

# Jun Xing (邢骏)

Researcher, miHoYo (米哈游)

<http://junxnui.github.io/>

[junxnui@gmail.com](mailto:junxnui@gmail.com)

## RESEARCH

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My research combines modern concepts in computer graphics, computer vision, machine learning and human computer interaction, with broad applications in 2D/3D/VR/Animation contents authoring, analysis, and synthesis. I am interested in designing interactive/predictive systems and deep learning-based algorithms to free the artists from the tedious works so they can focus on creation.

## EDUCATION

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**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

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**miHoYo (米哈游)** 2019.01—ongoing

Senior research scientist, 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 research intern, Visual Computing Group, Beijing

## PUBLICATIONS

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### [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, Bipin 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

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**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

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

*Befores&Afters;*

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

*SIGGRAPH Asia 2018 Technica Papers Trailer; fxGuide; LA Times;*  
*CBS News; CBC News; Netflix Original and BuzzFeed; Channel One News;*  
*Cartoon Brew; NTV (Nippon TV) News;*

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

*Nvidia News; MIT Tech Review;*

**Autocomplete 3D Sculpting**

*3Dnchu; MIT Tech Review;*

#### **Autocomplete Hand-drawn Animations**

*WIRED; FastCompany; The Next Web; AnimationWeek; MentalFloss;*

*CoolThings; TechTimes; 3Dnchu; CGPress;*

## **TECHNICAL REPORTS & PATENTS**

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#### **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**

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#### **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 Asia; PG; VRST;

Human Computer Interaction: CHI;

## **PROFESSIONAL SKILLS**

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#### **Designer:**

Neural network, algorithm, system, UI/UX

#### **Programmer:**

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

## **REFERENCES**

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<b>Dr. Li-Yi Wei</b>	Adobe Research, <a href="mailto:lwei@adobe.com">lwei@adobe.com</a>
<b>Prof. Hao Li</b>	Pinscreen, USC, ICT, <a href="mailto:hao@hao-li.com">hao@hao-li.com</a>
<b>Dr. Rubaiat Habib Kazi</b>	Adobe Research, <a href="mailto:rhabib@adobe.com">rhabib@adobe.com</a>
<b>Prof. Tovi Grossman</b>	University of Toronto, <a href="mailto:tovi@dgp.toronto.edu">tovi@dgp.toronto.edu</a>
<b>Dr. Jos Stam</b>	Nvidia, <a href="mailto:stam.jos@gmail.com">stam.jos@gmail.com</a>