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 2D/3D digital contents analysis, synthesis and authoring. In particular, I am interested in *interactive/predictive* modeling and *deep learning-based* reconstruction of high-fidelity face, hair and body for digital human.

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. HairNet: Single-View Hair Reconstruction using Convolutional Neural Networks. 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. ECCV 2018.
- Yajie Zhao, Weikai Chen, **Jun Xing**, Xiaoming Li, Zach Bessinger, Fuchang Liu, Wangmeng Zuo, Ruigang Yang. Identity Preserving Face Completion for Large Ocular Region Occlusio. 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.

EXHIBITIONS

- Koki Nagano, Jaewoo Seo, Kyle San, Aaron Hong, Mclean Goldwhite, **Jun Xing**, Stuti Rastogi, Jiale Kuang, Aviral Agarwal, Hanwei Kung, Caleb Arthur, Carrie Sun, Stephen Chen, Jens Fursund, Hao Li. Deep Learning-Based Photoreal Avatars for Online Virtual Worlds in iOS. SIGGRAPH 2018 Real-time Live!

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

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