

# Peter (Zhihang) Ren

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## CONTACT INFORMATION

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Homepage : [albuspeter.github.io](http://albuspeter.github.io)

## EDUCATION

**University of California, Berkeley** Aug. 2019 - Present

Ph.D. in Vision Science. Advisor : [Stella X. Yu](#), [David Whitney](#).  
Research in Computer Vision, Medical Imaging, and Vision Science

**University of California, San Diego**

Aug. 2017 - June 2019

M.S. in Electrical and Computer Engineering. Advisor : [Nuno Vasconcelos](#), [Bhaskar D. Rao](#)  
Research in Computer Vision, and Medical Imaging. GPA : 3.77/4.0

**University of Glasgow**

Sep. 2013 - June 2017

B.Eng. in Electronic and Electrical Engineering

**University of Electronic Science and Technology of China**

Sep. 2013 - June 2017

B.S. in Electronic Engineering. Advisor : [Shuaicheng Liu](#)  
Research in Image and Video Processing. GPA : 3.90/4.0, Rank :1/139

## PUBLICATIONS

1. [Serial dependence in perception across naturalistic GAN-generated mammograms](#)  
**Zhihang Ren**, Teresa Canas-Bajo, Cristina Ghirardo, Mauro Manassi, Stella X. Yu, David Whitney  
*Journal of Medical Imaging*, 2023,
2. [Serial Dependence in Dermatological Judgments](#)  
**Zhihang Ren**, Xinyu Li, Dana Pietralla, Mauro Manassi, David Whitney  
*Diagnostics*, 2023
3. [Idiosyncratic biases in the perception of medical images](#)  
Zixuan Wang, Mauro Manassi, **Zhihang Ren**, Cristina Ghirardo, Teresa Canas-Bajo, Yuki Murai, Min Zhou, David Whitney  
*Frontiers in Psychology*, 2022
4. [Controllable Medical Image Generation via GAN](#)  
**Zhihang Ren**, Stella X. Yu, David Whitney  
*Journal of Perceptual Imaging*, 2022
5. [Improve Image-based Skin Cancer Diagnosis with Generative Self-Supervised Learning](#)  
**Zhihang Ren**, Yunhui Guo, Stella X. Yu, David Whitney  
*IEEE/ACM Conference on Connected Health Applications, Systems, and Engineering Technologies (CHASE)*, 2021
6. [Serial Dependence in the Perceptual Judgments of Radiologists](#)  
Mauro Manassi\*, Cristina Ghirardo\*, Teresa Canas-Bajo\*, **Zhihang Ren**, William Prinzmetal, David Whitney  
*Cognitive Research : Principles and Implications*, 2021
7. [Controllable medical image generation via generative adversarial networks](#)  
**Zhihang Ren**, Stella X. Yu, David Whitney  
*Human Vision and Electronic Imaging (HVEI)* **Oral**, 2021
8. [Coding Trajectory: Enable Video Coding for Video Denoising](#)  
**Zhihang Ren**, Peng Dai, Shuaicheng Liu, Shuyuan Zhu, Bing Zeng  
*IEEE International Conference on Image Processing (ICIP)*, 2018
9. [MeshFlow Video Denoising](#)  
**Zhihang Ren**, Jiajia Li, Shuaicheng Liu, Bing Zeng  
*IEEE International Conference on Image Processing (ICIP)*, 2017
10. [Shape Recovery of Endoscopic Videos by Shape from Shading using Mesh Regularization](#)  
**Zhihang Ren**, Tong He, Lingbing Peng, Shuaicheng Liu, Shuyuan Zhu, Bing Zeng  
*International Conference on Image and Graphics (ICIG)*, 2017

11. Signal analysis of sound produced by collision of steel balls  
Lei Wang, Hao Wu, Jikun Jin, **Zhihang Ren**, Hongrui Zhang, Baohua Teng  
*Physics Experimentation* Vol.35 No.12, 1-4, Dec. 2015

## TEACHING & SERVICES

### Graduate Student Instructor at UC Berkeley

Machine Learning (CS189/289) [Fall 2019] : Design novel homework and exam questions on CCA algorithm, classic computer vision tasks, etc. , and lead discussion sessions. 400 students are enrolled in the class.

Perception (Psych C126) [Spring 2021, Spring 2022, Spring 2023(Head GSI)] : Manage GSI duties, arrange course materials, lead discussion sessions and office hours to help 60 students understand basic human visual system and perception mechanisms.

### Teaching Assistant at UC San Diego

Fall 2018

Statistical Learning (ECE271A) : Hold office hours to help students understand the concepts in statistical learning. 200 students are enrolled in the class.

### Teaching Assistant at UESTC

Fall 2015, 2016 Spring 2017

Introductory Programming : Hold office hours to help students understand the concepts in C/C++ programming. Lead lab session. 300 students are enrolled in the class.

Microelectronic Systems : Prepare and lead lab session. Help students on their project design and implementation. 300 students are enrolled in the class.

**Mentoring** 6 undergraduate students and 2 graduate students on their research projects.

**Reviewer Services** : Medical Education, Frontiers in Psychology

**Program Committee Chair** : Bay Area Vision Research Day (BAVRD), Online, 2020

## AWARDS

The Outstanding Graduate Student Instructor (OGSI) Award	2023
Elsevier/Vision Research Travel Award	2023
NSF Student Travel Award	2021
National Scholarship (top 1.5%)	2013-2014, 2014-2015
People's First Prize Scholarship (top 5%)	2015-2016
Academic Excellent Scholarship (top 5%)	2013-2014, 2014-2015

## SKILLS

Programming languages : Python, C/C++, MATLAB, R  
Deep learning/Robotics framework : PyTorch, Tensorflow, Keras  
Softwares : Photoshop, Premiere, Illustrator  
Languages : English, Chinese.

## ACTIVITIES & TALKS

1. Serial Dependence Biases Realistic Skin Cancer Diagnosis  
*The Annual Meeting of Vision Science Society (VSS)*, **Talk**, May 19-24, 2023
2. An Enhanced Dataset for Inferential Emotion Tracking in Humans and Machines  
*The Annual Meeting of Vision Science Society (VSS)*, May 19-24, 2023
3. Serial Dependence in Radiologist Perception across Naturalistic Mammogram Stimuli  
*The Annual Meeting of Vision Science Society (VSS)*, May 13-18, 2022
4. Simultaneous Localization and Size Discrimination Modeling via Convolutional Neural Network  
*The Annual Meeting of Vision Science Society (VSS)*, May 13-18, 2022
5. Sequentially dependent errors generalize across naturalistic mammogram stimuli  
*The Annual Meeting of Vision Science Society (Virtual-VSS)*, **Talk**, May 21-26, 2021
6. A General Model for Medical Stimuli Synthesis  
*The Annual Meeting of Vision Science Society (Virtual-VSS)*, May 21-26, 2021
7. A Generative Model for Tumor Stimuli Synthesis  
*The Annual Meeting of Vision Science Society (Virtual-VSS)*, May 17, 2020
8. Vice President of Finance, Vision Science Student Government 2020-2021

## HOBBIES

Hiking, Photography, Badminton, and Tennis