

# Menglei Chai

cmlatsim@gmail.com   ◇   <https://mlchai.com>   ◇   Santa Monica, CA, USA

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Menglei Chai is now a senior research scientist at Snap Inc. He received his Ph.D. & B.Sc. in Computer Science from Zhejiang University in 2017 & 2011. His research interests lie in the intersection between Computer Vision & Computer Graphics, especially on human digitization, image manipulation, 3D reconstruction, and physics-based animation.

## WORK EXPERIENCE

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<b>Snap Research</b> <i>Senior Research Scientist</i>	July 2017 - Present <i>Santa Monica, CA, USA</i>
<b>Adobe Research</b> <i>Research Intern</i>	June 2014 - September 2014 <i>San Jose, CA, USA</i>
<b>Zhejiang University</b> <i>Research Assistant</i>	September 2011 - June 2017 <i>Hangzhou, PRC</i>

## EDUCATION

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<b>Zhejiang University</b> <i>Ph.D. in Computer Science</i>	September 2011 - June 2017 <i>Hangzhou, PRC</i>
<b>Zhejiang University</b> <i>B.Sc. in Computer Science</i>	September 2007 - June 2011 <i>Hangzhou, PRC</i>

## PUBLICATIONS

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- DisUnknown: Distilling Unknown Factors for Disentanglement Learning**  
*IEEE/CVF International Conference on Computer Vision (ICCV) 2021*  
*Sitao Xiang, Yuming Gu, Pengda Xiang, Menglei Chai, Hao Li, Yajie Zhao, Mingming He*
- Efficient Semantic Image Synthesis via Class-Adaptive Normalization**  
*IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI) 2021*  
*Zhentao Tan, Dongdong Chen, Qi Chu, Menglei Chai, Jing Liao, Mingming He, Lu Yuan, Gang Hua, Nenghai Yu*
- Diverse Semantic Image Synthesis via Probability Distribution Modeling**  
*IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) 2021*  
*Zhentao Tan, Menglei Chai, Dongdong Chen, Jing Liao, Qi Chu, Bin Liu, Gang Hua, Nenghai Yu*
- Flow Guided Transformable Bottleneck Networks for Motion Retargeting**  
*IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) 2021*  
*Jian Ren, Menglei Chai, Oliver Woodford, Kyle Olszewski, Sergey Tulyakov*
- Motion Representations for Articulated Animation**  
*IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) 2021*  
*Aliaksandr Siarohin, Oliver Woodford, Jian Ren, Menglei Chai, Sergey Tulyakov*
- A Good Image Generator Is What You Need for High-Resolution Video Synthesis**  
*International Conference on Learning Representations (ICLR) 2021*  
*Yu Tian, Jian Ren, Menglei Chai, Kyle Olszewski, Xi Peng, Dimitris N. Metaxas, Sergey Tulyakov*

**FaceBlit: Instant Real-Time Example-Based Style Transfer to Facial Videos**

*ACM SIGGRAPH Symposium on Interactive 3D Graphics and Games (i3D) 2021*

Aneta Texler, Ondrej Texler, Michal Kucera, Menglei Chai, Daniel Sykora

**Neural Hair Rendering**

*European Conference on Computer Vision (ECCV) 2020*

Menglei Chai, Jian Ren, Sergey Tulyakov

**MichiGAN: Multi-Input-Conditioned Hair Image Generation for Portrait Editing**

*ACM Transactions on Graphics (SIGGRAPH) 2020*

Zhentao Tan, Menglei Chai, Dongdong Chen, Jing Liao, Qi Chu, Lu Yuan, Sergey Tulyakov, Nenghai Yu

**Interactive Video Stylization Using Few-Shot Patch-Based Training**

*ACM Transactions on Graphics (SIGGRAPH) 2020*

Ondrej Texler, David Futschik, Michal Kucera, Ondrej Jamriska, Sarka Sochorova, Menglei Chai, Sergey Tulyakov, Daniel Sykora

**Revisiting Image Aesthetic Assessment via Self-supervised Feature Learning**

*AAAI Conference on Artificial Intelligence (AAAI) 2020*

Kekai Sheng, Weiming Dong, Menglei Chai, Guohui Wang, Peng Zhou, Feiyue Huang, Bao-Gang Hu, Rongrong Ji, Chongyang Ma

**Real-Time Hair Simulation with Neural Interpolation**

*IEEE Transactions on Visualization and Graphics (TVCG) 2020*

Qing Lyu, Menglei Chai, Xiang Chen, Kun Zhou

**Human Motion Transfer from Poses in the Wild**

*European Conference on Computer Vision Workshops (ECCVW) 2020*

Jian Ren, Menglei Chai, Sergey Tulyakov, Chen Fang, Xiaohui Shen, Jianchao Yang

**Learning to Assess Visual Aesthetics of Food Images**

*Computational Visual Media (CVM) 2020*

Kekai Sheng, Weiming Dong, Haibin Huang, Menglei Chai, Yong Zhang, Chongyang Ma, Bao-Gang Hu

**End-to-End Time-Lapse Video Synthesis from a Single Outdoor Image**

*IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) 2019*

Seonghyeon Nam, Chongyang Ma, Menglei Chai, William Brendel, Ning Xu, Seon Joo Kim

**Real-Time Patch-Based Stylization of Portraits Using Generative Adversarial Network**

*ACM/EG Expressive Symposium (Expressive) 2019*

David Futschik, Menglei Chai, Chen Cao, Chongyang Ma, Aleksei Stoliar, Sergey Korolev, Sergey Tulyakov, Michal Kucera, Daniel Sykora

**Stabilized Real-time Face Tracking via a Learned Dynamic Rigidity Prior**

*ACM Transactions on Graphics (SIGGRAPH Asia) 2018*

Chen Cao, Menglei Chai, Oliver Woodford, Linjie Luo

**Parametric Reshaping of Portrait Images for Weight-Change**

*IEEE Computer Graphics and Applications (CG&A) 2018*

Haiming Zhao, Xiaogang Jin, Xiaojian Huang, Menglei Chai, Kun Zhou

**A Data-driven Approach to Four-view Image-based Hair Modeling**

*ACM Transactions on Graphics (SIGGRAPH) 2017*

*Meng Zhang, Menglei Chai, Hongzhi Wu, Hao Yang, Kun Zhou*

**AutoHair: Fully Automatic Hair Modeling from a Single Image**

*ACM Transactions on Graphics (SIGGRAPH) 2016*

*Menglei Chai, Tianjia Shao, Hongzhi Wu, Yanlin Weng, Kun Zhou*

**Adaptive Skinning for Interactive Hair-solid Simulation**

*IEEE Transactions on Visualization and Graphics (TVCG) 2016*

*Menglei Chai, Changxi Zheng, Kun Zhou*

**High-quality Hair Modeling from a Single Portrait Photo**

*ACM Transactions on Graphics (SIGGRAPH Asia) 2015*

*Menglei Chai, Linjie Luo, Kalyan Sunkavalli, Nathan Carr, Sunil Hadap, Kun Zhou*

**A Reduced Model for Interactive Hairs**

*ACM Transactions on Graphics (SIGGRAPH) 2014*

*Menglei Chai, Changxi Zheng, Kun Zhou*

**Cone Tracing for Furry Object Rendering**

*IEEE Transactions on Visualization and Graphics (TVCG) 2014*

*Hao Qin, Menglei Chai, Qiming Hou, Zhong Ren, Kun Zhou*

**Dynamic Hair Manipulation in Images and Videos**

*ACM Transactions on Graphics (SIGGRAPH) 2013*

*Menglei Chai, Lvdi Wang, Yanlin Weng, Xiaogang Jin, Kun Zhou*

**As-Rigid-As-Possible Distance Field Metamorphosis**

*Computer Graphics Forum (Pacific Graphics) 2013*

*Yanlin Weng, Menglei Chai, Weiwei Xu, Yiyang Tong, Kun Zhou*

**Hair Interpolation for Portrait Morphing**

*Computer Graphics Forum (Pacific Graphics) 2013*

*Yanlin Weng, Lvdi Wang, Xiao Li, Menglei Chai, Kun Zhou*

**Single-View Hair Modeling for Portrait Manipulation**

*ACM Transactions on Graphics (SIGGRAPH) 2012*

*Menglei Chai, Lvdi Wang, Yanlin Weng, Yizhou Yu, Baining Guo, Kun Zhou*

**AWARDS**

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<b>SIGGRAPH Real-Time Live! Best-In-Show Award</b>	2020
<b>Microsoft Fellowship</b>	2012
<b>National Scholarship, PRC</b>	2010-2015
<b>Outstanding Graduate Student Award, Zhejiang University</b>	2011
<b>First-Class Excellent Student Award, Zhejiang University</b>	2010