XUANER (CECILIA) ZHANG

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EDUCATION

University of California, Berkeley   **expected May 2021**
PhD in Computer Science, Computational Photography   Berkeley, CA
Adviser: Ren Ng

Rice University   **May 2015**
B.S. in Electrical and Computer Engineering   Houston, TX
Minor in Computational Applied Mathematics
Graduated with **Summa Cum Laude** and **Distinction in Research**

RESEARCH INTERESTS

Computational Photography, Computer Graphics I'm interested in photo enhancement, restoration and (realistic) editing, along with the approach using deep neural networks. I hope to design software and algorithms that make high-quality photography more accessible to people.

PAST RESEARCH

Computational Photography Group, Facebook   **5/2017 - 8/2017**
Research Intern   *Seattle, WA*

· Worked with Kevin Matzen on single image restoration using deep generative model.

Imagination Lab, Adobe Research   **5/2016 - 8/2016**
Research Scientist Intern   *San Jose, CA*

· Collaborated with Joon-Young Lee, Kalyan Sunkavalli, Zhaowen Wang on hyperlapse video enhancement. We proposed a photometric stabilization framework that consists of optimal frame sampling and content-aware photometric smoothing. (Paper presented in Pacific Graphics 2017)

Visual Computing Lab, UC Berkeley   **8/2015 - 12/2015**
Graduate Researcher   *Berkeley, CA*

· Advised by Prof. Ren Ng and worked on building a pinhole-based vision correcting light field display that compensates for eye aberrations and allows free eye movements within a user-specified viewing zone. (Poster presented at ICCP 2016)

Computer Vision and Computational Imaging Lab, Rice University   **5/2013 - 5/2015**
Research Assistant   *Houston, TX*

· Advised by Prof. Ashok Veeraraghavan and worked on *Phase Retrieval Microscopy* where we built a mobile microscopy system that achieves wide field-of-view and high-resolution microscopic images using fourier optics, and on *Mobile Image Stitching* where we built a mobile microscopy system and applied image panoramic stitching to achieve giga-pixel microscopic images.

Senior Design - Virtual Fitting System, Rice University   **8/2013 - 8/2014**

· Advised by Prof. Gary Woods and Prof. Ron Goldman and designed a virtual fitting system for online clothes shoppers. We built a 3D body shape database and applied MLP artificial neural network model to achieve real-time 3D garment simulation. (Short paper published in CASA 2014 and poster accepted to SIGGRAPH 2014)

Information System Group, Hochschule Pforzheim   **5/2013 - 8/2013**
Research Assistant (DAAD RISE Scholar)   *Pforzheim, Germany*

· Worked with Dr. Tobias Gehrke and worked on designing optimized coutourlet filters for high-gain image encoding. Research presented at the DAAD RISE conference 2013.

PUBLICATIONS AND POSTERS

Zhang, Xuaner, Joon-Young Lee, Kalyan Sunkavalli, Zhaowen Wang, "Photometric Stabilization for Fast-forward Videos" Computer Graphics Forum. Vol. 36. No. 7. 2017.

Zhang, Xuaner*, Jinkyu Kim*, Laura Waller, Brian A. Barsky, Ren Ng. "Free Your Eyes: Retinal Image Deblurring Display with Enlarged Viewing Zone." Computational Photography (ICCP), Poster, 2015 IEEE International Conference on. IEEE, 2015.

Zhang, Xuaner, Lam Yuk Wong, VIRTUAL FITTING: REAL-TIME GARMENT SIMULATION FOR ONLINE CLOTHES SHOPPING, Proceedings of the 27th Conference on Computer Animation and Social Agents, 2014

Zhang, Xuaner, and Lam Yuk Wong. "Virtual fitting: real-time garment simulation for online shopping." ACM SIGGRAPH 2014 Posters. ACM, 2014.

TEACHING EXPERIENCE

Graduate Student Instructor, EECS, UC Berkeley   **8/2016 - 1/2017**
Taught weekly discussion session for "Computer Graphics".
Course Assistant, Rice University   **8/2014 - 12/2015**
Taught weekly discussion session for "Fundamental of Electrical Engineering".
Coursera Forum Modulator, Rice University   **8/2014 - 12/2014**
Modulated discussion forum and answered questions on Coursera for "Fundamental of Electrical Engineering".

LANGUAGES

Computer Languages	Python, MATLAB, C++, HTML
Tools:	PyTorch, Tensorflow, Caffe, Caffe2, OpenCV, Linux Shell, Vim, LaTeX

AFFILIATIONS

UC Berkeley Women In Computer Science and Engineering, Industrial Liaison	**2016 - present**
ACM, Member	**2014 - present**
IEEE, Member	**2013 - present**
Phi Beta Kappa Honor Society, Member	**2015 - 2016**
Eta Kappa Nu Electrical Engineering Honor Society, Member	**2014 - 2016**
Rice University IEEE Student Chapter, Vice President	**2014 - 2015**

OTHER HONORS AND AWARDS

CRA-W (Computing Research Association) Grad Cohort Participant	**4/2016**
Willy Revolution Award for Innovative Design (grand prize for senior design)	**10/2014**
IEEEXtreme 24-Hour Programming Competition, ranked 156/1853 worldwide	**5/2014**