# Jun Xing (邢骏)

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## RESEARCH

My research combines modern concepts in Computer Graphics, Computer Vision, Machine Learning and Human Computer Interaction, with broad applications in digital painting, animation, sculpting, and geometry analysis and synthesis, as well as UI/UX design. In particular, I am interested in analyzing the human-centered activities of authoring the various digital contents, and providing online "intelligent" suggestions, via a natural interface, to reduce manual labor while improving performance.

## EDUCATION

**PhD, Computer Science**                                                                                    **2012.09－2016.12**
University of Hong Kong, Dept. of Computer Science, advised by Dr. Li-Yi Wei

**Bachelor, Electronic Engineering and Information Science**                            **2008.09－2012.06**
University of Science and Technology of China (USTC), Dept. of Electronic Engineering and Information Science

## WORK EXPERIENCE

**University of Southern California,** postdoc in ICT, with Hao Li, Los Angeles                    **2017.05－present**
**Adobe Research**, intern in the Procedural Imaging Group, with Cynthia Lu etc. San Jose          **2016.07－2016.09**
**Autodesk Research**, intern in the UI Group, with Rubaiat Habib Kazi etc. Toronto                **2016.01－2016.04**
**Microsoft Research Asia,** intern in the Visual Computing Group, with Takaaki Shiratori etc., Beijing    **2014.12－2015.04**

## PUBLICATIONS

- Yi Zhou, Liwen Hu, **Jun Xing**, Weikai Chen, Han-Wei Kung, Xin Tong, Hao Li. Single-View Hair Reconstruction using Convolutional Neural Networks. Accepted by ECCV 2018.

- Zeng Huang, Tianye Li, Weikai Chen, Yajie Zhao, **Jun Xing**, Chloe LeGendre, Linjie Luo, Chongyang Ma, Hao Li. Deep Volumetric Video From Very Sparse Multi-View Performance Capture. Accepted by ECCV 2018.

- Yajie Zhao, Weikai Chen, **Jun Xing**, Ruigang Yang. Identity Preserving Face Completion for Large Ocular Region Occlusio. Accepted by BMVC 2018.

- Mengqi Peng, **Jun Xing**, Li-Yi Wei. Autocomplete 3D Sculpting. ACM Transactions on Graphics (TOG), Proceedings of ACM SIGGRAPH 2018.

- Loc Huynh, Weikai Chen, Shunsuke Saito, **Jun Xing**, Koki Nagano, Andrew Jones, Hao Li, Paul Debevec. Mesoscopic Facial Geometry Inference using Deep Neural Networks. CVPR 2018 (Spotlight).

- Xu Shen, Xinmei Tian, **Jun Xing**, Yong Rui, Dacheng Tao. Sequence-to-Sequence Learning via Shared Latent Representation. AAAI 2018.

- **Jun Xing**, Rubaiat Habib Kazi, Tovi Grossman, Li-Yi Wei, Jos Stam, George Fitzmaurice. Energy-Brushes: Interactive Tools for Illustrating Stylized Elemental Dynamics. UIST 2016.

- **Jun Xing**, Li-Yi Wei, Takaaki Shiratori, and Koji Yatani. Autocomplete Hand-drawn Animations. ACM Transactions on Graphics (TOG), Proceedings of ACM SIGGRAPH Asia 2015.

- **Jun Xing**, Hsiang-Ting Chen and Li-Yi Wei. Autocomplete Painting Repetitions. ACM Transactions on Graphics (TOG), Proceedings of ACM SIGGRAPH Asia 2014.

## MORE RESEARCH EXPERIENCE

**Strip-based Hair Modeling in VR**                                              **2017.08－present**

We provide a 3D VR authoring interface for immersive interaction with the hair models. Our system combines the flexibility of manual authoring, the convenience of data-driven automation and the power of machine learning for high quality hair modeling.

**Synthesizing Dynamic Facial Textures from a Single Image**                     **2018.01－present**

We propose a conditional generative adversarial network that learns a mapping from a photograph of the subject in neutral pose to an arbitrary FACS-controlled expression.

**Autocomplete VR painting**                                                     **2016.07－present**

The goal is to handle different types of repetitions in VR painting, including the detail decorative strokes, the surface strokes, and even higher-level scaffold, in a simple and general framework.

**Interactive Facial Hair Editing and Synthesis**                               **2017.06－present**

Users can design facial hairs of different shapes/lengths/densities via simple sketching, while keeping the style of a target facial hair defined by an exemplar image.

## PATENTS

Techniques for Generating Dynamic Effects Animations: US filed by Autodesk (2016)
Stroke Operation Prediction for Three-Dimensional Digital Content: Pending, filed by Adobe (2017)

## ACADEMIC SERVICE

Committee Member:

    Pacific Graphics 2018

    SIGGRAPH Emerging Technology 2017

Reviewer:

    SIGGRAPH Asia 2017; CHI 2017; Computer & Graphics 2017; IEEE Transactions on Cognitive and Developmental Systems 2017; PG 2015, 2016; IEEE Computer Graphics and Applications 2016

## PROFESSIONAL SKILLS

Designer: algorithm, system, UI/UX
Programmer: C/C++, Qt, Python, Java, OpenGL/CV/VR, Unity

## AWARDS

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| Excellent intern of Stars of Tomorrow Internship Program, Microsoft Research Asia (MSRA) | **2015** |
| HKU University Postgraduate Fellowships (UPF), HKU | **2012－2015** |
| Outstanding undergraduate, USTC | **2012** |
| Outstanding undergraduate research project, USTC | **2011** |
| Second prize in Mathematical Contest in Modeling | **2011** |
| National Scholarship, Ministry of Education, P.R.China | **2011** |
| National Inspirational Scholarship, Ministry of Education, P.R.China | **2009, 2010** |
| Outstanding Students Scholarship, USTC | **2008, 2009** |

# REFERENCES

Li-Yi Wei (Adobe Research), lwei@adobe.com

Hao Li (Pinscreen, USC, ICT), hao@hao-li.com

Rubaiat Habib Kazi (Adobe Research), rhabib@adobe.com

Tovi Grossman (Autodesk Research and University of Toronto), tovi@dgp.toronto.edu

Cynthia Lu (Adobe Research), jlu@adobe.com