**Jun Xing (邢骏)**

Lead researcher, miHoYo (米哈游) <http://junxnui.github.io/> [junxnui@gmail.com](mailto:junxnui@gmail.com)

**RESEARCH**

My research combines modern concepts in computer graphics, computer vision, deep learning and human computer interaction, with broad applications in 2D/3D/VR/Animation contents authoring, analysis, and synthesis. In particular, I am interested in high-quality digital human modeling and rigging, performance capturing and retargeting, cloth and hair simulation, etc.. My goal is to design interactive/predictive systems and deep learning-based algorithms to free the artists from the tedious works so they can focus on creation.

**EDUCATION**

**University of Hong Kong** 2012.09－2016.12

PhD in computer science, advised by Dr. Li-Yi Wei

**University of Science and Technology of China (USTC)** 2008.09－2012.06

Bachelor in Electronic Engineering and Information

**WORK EXPERIENCE**

**miHoYo (米哈游)** 2019.01－ongoing

Lead researcher, Shanghai

**USC Institute for Creative Technologies** 2017.05－2019.01

Postdoctoral researcher, supervised by Hao Li, Vision and Graphics Lab, Los Angeles

**Adobe Research** 2016.07－2016.09

Graphics research intern, Procedural Imaging Group, San Jose

**Autodesk Research** 2016.01－2016.04

HCI Graphics research intern, UI Graphics Group, Toronto

**Microsoft Research Asia**  2014.12－2015.04

Graphics researchintern, Visual Computing Group, Beijing

**PUBLICATIONS**

[17] **Intuitive, Interactive Beard and Hair Synthesis with Generative Models**

Kyle Olszewski, Duygu Ceylan, *Jun Xing*, Jose I. Echevarria, Zhili Chen, Weikai Chen, Hao Li

*CVPR 2020 (Oral)*

[16] **Learning Formation of Physically-based Face Attributes**

Ruilong Li, Kalle Bladin, Yajie Zhao, Chinmay Chinara, Owen Ingraham, Pengda Xiang, Xinglei Ren, Pratusha

Prasad, Biping Kishore, *Jun Xing*, Hao Li

*CVPR 2020*

[15] **Deep Face Normalization**

Koki Nagano, Jaewoo Seo, Huiwen Luo, Zejian Wang, *Jun Xing*, Liwen Hu, Lingyu Wei, Hao Li

*SIGGRAPH Asia 2019*

[14] **Learning Perspective Undistortion of Portraits**

Yajie Zhao, Zeng Huang, Tianye Li, Weikai Chen, Chloe LeGendre, Xinglei Ren, *Jun Xing*, Ari Shapiro, Hao Li

*ICCV 2019 (Oral)*

[13] **HairBrush for Immersive Data-Driven Hair Modeling**

*Jun Xing*, Koki Nagano, Weikai Chen, Haotian Xu, Li-Yi Wei, Yajie Zhao, Jingwan Lu, Byungmoon Kim, Hao Li

*UIST 2019*

[12] **Quantization Network**

Jiwei Yang, Xu Shen, *Jun Xing*, Xinmei Tian, Houqiang Li, Bing Deng, Jianqiang Huang, Xiansheng Hua

*CVPR 2019*

[11] **Mask-off: Synthesizing Face Images in the Presence of Head-mounted Displays**

Yajie Zhao, Qingguo Xu, Weikai Chen, *Jun Xing*, Chao Du, Xinyu Huang, Ruigang Yang

*IEEE VR 2019*

[10] **paGAN: Real-time Avatars Using Dynamic Textures**

Koki Nagano, Jaewoo Seo, *Jun Xing*, Lingyu Wei, Zimo Li, Shunsuke Saito, Aviral Agarwal, Jens Fursund, Hao Li

*SIGGRAPH Asia 2018*

[9] **HairNet: Single-View Hair Reconstruction using Convolutional Neural Networks**

Yi Zhou, Liwen Hu, *Jun Xing*, Weikai Chen, Han-Wei Kung, Xin Tong, Hao Li

*ECCV 2018*

[8] **Deep Volumetric Video from Very Sparse Multi-View Performance Capture**

Zeng Huang, Tianye Li, Weikai Chen, Yajie Zhao, *Jun Xing*, Chloe LeGendre, Linjie Luo, Chongyang Ma, Hao Li

*ECCV 2018*

[7] **Identity Preserving Face Completion for Large Ocular Region Occlusion**

Yajie Zhao, Weikai Chen, *Jun Xing*, Xiaoming Li, Zach Bessinger, Fuchang Liu, Wangmeng Zuo, Ruigang Yang

*BMVC 2018*

[6] **Autocomplete 3D Sculpting**

Mengqi Peng,*Jun Xing*, Li-Yi Wei

*SIGGRAPH 2018*

[5] **Mesoscopic Facial Geometry Inference using Deep Neural Networks**

Loc Huynh, Weikai Chen, Shunsuke Saito, *Jun Xing*, Koki Nagano, Andrew Jones, Hao Li, Paul Debevec

*CVPR 2018 (Spotlight)*

[4] **Sequence-to-Sequence Learning via Shared Latent Representation**

Xu Shen, Xinmei Tian, *Jun Xing*, Yong Rui, Dacheng Tao

*AAAI 2018*

[3] **Energy-Brushes: Interactive Tools for Illustrating Stylized Elemental Dynamics**

*Jun Xing*, Rubaiat Habib Kazi, Tovi Grossman, Li-Yi Wei, Jos Stam, George Fitzmaurice

*UIST 2016*

[2] **Autocomplete Hand-drawn Animations**

*Jun Xing*, Li-Yi Wei, Takaaki Shiratori, and Koji Yatani

*SIGGRAPH Asia 2015*

[1] **Autocomplete Painting Repetitions**

*Jun Xing*, Hsiang-Ting Chen and Li-Yi Wei

*SIGGRAPH Asia 2014*

**EXHIBITIONS**

**VR Hair Salon for Avatars**

*Jun Xing*, Liwen Hu, Koki Nagano, Li-Yi Wei, Hao Li.

*SIGGRAPH 2019 Real-time Live!*

**Pinscreen Avatars in your Pocket: Mobile paGAN engine and Personalized Gaming**

Koki Nagano, Shunsuke Saito, Mclean Goldwhite, Kyle San, Aaron Hong, Liwen Hu, Lingyu Wei, *Jun Xing*, Qingguo Xu, Hanwei Kung, Jiale Kuang, Aviral Agarwal, Erik Castellanos, Jaewoo Seo, Jens Fursund, Hao Li.

*SIGGRAPH Asia 2018 Real-time Live!*

**Deep Learning-Based Photoreal Avatars for Online Virtual Worlds in iOS**

Koki Nagano, Jaewoo Seo, *Jun Xing*, Kyle San, Aaron Hong, Mclean Goldwhite, Jiale Kuang, Aviral Agarwal, Caleb Arthur, Hanwei Kung, Stuti Rastogi, Carrie Sun, Stephen Chen, Jens Fursund, Hao Li.

*SIGGRAPH 2018 Real-time Live!*

**MEDIA & PRESS**

**HairBrush for Immersive Data-Driven Hair Modeling**

[Befores&Afters](https://beforesandafters.com/2019/07/16/its-like-youve-just-stepped-out-of-a-vr-hair-salon/?fbclid=IwAR0pspHDwVAfwzh0gDGeSUR30-yjhsX9X6r2NrdBUCeGED3MMt-klWyl8DY);

**paGAN: Real-time Avatars Using Dynamic Textures**

[SIGGRAPH Asia 2018 Technica Papers Trailer](https://www.youtube.com/watch?v=wdKpXvF_3AU); [fxGuide](https://www.fxguide.com/featured/a-i-at-siggraph-part-2-pinscreen-at-real-time-live/); [LA Times](https://www.latimes.com/business/technology/la-fi-tn-fake-videos-20180219-story.html);

[CBS News](https://www.cbsnews.com/news/spotting-fake-news-in-a-world-with-manipulated-video/); [CBC News](https://www.cbc.ca/news/fifth/the-deepfake-the-war-over-truth-the-lie-detectors-1.4910865); [Netflix Original and Buzzfeed](https://www.youtube.com/watch?v=Nutd-ofrzZQ); [Channel One News](https://www.channelone.com/video_post/get-your-geek-on-image-manipulation-technology/);

[Cartoon Brew](https://www.cartoonbrew.com/tech/12-cool-new-pieces-of-animation-tech-we-saw-at-siggraph-2018-163072.html); [NTV (Nippon TV) News](http://www.news24.jp/articles/2018/11/02/10408304.html?fbclid=IwAR3Y6YAvcWXEqrMNEncm-FuIYyrJ5dFhuSOQ0aU-k3xN-gs-LAYtTcGDTUU);

**HairNet: Single-View Hair Reconstruction using Convolutional Neural Networks**

[Nvidia News](https://news.developer.nvidia.com/ai-can-render-hair-in-3d-in-real-time/); [MIT Tech Review](https://www.technologyreview.com/s/611569/the-best-of-the-physics-arxiv-week-ending-june-30-2018/);

**Autocomplete 3D Sculpting**

[3Dnchu](http://3dnchu.com/archives/autocomplete-3d-sculpting/); [MIT Tech Review](https://www.technologyreview.com/s/604113/the-best-of-the-physics-arxiv-week-ending-april-8-2017/);

**Autocomplete Hand-drawn Animations**

[WIRED](https://www.wired.com/2015/10/microsofts-badass-new-tool-is-like-autocomplete-for-drawing/); [FastCompany](https://www.fastcompany.com/3052463/microsoft-research-debuts-autocomplete-for-animation-and-its-incredible); [The Next Web](https://thenextweb.com/apps/2015/10/28/coming-soon-autocomplete-for-hand-drawn-animations/); [AnimationWeek](http://animationweek.uk/autocomplete-hand-drawn-animations); [MentalFloss](http://mentalfloss.com/article/70202/autocomplete-software-now-exists-hand-drawn-animation);

[CoolThings](https://www.coolthings.com/autocomplete-animation-microsoft-research/); [TechTimes](https://www.techtimes.com/articles/98210/20151021/microsofts-new-tool-autocomplete-animations.htm); [3Dnchu](http://3dnchu.com/archives/autocomplete-hand-drawn-anim/); [CGPress](https://cgpress.org/archives/autocomplete-hand-drawn-animations.html);

**TECHNICAL REPORTS & PATENTS**

**Techniques for Generating Dynamic Effects Animations**

Pending, US filed by Autodesk (2016), <https://patents.justia.com/patent/20180082460>

**Stroke Operation Prediction for Three-Dimensional Digital Content**

Pending, US filed by Adobe (2017), <https://patents.justia.com/patent/20180239434>

**Deep RBFNet: Point Cloud Feature Learning using Radial Basis Functions**

Weikai Chen, Xiaoguang Han, Guanbin Li, Chao Chen, *Jun Xing*, Yajie Zhao, Hao Li

arXiv:1812.04302.

**ACADEMIC SERVICE**

**Committee Member:**

IJCAI 2020

AAAI 2019, 2020

International Conference on Computational Visual Media (CVM) 2019

Pacific Graphics 2018

SIGGRAPH Emerging Technology 2017

**Reviewer:**

Computer Vision: CVPR; ECCV; ICCV; ACCV; TIP;

Computer Graphics: SIGGRAPH /SIGGRAPH Asia; PG; VRST;

Human Computer Interaction: CHI; UIST;

**PROFESSIONAL SKILLS**

**Designer:** neural network, algorithm, UI/UX, system

**Programmer:** C/C++, Python/Pytorch, Qt, Java, OpenGL/CV/VR, Unity

**REFERENCES**

**Dr. Li-Yi Wei** Adobe Research, [lwei@adobe.com](mailto:lwei@adobe.com)

**Prof. Hao Li** Pinscreen, USC, ICT, [hao@hao-li.com](mailto:hao@hao-li.com)

**Dr. Rubaiat Habib Kazi** Adobe Research, [rhabib@adobe.com](mailto:rhabib@adobe.com)

**Prof. Tovi Grossman** University of Toronto, tovi@dgp.toronto.edu

**Dr. Jos Stam**  Nvidia, stam.jos@gmail.com