, 2025, Cape Girardeau, MO, USA. [doi.org/10.1145/3696673.3723081]
5. Alam S, Patel Y, Gurrani Y, **Zhao C\***, Dan Lo. A Hybrid Approach of Data Mining and Deep Learning for Network Intrusion Detection. *In 2025 ACM Southeast Conference (ACMSE 2025)*, April 24–26, 2025, Cape Girardeau, MO, USA. [doi.org/10.1145/3696673.3723077]
6. **Zhao C**, Xu Z, Baral P, Esposito M, Zhou W\*. Multi-graph Graph Matching for Coronary Artery Semantic Labeling in Invasive Coronary Angiograms. *Pattern Recognition*. 2025 Jun;111943. [doi: 10.1016/j.patcog.2025.111943]
7. Wei D, Zhao Y, Hongbo G, Zhang H, **Zhao C**, Li S, He X. PGDPNN: Prior-information generation and distribution prediction Neural Network for Fluorescence Molecular Tomography Reconstruction. *Optics Express*. 2025 [doi.org/10.1364/OE.557118]
8. Zhang F, Zhang J, Li X, Jiang J, **Zhao C\***, Mu N\*. PMA-Net: Parallel Mixed Attention Network for Predicting Intracranial Aneurysm Rupture Risk. *IEEE 37th International Conference on Tools with Artificial Intelligence (ICTAI)*. 2025.
9. Elghazzali Z, Xie Y, **Zhao C**, Deng B, Chen L and Nasif K. Multimodal Deep Learning for Alzheimer's Disease Classification: A Practical Fusion Framework for Clinical Deployment. *IEEE 37th International Conference on Tools with Artificial Intelligence (ICTAI)*. 2025
10. Kang Y, **Zhao C\***. Staged Multi-view Data Classification using Uncertainty Quantification. *IEEE 37th International Conference on Tools with Artificial Intelligence (ICTAI)*. 2025
11. Zhu F, Zhang Y, Liang G, Nan J, Li Y, Han C, Sun D, Wang Z, **Zhao C**, Zhou W, He J, Xu Y, Cheang I, Zhu X, Zhou Y, Zhou W. Diagnosis of Pulmonary Hypertension by Integrating Multimodal Data with a Hybrid Graph Convolutional and Transformer Network. *Journal of Imaging Informatics in Medicine*. 2025.
12. Mu, N, Yang, H, **Zhao, C\***. An Uncertainty-Aware Dynamic Decision Framework for Progressive Multi-Omics Integration in Classification Tasks. *Computer Methods and Programs in Biomedicine*. 2025. [doi.org/10.1016/j.cmpb.2025.109179]

13. Toyli A, Shaik A, **Zhao C**, Chen QH, Sha Q, Zhou W. The heart-brain axis: unraveling the interconnections between cardiovascular and Alzheimer's diseases. *Frontiers in Cardiovascular Medicine*. 2025 Nov 24;12:1685461.
14. Toyli A, Hung GU, **Zhao C**, Sha Q, Chiu PY, Zhou W. Comparison of cerebral technetium-99m-ethyl cysteinate dimer perfusion in patients with dementia with Lewy bodies and Parkinson's disease dementia. *Nuclear Medicine Communications*. 2025 Mar 1;46(3):218-22.
15. Nahid E, **Zhao C**, Mahyar A, Zheng D, Xu H. Privacy-Preserving Multi-Source Data-Driven Optimization for Intelligent EV Charging. *IEEE International Conference on Systems, Man, and Cybernetics*. 2025.

2024:

1. Liu X, Xiao P, Esposito M, Raavi M, **Zhao C\***. AGFA-Net: Attention-Guided and Feature-Aggregated Network for Coronary Artery Segmentation using Computed Tomography Angiography. *IEEE 36th International Conference on Tools with Artificial Intelligence (ICTAI)*, Herndon, VA, USA, 2024, pp. 327-334. [DOI: 10.1109/ICTAI62512.2024.00055.]
2. Yao N, Hu H, Chen K, Huang H, **Zhao C**, Guo Y, Li B, Nan J, Li Y, Han C, Zhu F. A robust deep learning method with uncertainty estimation for the pathological classification of renal cell carcinoma based on CT images. *Journal of imaging informatics in medicine*. 2024 Sep 23:1-1. [DOI: 10.1007/s10278-024-01276-7]
3. Yuan K, Wang L, Wei Q\*, Cheng X, **Zhao C**, Tang S, Deng HW, Zhou W. A deep learning approach based on two-channel 3DCNN networks to automatically predict the risk of femoral fracture using CT images. *Journal of Imaging Science and Technology*. 2024. [DOI:10.2352/J.ImagingSci.Technol.2024.68.6.060502]
4. **Zhao C**, Liu A, Zhang X, Cao X, Ding Z, Sha Q, Shen H, Deng HW\*, Zhou W\*. CLCLSA: Cross omics linked embedding with contrastive learning and self-attention for integration with incomplete multi-omics data. *Computers in Biology and Medicine*. 2024. [PMID: 38295477]
5. Cao X, Keyak JH, Sigurdsson S, **Zhao C**, Zhou W, Liu A, Lang TF, Deng HW, Gudnason V\*, Sha Q\*. A new hip fracture risk index derived from FEA-computed proximal femur fracture loads and energies-to-failure. *Osteoporosis International*. 2024. [PMID: 38246971]
6. Shaik A, Larsen K, Lane NE, **Zhao C\***, Su KJ, Keyak JH, Tian Q, Sha Q, Shen H, Deng HW, Zhou W. A staged approach using machine learning and uncertainty quantification to predict the risk of hip fracture. *Bone Rep*. 2024 Sep 12;22:101805. [DOI: 10.1016/j.bonr.2024.101805] [PMID: 39328352]; [PMCID: PMC11426051].
7. **Zhao C**, Su KJ, Wu C, Cao X, Sha Q, Li W, Luo Z, Qin T, Qiu C, Zhao LJ, Liu A, Jiang L, Zhang X, Shen H, Zhou W\*, Deng HW\*. Multi-View Variational Autoencoder for Missing Value Imputation in Untargeted Metabolomics. *Computers in Biology and Medicine*. 2024. [PMID: 38955127]
8. Baral P, **Zhao C**, Esposito M and Zhou W. A review on machine learning for arterial extraction and quantitative assessment on invasive coronary angiograms. *Current Cardiovascular Imaging Reports*, 17(10), pp.93-105. 2024.
9. Larsena K, He Z, **Zhao C**, Zhang X, Sha Q, Mesquita C.T, Paeze D, Garcia E.V., Zou J, Peix A and Zhou W. 2024. A new method using deep learning to predict the response to cardiac resynchronization therapy. *Journal of Imaging Informatics in Medicine*.
10. Toyli A, Hung G.U, **Zhao C**, Sha Q, Chiu P.Y. and Zhou W. 2024. Comparison of Cerebral ECD Perfusion in Patients with Dementia with Lewy Bodies and Parkinson' s Disease Dementia. *Nuclear Medicine Communications* [PMID: 9143472]
11. Yao N, Tian Y, Neves DG, **Zhao C**, Mesquita CT, Martins WA, Li Y, Han C, Zhu F, Dai N, Zhou W. Incremental Value of Radiomics Features of Epicardial Adipose Tissue for Detecting the Severity of COVID-19 Infection. *Kardiologija*. 2024 Sep 30;64(9):96-104. [PMID: 39392272]

2023 and before:

1. **Zhao C**, Keyak JH, Cao X, Sha Q, Tian Q, Qiu C, Su R, Wu L, Luo Z, Zhao L, Shen H, Deng HW\*, Zhou W\*. Multi-view information fusion using multi-view variational autoencoder to predict proximal femoral fracture load. *Frontiers in Endocrinology Sec. Bone Research*. 2023. [PMID: 38075049] [PMCID: PMC10710145]

2. Meng Y, Du Z, **Zhao C**, Dong M, Pieta D, Tang J\*, Zhou W\*. Automated extraction of coronary arteries using deep learning in invasive coronary angiograms. *Technology and Health Care*. 2023. [PMID: 37545276]
3. **Zhao C**, Shi S, He Z, Malhotra S, Wang C, Zhao Z, Li X, Wen H, Tang S, Zhou Y\*, Zhou W\*. Spatial temporal V-Net for automatic segmentation and quantification of right ventricle on gated myocardial perfusion SPECT images. *Medical Physics*. 2023. [PMID: 37860998]
4. **Zhao C**, Xu Z, Hung GU, Zhou W\*. EAGMN: Coronary artery semantic labeling using edge attention graph matching network. *Computers in Biology and Medicine*. 2023. [PMID: 37725850]
5. Lyu Z, King K, Rezaeitalahmahalleh M, Pienta D, Mu N, **Zhao C**, Zhou W, Jiang J\*. Deep learning-based Image Segmentation for Image-based Computational Hemodynamic Analysis of Abdominal Aortic Aneurysms: A Comparison Study. *Biomedical Physics & Engineering Express*. 2023. [PMID: 37625388]
6. Yao N, Li L, Gao Z, **Zhao C**, Li Y, Han C, Nan J, Zhu Z, Xiao Y, Zhu F, Zhao M\*, Zhou W. Deep Learning-Based Diagnosis of Disease Activity in Patients with Graves' Orbitopathy Using Orbital SPECT/CT. *European Journal of Nuclear Medicine and Molecular Imaging*. 2023. [PMID:37395800] [PMCID: PMC10547836]
7. **Zhao C**, Xu Z, Jiang J, Esposito M, Pienta D, Hung GU, Zhou W\*. AGMN: Association Graph based Graph Matching Network for Coronary Artery Semantic Labeling on Invasive Coronary Angiograms. *Pattern Recognition*. 2023. [PMID: 37483334] [PMCID: PMC10358827]
8. Zhu F, Li L, Zhao J, **Zhao C**, Tang S, Nan J, Li Y, Zhao Z, Shi J, Chen Z, Han C, Jiang Z\*, Zhou W\*. A new method incorporating deep learning with shape priors for left ventricular segmentation in myocardial perfusion SPECT images. *Computers in Biology and Medicine*. 2023. [PMID:37130501]
9. Zhu F, Wang G, **Zhao C**, Malhotra S, Zhao M, He Z, Shi J, Jiang Z\*, Zhou W\*. Automatic reorientation by deep learning to generate short-axis SPECT myocardial perfusion images. *Journal of Nuclear Cardiology*. 2023. [PMID: 36859594]
10. Xu Z, Malhotra S, **Zhao C**, Li C, Ye Z, Hua R, Wang C, Zhou W. 3D Fusion Between SPECT Myocardial Perfusion Imaging and Invasive Coronary Angiography to Guide Revascularization in Patients With Stable Coronary Artery Disease. *Circulation*. 2023 Nov 7;148.
11. Meng Y, Dong M, Dai X, Tang H, **Zhao C**, Jiang J, Xu S, Zhou Y, Zhu F, Xu Z\*, Zhou W\*. Automatic identification of end-diastolic and end-systolic cardiac frames from invasive coronary angiography videos. *Technology and Health Care*. 2022. [PMID: 35599518]
12. He Z, Zhang X, **Zhao C**, Ling X, Malhotra S, Qian Z, Wang Y, Hou X, Zou J\*, Zhou W\*. A method using deep learning to discover new predictors from left-ventricular mechanical dyssynchrony for CRT response. *Journal of Nuclear Cardiology*. 2022. [PMID: 35915327]
13. Zhu F, Gao Z, **Zhao C**, Zhu H, Tian Y, Dong Y, Jiang J, Dai N\*, Zhou W\*. A Deep Learning-based Method to Extract Lumen and Media-Adventitia in Intravascular Ultrasound Images. *Ultrasonic Imaging*. 2022. [PMID: 35861418]
14. **Zhao C**, Tang H, McGonigle D, He Z, Zhang C, Wang YP, Deng HW, Bober R\*, Zhou W\*. Development of an approach to extracting coronary arteries and detecting stenosis in invasive coronary angiograms. *Journal of Medical Imaging*. 2022. [PMID: 35875389] [PMCID:PMC9295705]
15. **Zhao C**, Bober R, Tang H, Tang J, Dong M, Zhang C, He Z, Esposito ML, Xu Z\*, Zhou W\*. Semantic segmentation to extract coronary arteries in fluoroscopy angiograms. *Journal of Advances in Applied & Computational Mathematics*. 2022;9:76-85. [DOI:10.15377/2409-5761.2022.09.6]
16. Deng Y, Wang L, **Zhao C**, Tang S\*, Cheng X, Deng HW, Zhou W. A Deep Learning-Based Approach to Automatic Proximal Femur Segmentation in Quantitative CT Images. *Medical and Biological Engineering and Computing*. 2022. [PMID: 35322343]
17. Xu Z, Tang H, Malhotra S, Dong M, **Zhao C**, Ye Z, Zhou Y, Xu S, Li D, Wang C\*, Zhou W\*. Three dimensional Fusion of Myocardial Perfusion SPECT and Invasive Coronary Angiography Guides Coronary revascularization. *Journal of Nuclear Cardiology*. 2022. [PMID: 35194752]
18. **Zhao C**, Vij A, Malhotra S, Tang J, Tang H, Pienta D, Xu Z\*, Zhou W\*. Automatic extraction and stenosis evaluation of coronary arteries in invasive coronary angiograms. *Computers in Biology and Medicine*. 2021. [PMID: 34315031]
19. Zhu F\*, Gao Z, **Zhao C**, Zhu Z, Liu Y, Tang S, Jiang C, Li X, Zhao M\*, Zhou W. Semantic segmentation using deep learning to extract total extraocular muscles and optic nerve from orbital computed tomography images. *Optik*. 2021. [DOI: 10.1016/j.ijleo.2021.167551]
20. **Zhao C**, Keyak JH, Tang J, Kaneko TS, Khosla S, Amin S, Atkinson EJ, Zhao LJ, Serou MJ, Zhang C, Shen H, Deng HW\*, Zhou W\*. ST-V-Net: Incorporating shape priors into convolutional neural networks

- for automatic segmentation of proximal femur from quantitative CT images. *Complex & Intelligent Systems*. 2021. [PMID: 37304840] [PMCID: PMC10256660] [DOI: 10.1007/s40747-021-00427-5]
21. **Zhao C**, Xu Y, He Z, Tang J, Zhang Y, Han J, Shi Y\*, Zhou W\*. Lung Segmentation and Automatic Detection of COVID-19 Using Radiomic Features from Chest CT Images. *Pattern Recognition*. 2021. [PMID: 34092815] [PMCID: PMC8169223]
  22. Tang H, Bober R, **Zhao C**, Zhu H, Zhang C, Zhu H, He Z, Xu Z\*, Zhou W\*. 3D Fusion between Fluoroscopy Angiograms and SPECT Myocardial Perfusion Images to Guide Percutaneous Coronary Intervention. *Journal of Nuclear Cardiology*. 2021. [PMID: 33825145]
  23. Hua X, Han J\*, **Zhao C**, Tang H, He Z, Chen QH, Tang S, Tang J\*, Zhou W\*. A novel method for ECG signal classification via one-dimensional convolutional neural network. *Multimedia Systems*. 2022;28:1387-1399. [DOI: 10.1007/s00530-020-00713-1]
  24. Pan X, Zhao Y, Chen H, Wei D, **Zhao C\***, Wei Z. Fully automated bone age assessment on large-scale hand X-ray dataset. *International journal of biomedical imaging*. 2020. [PMID: 32190035] [PMCID: PMC7072110] [DOI: 10.1155/2020/8460493]
  25. Fan L, Han J, Jia Y, **Zhao C**, Yang B. Segmentation of femurs in x-ray image with generative adversarial networks. *DEStech Transactions on Engineering and Technology Research*. 2019
  26. **Zhao C**, Han J, Jia Y, Fan L, Gou F. Versatile framework for medical image processing and analysis with application to automatic bone age assessment. *Journal of Electrical and Computer Engineering*. 2018
  27. **Zhao C**, Han J, Xu X. CNN and RNN based neural networks for action recognition. *Journal of Physics: Conference Series*. 2018.
  28. Han J, Jia Y, **Zhao C**, Gou F. Automatic bone age assessment combined with transfer learning and support vector regression. *International conference on information technology in medicine and education (ITME)*. 2018.
  29. Jia Y, Fan L, **Zhao C**, Han J. An approach for Chinese character captcha recognition using CNN. *Journal of Physics: Conference Series*. 2018
  30. **Zhao C**, Han J, Jia Y. 3D inception convolutional neural networks for automatic lung nodule detection. *International conference on computational science and computational intelligence (CSCI)*. 2017

## Dissertations

1. **Zhao C**. Deep Learning for Medical Image Segmentation using Prior Knowledge and Topology. 2023. [DOI: 10.37099/mtu.dc.etr/1691]

## Conference abstracts

1. **Zhao C**, Liu A, Zhang X, Cao X, Ding Z, Sha Q, Shen H, Deng HW, Zhou W. CLCLSA: Cross-omics Linked embedding with Contrastive Learning and Self Attention for multi-omics integration with incomplete multi-omics data. *ASHG*. 2023.
2. **Zhao C**, Esposito M, Jiang J, Xu Z, Zhou W. Automated Semantic Segmentation And Stenosis Detection Of Coronary Arteries On Invasive Coronary Angiograms Using Hypergraph Matching And Information Fusion. *AHA Scientific Session*. 2023.
3. Xu Z, Malhotra S, **Zhao C**, Wang C, Zhou W. 3d Fusion between SPECT Myocardial Perfusion Imaging and Invasive Coronary Angiography to Guide Revascularization in Patients with Stable Coronary Artery Disease. *AHA Scientific Session*. 2023.
4. Wang G, Zhu F, **Zhao C**, Malhotra S, Jiang Z, Zhou W. Automatic reorientation by deep learning to generate short-axis SPECT myocardial perfusion images. *ASNC*. 2022.
5. Cao X, Keyak JH, Sigurdsson S, **Zhao C**, Zhou W, Lang T, Deng HW, Gudnason V, Sha Q. Hip Fracture Prediction using the First Principal Component Derived from FEA-Computed Fracture Loads. *ASBMR*. 2022.
6. Pienta D, **Zhao C**, Zhou W. Methods to Improve Deep Learning Based Automatic Coronary Extraction. Michigan Technological University Undergraduate Research Symposium. March 25, 2022.
7. Lyu Z, Pienta D, Johnson T, **Zhao C**, Jiang J, Zhou W. Automated Image Segmentation for computational Analysis of Patients with Abdominal Aortic Aneurysms. Michigan Technological University Graduate Research Colloquium. March 29, 2022.

## Patients and invention disclosures

1. Zhou W, **Zhao C**. Automatic extraction of coronary arteries and measurement of fractional flow reserve in invasive coronary angiography. Invention Disclosure. Michigan Technological University (ID # 2305.00). 2022.