Zhixin Shu

Department of Computer Science, Stony Brook University
Stony Brook, NY 11794
(631) 496-6917, zhshu@cs.stonybrook.edu

EDUCATION

Doctor of Philosophy, Computer Science, [August 2013 to present]
Stony Brook University, State University of New York, Stony Brook, NY, USA

Master of Engineering, Computer Science, [September 2010, June 2013]
Institute of Automation, University of Chinese Academy of Sciences, Beijing, China

Bachelor of Science, Measurement and Control, [September 2006, June 2010]
Dalian University of Technology, Dalian, Liaoning, China

RESEARCH INTERESTS

Computer Vision, Computer Graphics, Machine Learning, Image Editing.

PROFESSIONAL EXPERIENCE

Research Intern at Adobe Research, San Jose, California, USA. [Fall 2017]
– Unsupervised 3D face reconstruction.
Research Intern at Center for Visual Computing, CentraleSupelec, France. [Spring 2017]
– Shape analysis with deep learning.
Research Intern at Adobe Research, San Jose, California, USA. [Fall 2016]
– Face image analysis and editing with deep learning.
Research Intern at Adobe Research, San Jose, California, USA. [Summer 2015]
– Algorithm design for portrait relighting.
Research Intern at Adobe Research, San Jose, California, USA. [Summer 2014]
– Algorithms and system design for eyes editing.
Research Assistant at Stony Brook University [Fall 2014 to present]
Teaching Assistant at Stony Brook University [Fall 2013, Spring 2014, Fall 2015]
Research Intern at Hanvon Technology, Beijing, China. [Fall 2011, Fall 2012]
– 3D face modeling and facial expression synthesis.

PUBLICATIONS

Lifting AutoEncoders: Unsupervised Learning of a Fully-Disentangled 3D Morphable Model using Deep Non-Rigid Structure from Motion, Mihir Sahasrabudhe, Zhixin Shu, Edward Bartrum, Riza Alp Guler, Dimitris Samaras, Iasonas Kokkinos. ArXiv 2019.

An Adversarial Neuro-Tensorial Approach For Learning Disentangled Representations, Mengjiao Wang, Zhixin Shu, Shiyang Cheng, Yannis Panagakis, Dimitris Samaras, Stefanos Zafeiriou. *International Journal on Computer Vision (IJCV) 2019.*

Deforming Autoencoders: Unsupervised Disentangling of Shape and Appearance, Zhixin Shu, Mihir Sahasrabudhe, Alp Guler, Dimitris Samaras, Nikos Paragios, Iasonas Kokkinos. *European Conference on Computer Vision (ECCV 2018).*

DocUNet: Document Image Unwarping via A Stacked U-Net, Ke Ma, Zhixin Shu, Dimitris Samaras, Xue Bai, Jue Wang. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2018).*

Portrait Lighting Transfer using a Mass Transport Approach, Zhixin Shu, Sunil Hadap, Eli Shechtman, Kalyan Sunkavalli, Sylvain Paris, and Dimitris Samaras. *ACM Transactions on Graphics (TOG), Volume 37, Issue 1, November 2017, Article No. 2. (presented at SIGGRAPH 2017).*

Neural Face Editing with Intrinsic Image Disentangling, Zhixin Shu, Ersin Yumer, Sunil Hadap, Kalyan Sunkavalli, Eli Shechtman, and Dimitris Samaras. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2017) (oral).*

EyeOpener: Editing Eyes in the Wild, Zhixin Shu, Eli Shechtman, Dimitris Samaras, and Sunil Hadap, *ACM Transactions on Graphics (TOG), Volume 36, Issue 1, September 2016, Article No. 1. (presented at SIGGRAPH 2016).* (Tech Transfer: Adobe Photoshop Element – Open Closed Eyes).

Action Detection with Improved Dense Trajectories and Sliding Window, Zhixin Shu, Kiwon Yun, Dimitris Samaras, *European Conference on Computer Vision ChaLearn Looking at People workshop (ECCV workshop 2014).*

3D Facial Expression Synthesis from a Single Image Using a Model Set, Zhixin Shu, Lei Huang, Changping Liu , *Asian Conference on Computer Vision Workshop (ACCV workshop 2012).*

PATENTS

Image Lighting Transfer via Multi-dimensional Histogram Matching. US 20180061028.

AWARDS

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

TECHNICAL SKILLS

Python, Torch(Lua), MATLAB, C/C++, Java, Octave, HTML, LaTeX, etc.

ACADEMIC SERVICE

Reviewer:
IEEE Conference on Computer Vision and Pattern Recognition (CVPR – 2016, 2017, 2018, 2019)
International Conference on Computer Vision (ICCV – 2017, 2019)
European Conference on Computer Vision (ECCV – 2018)
Asian Conference on Computer Vision (ACCV – 2018)
SIGGRAPH 2019
SIGGRAPH Asia 2019
Pacific Graphics (PG – 2018)
IEEE Transactions on Pattern Analysis and Machine Intellegence (TPAMI)
International Journal on Computer Vision (IJCV)