# Xiaoran Zhang

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# **EDUCATION**

## University of California, Los Angeles

Los Angeles, California

M.S. in Electrical and Computer Engineering GPA: 3.94/4.0

Sep. 2019 - Present

o Courses: Neural Networks and Deep Learning  $(A^+)$ , Linear Programming (A), Convex Optimization (A), Large Scale Optimization (A), Computational Imaging  $(A^-)$ , Reinforcment Learning.

## **Beijing Institute of Technology**

Beijing, China

B.Eng. in Automatic Control GPA: 91.57/100 Ranking: 2/36

Sep. 2015 - June 2019

o Xu Teli Special Fellowship (highest honor for undergrad).

# **RESEARCH EXPERIENCE**

#### **UCLA ECE The Ozcan Research Group**

Los Angeles, USA

Advisor: Prof. Yair Rivenson

Oct. 2019 - Present

o Proposed and developed 2D unsupervised and weakly-supervised deep learning-based non-rigid image registration frameworks.

#### BIT Institute of Automation & Peking University Third Hospital

Beijing, China

Advisor: Prof. Dawei Shi and Dr. Yan Li

Feb. 2019 - Sep. 2019

o Designed a automatic tool for 2D MRI spinal cord segmentation using CNN and active contour propagation.

#### **BIT Institute of Automation**

Beijing, China

Advisor: Prof. Dawei Shi

*Nov.* 2018 – Feb. 2019

 Designed a calibration algorithm for subcutaneous continuous glucose monitoring sensors with reduced calibration frequency and computation complexity.

### University of Alberta Mazankowski Alberta Heart Institute

Edmonton, Canada

Advisor: Prof. Kumaradevan Punithakumar and Prof. Michelle Noga

July 2018 – Feb. 2019

o Designed a fully automatic segmentation approach for 2D MRI cardiac images using CNN and unscented Kalman filter.

# **PUBLICATIONS**

- [1] **Xiaoran Zhang**, Michelle Noga, David Glynn Martin, and Kumaradevan Punithakumar. Fully automated left atrium segmentation from anatomical cine long-axis MRI sequences using deep convolutional neural network with unscented Kalman filter. *Under Review*, 2020.
- [2] **Xiaoran Zhang**, Yan Li, Yicun Liu, Shu-xia Tang, Xiaoguang Liu, Kumaradevan Punithakumar, and Dawei Shi. Automatic spinal cord segmentation from axial-view MRI slices using CNN with grayscale regularized active contour propagation. *Submitted*, 2020.
- [3] **Xiaoran Zhang**, Wan Zhang, Yongtong Cao, Dawei Shi, and Ling Shi. Optimal continuous glucose monitoring sensor calibration for patients with type 1 diabetes. In 2019 IEEE 28th International Symposium on Industrial Electronics (ISIE), pages 617–622. IEEE, 2019.
- [4] **Xiaoran Zhang**, David Glynn Martin, Michelle Noga, and Kumaradevan Punithakumar. Fully automated left atrial segmentation from MR image sequences using deep convolutional neural network and unscented kalman filter. In *2018 IEEE International Conference on Bioinformatics and Biomedicine (BIBM)*, pages 2316–2323. IEEE, 2018.
- [5] **Xiaoran Zhang**, Yuting Bai, and Senchun Chai. State estimation for GPS outage based on improved nonlinear autoregressive model. In 2018 IEEE 9th International Conference on Software Engineering and Service Science (ICSESS), pages 840–843. IEEE, 2018.

# **AWARDS**

Xute Li Special Fellowship (highest honor for undergrad, 9/all undergraduates), by BIT	2019
Graduate with 1st Class Honor, by BIT and Beijing Municipal Education Commission	2019
Mitacs Award for Outstanding Innovation-Undergraduate (1/all Mitacs interns), by Mitacs	2018
Meritorious Winner in ICM/MCM (8.88%), by COMAP	2018
National Scholarship (1/36), by the Ministry of Education of the People's Republic of China	2016
Beijing Triple 'A' Outstanding Student Award (1/320), by Beijing Municipal Education Commission	2016
Three times 1st Class Scholarship (1/36), by BIT	2015, 2016