

# 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](#). GPA : 3.955/4.0  
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. Controllable Medical Image Generation via GAN  
**Zhihang Ren**, Stella X. Yu, David Whitney  
*Journal of Perceptual Imaging*, 2021 (in revision)
2. 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 (in press)
3. [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
4. [Controllable medical image generation via generative adversarial networks](#)  
**Zhihang Ren**, Stella X. Yu, David Whitney  
*Human Vision and Electronic Imaging (HVEI)* **Oral**, 2021
5. [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
6. [MeshFlow Video Denoising](#)  
**Zhihang Ren**, Jiajia Li, Shuaicheng Liu, Bing Zeng  
*IEEE International Conference on Image Processing (ICIP)*, 2017
7. [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
8. 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** Fall 2019, Spring 2021  
Machine Learning (CS189/289) : Designed novel homework and exam questions on CCA algorithm, classic computer vision tasks, etc. , and led discussion sessions. 400 students are enrolled in the class.

Perception (Psych C126) : Led 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. Led lab session. 300 students are enrolled in the class.

Microelectronic Systems : Prepared and led lab session. Helped students on their project design and implementation. 300 students are enrolled in the class.

**Mentoring** 1 UC Berkeley undergraduate student on her research project.

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

**AWARDS**

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. Sequentially dependent errors generalize across naturalistic mammogram stimuli  
*The Annual Meeting of Vision Science Society (Virtual-VSS)*, **Oral**, May 21-26, 2021
2. A General Model for Medical Stimuli Synthesis  
*The Annual Meeting of Vision Science Society (Virtual-VSS)*, May 21-26, 2021
3. A Generative Model for Tumor Stimuli Synthesis  
*The Annual Meeting of Vision Science Society (Virtual-VSS)*, May 17, 2020
4. Vice President of Finance, Vision Science Student Government 2020-2021

**HOBBIES**

Hiking, Photography, Badminton, and Tennis