

# Zhixin Shu

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## Education

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<b>Stony Brook University</b> <i>Doctor of Philosophy, Computer Science</i>	September, 2013 – December, 2019 Stony Brook, NY, US
<b>University of Chinese Academy of Science</b> <i>Master of Engineering, Computer Science</i>	September, 2010 – June, 2013 Beijing, China
<b>Dalian University of Technology</b> <i>Bachelor of Science, Measurement and Control</i>	September, 2006 – June, 2010 Dalian, Liaoning, China

## Professional Experience

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<b>Research Scientist</b> <i>Adobe Research</i> <ul style="list-style-type: none"><li>Research on 3D computer vision and graphics for human.</li></ul>	February, 2020 – Present San Jose, CA, US
<b>Research Assistant</b> <i>Stony Brook University</i> <ul style="list-style-type: none"><li>Research on computer vision and machine learning.</li></ul>	Fall, 2014 – December, 2019 Stony Brook, NY, US
<b>Research Intern</b> <i>Adobe Research</i> <ul style="list-style-type: none"><li>Unsupervised 3D face reconstruction.</li></ul>	Fall, 2017 San Jose, CA, US
<b>Research Intern</b> <i>Center for Visual Computing, CentraleSupélec</i> <ul style="list-style-type: none"><li>Shape analysis with deep learning.</li></ul>	Spring 2017 Île-de-France, France
<b>Research Intern</b> <i>Adobe Research</i> <ul style="list-style-type: none"><li>Face image analysis and editing with deep learning.</li></ul>	Fall, 2016 San Jose, CA, US
<b>Research Intern</b> <i>Adobe Research</i> <ul style="list-style-type: none"><li>Algorithm design for portrait relighting.</li></ul>	Fall, 2015 San Jose, CA, US
<b>Research Intern</b> <i>Adobe Research</i> <ul style="list-style-type: none"><li>Algorithms and system design for eyes editing.</li></ul>	Fall, 2014 San Jose, CA, US
<b>Teaching Assistant</b> <i>Stony Brook University</i> <ul style="list-style-type: none"><li>Teaching assistant for various courses in Computer Science Department.</li></ul>	Fall, 2013, Spring 2014, Fall 2015 Stony Brook, NY, US
<b>Research Intern</b> <i>Hanvon Technology</i> <ul style="list-style-type: none"><li>3D face modeling and facial expression synthesis.</li></ul>	Fall, 2011, Fall 2012 Beijing, China

## Publications

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- S Athar, Z Shu, D Samaras, *FLAME-in-NeRF: Neural control of Radiance Fields for Free View Face Animation*, FG, 2023
- S Das, K Ma, Z Shu, D Samaras, *Learning an Isometric Surface Parameterization for Texture Unwrapping*, ECCV, 2022.
- Y Liu, Z Shu, Y Li, Z Lin, R Zhang, S.Y. Kung, *3D-FM GAN: Towards 3D-Controllable Face Manipulation*, ECCV, 2022.
- K Ma, S Das, Z Shu, D Samaras, *Learning From Documents in the Wild to Improve Document Unwarping*, SIGGRAPH, 2022
- S Athar, Z Xu, K Sunkavalli, E Shechtman, Z Shu, *RigNeRF: Fully Controllable Neural 3D Portraits*, CVPR, 2022.
- J Yoon, D Ceylan, T Wang, J Lu, J Yang, Z Shu, H Park, *Learning Motion-Dependent Appearance for High-Fidelity Rendering of Dynamic Humans from a Single Camera*, CVPR, 2022.
- Q Xu, Z Xu, J Philip, S Bi, Z Shu, K Sunkavalli, U Neumann, *Point-NeRF: Point-based Neural Radiance Fields*, CVPR, 2022 (oral).
- S Chandran, Y Hold-Geoffroy, K Sunkavalli, Z Shu, S Jayasuriya, *Temporally Consistent Relighting for Portrait Videos*, WACV, 2021.
- B AlBahar, J Lu, J Yang, Z Shu, E Shechtman, J Huang *Pose with Style: Detail-Preserving Pose-Guided Image Synthesis with Conditional StyleGAN*, SIGGRAPH Asia (TOG), 2021.
- M Lagunas, X Sun, J Yang, R Villegas, J Zhang, Z Shu, B Masia, D Gutierrez, *Single-image Full-body Human Relighting*, EGSR 2021
- Y Liu, Z Shu, Y Li, Z Lin, F Perazzi, S.Y. Kung, *Content-Aware GAN Compression*, CVPR, 2021.
- S Athar, Z Shu, D Samaras, *Self-supervised Deformation Modeling for Facial Expression Editing*, FG, 2020
- Z Shu, D Ceylan, K Sunkavalli, E Shechtman, S Hadap, D Samaras, *Learning Monocular Face Reconstruction using Multi-View Supervision*, FG, 2020 (best paper runner up).
- S Das, K Ma, Z Shu, R Shilrot, D Samaras, *DewarpNet: Single-Image Document Unwarping with Stacked 3D and 2D Regression Networks*, ICCV, 2019
- M Sahasrabudhe, Z Shu, E Bartrum, R.A. Guler, D Samaras, I Kokkinos. *Lifting AutoEncoders: Unsupervised Learning of a Fully-Disentangled 3D Morphable Model using Deep Non-Rigid Structure from Motion*, ICCV workshop, 2019.
- M Wang, Z Shu, S Cheng, Y Panagakis, D Samaras, S Zafeiriou. *An Adversarial Neuro-Tensorial Approach For Learning Disentangled Representations*, IJCV, 2019.
- Z Shu, M Sahasrabudhe, R.A. Guler, D Samaras, N Paragios, I Kokkinos. *Deforming Autoencoders: Unsupervised Disentangling of Shape and Appearance*, ECCV, 2018.
- K Ma, Z Shu, D Samaras, X Bai, J Wang. *DocUNet: Document Image Unwarping via A Stacked U-Net*, CVPR 2018.
- Z Shu, S Hadap, E Shechtman, K Sunkavalli, S Paris, and D Samaras. *Portrait Lighting Transfer using a Mass Transport Approach*, ACM Transactions on Graphics (TOG), 2017.
- Z Shu, E Yumer, S Hadap, K Sunkavalli, E Shechtman, and D Samaras, *Neural Face Editing with Intrinsic Image Disentangling*, CVPR, 2017 (oral).
- Z Shu, E Shechtman, D Samaras, and S Hadap, *EyeOpener: Editing Eyes in the Wild*, ACM Transactions on Graphics (TOG), 2017.
- Z Shu, K Yun, D Samaras, *Action Detection with Improved Dense Trajectories and Sliding Window*, ECCV workshop 2014.

*Academic service*

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**Conference Reviewer** – CVPR, ICCV, ECCV, SIGGRAPH, SIGGRAPH Asia, NeurIPS, ICLR,  
FG, ACCV, BMVC, WACV

**Journal Reviewer** – TOG, IJCV, TPAMI

**Presentation Chair** – CVPR 2022

*Awards & Honors*

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**3rd place in ChaLearn 2014 Looking at People Challenge: Action Recognition**

*ECCV Workshop*

2014

**Best paper runner up award**

*FG*

2020