

# Xiaoran Zhang

xiaoran.zhang@yale.edu <https://xiaoranzhang.com/> [\[Google Scholar\]](#) 424-402-7934

**Research Interest** Machine Learning, Computer Vision, Medical Image Analysis

## Education

**Yale University**, New Haven, Connecticut

*Ph.D., Biomedical Engineering*

Sep. 2021 - June 2026 (expected)

- Committee members: Prof. James Duncan (chair), Prof. Alex Wong, Prof. Lawrence Staib, Dr. Albert Sinusas

**University of California, Los Angeles (UCLA)**, Los Angeles, California

*M.S., Electrical and Computer Engineering* (GPA:3.933/4.0) Sep. 2019 - June 2021

**Beijing Institute of Technology (BIT)**, Beijing, PRC

*B.S., Automation (Electrical Engineering)* (GPA: 91.57/100) Sep. 2015 - June 2019

## Selected

### Publications

#### Journal

- [J1] Jingxi Li, Jason Garfinkel, **Xiaoran Zhang**, Di Wu, Yijie Zhang, Kevin de Haan, Hongda Wang, Tairan Liu, Bijie Bai, Yair Rivenson, Gennady Rubinstein, Philip O Scumpia, Aydogan Ozcan. "Biopsy-free in vivo virtual histology of skin using deep learning" *Light: Science & Applications*, 2021 (IF=19.4).
- [J2] **Xiaoran Zhang**, Michelle Noga, David Glynn Martin, Kumaradevan Punithakumar. "Fully automated left atrium segmentation from anatomical cine long-axis MRI sequences using deep convolutional neural network with unscented Kalman filter" *Medical Image Analysis*, 2020 (IF=10.9).

#### Conference & Workshop

- [C1] **Xiaoran Zhang**, John Stendahl, Lawrence Staib, Albert J. Sinusas, Alex Wong, James S. Duncan. "An Adaptive Correspondence Scoring Framework for Unsupervised Image Registration of Medical Images" *European Conference on Computer Vision (ECCV)*, 2024. [\[Project page\]](#)
- [C2] **Xiaoran Zhang\***, Daniel H. Pak\*, Shawn S. Ahn, Xiaoxiao Li, Chenyu You, Lawrence Staib, Albert J. Sinusas, Alex Wong, James S. Duncan. "Heteroscedastic Uncertainty Estimation for Probabilistic Unsupervised Registration of Noisy Medical Images" *International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI)*, 2024. [\[Project page\]](#)
- [C3] **Xiaoran Zhang**, Chenyu You, Shawn Ahn, Juntang Zhuang, Lawrence Staib, James Duncan. "Learning correspondences of cardiac motion from images using biomechanics-informed modeling." *MICCAI-Statistical Atlases and Computational Modelling of the Heart (STACOM) Workshop*, 2022. [\[Project page\]](#)
- [C4] **Xiaoran Zhang**, Michelle Noga, Kumaradevan Punithakumar. "Fully automated deep learning based segmentation of normal, infarcted and edema regions from multiple cardiac MRI sequences." *MICCAI-Statistical Atlases and Computational Modelling of the Heart (STACOM) Workshop*, 2020. [\[Project page\]](#)
- [C5] **Xiaoran Zhang**, David Glynn Martin, Michelle Noga, Kumaradevan Punithakumar. "Fully automated left atrial segmentation from MR image sequences using deep convolutional neural network and unscented kalman filter." *IEEE International Conference on Bioinformatics and Biomedicine (BIBM)*, 2018.

**Academic Services**      **Journal Reviewer:** Medical Image Analysis (MedIA), IEEE Transactions on Medical Images (TMI), IEEE Transactions on Biomedical Engineering (TBME), IEEE Transactions on Industrial Electronics (TIE) etc.

**Conference Reviewer:** ECCV, ICML, ICLR, NeurIPS, MICCAI, EMBC etc.

**Selected Awards and Honors**

Conference Travel Award	Yale, 2023
Bronze Distinguished Reviewer	IEEE TMI, 2022
Graduate Fellowship	Yale, 2021-2022
President Teli Xu's Fellowship (highest honor, cash award ~ 7000 USD)	BIT, 2019
Graduate with 1st Class Honor	BIT and BMEC, 2019
Award for Outstanding Innovation-Undergraduate (1 out of all interns)	Mitacs, 2018
Meritorious Winner in the Interdisciplinary Contest in Modeling	COMAP, 2018
National Scholarship	Ministry of Education, 2015-2016

**Teaching**

BENG 352 Biomedical Signals and Images at Yale	Spring 2023, 2024
ECE M146 Introduction to Machine Learning at UCLA	Winter 2021
ECE C247 Neural Networks and Deep Learning at UCLA	Winter 2021
ECE 236A Linear Programming at UCLA	Fall 2020

**Skills**

**Programming:** PyTorch, Tensorflow, Python, MATLAB,  $\LaTeX$ , Keras, HTML

**Language:** Chinese (native), English.