# Tiantian Wang

# Curriculum Vitae

## **EDUCATION**

2018 - Now: Ph. D. University of California, Merced, CA, USA.

Research Focus: Free-Viewpoint Human Video Generation with Diffusion Model; Novel View Synthesis and Animated Human with Neural Radiance Fields (NeRFs)/Gaussian Splatting, Video Matting.

Advisor: Ming-Hsuan Yang in Electrical Engineering and Computer Science.

2015 - 2018: M. S. Dalian University of Technology, Dalian, PRC.

Research Focus: Salient Object Detection.

2011 - 2015: B. S. Dalian University of Technology, Dalian, PRC.

#### **PUBLICATION**

[Under Review] <u>Tiantian Wang</u>, Xinxin Zuo, Fangzhou Mu, Jian Wang, Ming-Hsuan Yang. <u>Towards 4D Human Video Stylization</u>. In <u>IEEE Transactions on Circuits and Systems for Video Technology</u> (TCSVT).

[Under Review] <u>Tiantian Wang</u>, Nikolaos Sarafianos, Ming-Hsuan Yang, Tony Tung. Neural Rendering of Humans in Novel View and <u>Pose from Monocular Video</u>. In **International Journal of Computer Vision (IJCV)**.

- [1] <u>Tiantian Wang</u>, Sifei Liu, Yapeng Tian, Kai Li, Ming-Hsuan Yang. Video Matting via Consistency-Regularized Graph Neural Networks. In **ICCV** 2021.
- [2] <u>Tiantian Wang</u>, Yongri Piao, Xiao Li, Lihe Zhang, Huchuan Lu. Deep Learning for Light Field Saliency Detection. In <u>ICCV</u> 2019.
- [3] Yi-Wen Chen, Yi-Hsuan Tsai, <u>Tiantian Wang</u>, Yen-Yu Lin, Ming-Hsuan Yang. Referring Expression Object Segmentation with Caption-Aware Consistency. In **BMVC** 2019.
- [4] <u>Tiantian Wang</u>, Lihe Zhang, Shuo Wang, Huchuan Lu, Gang Yang, Xiang Ruan, Ali Borji. Detect Globally, Refine Locally: A Novel Approach to Saliency Detection. In **CVPR** 2018.
- [5] Xiaoning Zhang\*, <u>Tiantian Wang</u>\*, Jinqing Qi, Huchuan Lu, Gang Wang. Progressive Attention Guided Recurrent Network for Salient Object Detection. In **CVPR** 2018. (\* denotes equal contributions).
- [6] <u>Tiantian Wang</u>, Ali Borji, Lihe Zhang, Pingping Zhang, Huchuan Lu. A Stagewise Refinement Model for Detecting Salient Objects in Images. In **ICCV** 2017.
- [7] <u>Tiantian Wang</u>, Lihe Zhang, Huchuan Lu, Chong Sun, Jinqing Qi. Kernelized Subspace Ranking for Saliency Detection. In **ECCV** 2016.
- [8] Lihe Zhang, Jie Wu, <u>Tiantian Wang</u>, Pingping Zhang, Ali Borji, Huchuan Lu. A Multi-Stage Refinement Network for Salient Object Detection. **IEEE Transactions on Image Processing**, vol. 29, pp. 3534-3545, 2020.
- [9] Lihe Zhang, Jiayu Sun, <u>Tiantian Wang</u>, Yifan Min, Huchuan Lu. Visual Saliency Detection via Kernelized Subspace Ranking with Active Learning. **IEEE Transactions on Image Processing**, vol. 29, pp. 2258-2270, 2020.
- [10] Wenlong Guan, <u>Tiantian Wang</u>, Jinqing Qi, Lihe Zhang, Huchuan Lu. Edge-Aware Convolution Neural Network Based Salient Object <u>Detection</u>. **IEEE Signal Processing Letters**, vol. 26, no. 1, pp. 114-118, 2019.
- [11] Lihe Zhang, Xiang Fang, Hongguang Bo, Tiantian Wang, Huchuan Lu. Deep Multi-Level Networks with

Multi-Task Learning for Saliency Detection. **Neurocomputing**, vol. 312, pp. 229-238, 2018.

[12] Dakhia Abdelhafid, <u>Tiantian Wang</u>, <u>Huchuan Lu. A Hybrid-Backward Refinement Model for Salient Object Detection</u>. <u>Neurocomputing</u>, vol.358, pp. 72-80, 2019.

[13] Dakhia Abdelhafid, <u>Tiantian Wang</u>, Huchuan Lu. Multi-scale Pyramid Pooling Network for Salient Object Detection. **Neurocomputing**, vol. 333, pp. 211-220, 2019.

#### RESEARCH EXPERIENCE

Research Intern Stability AI, San Francisco, California, CA, USA, Mar 2024 - Now.

Research Focus: Photo-Realistic Free-Viewpoint Human Video Generation with Diffusion

Models.

Mentor: Chun-Han Yao, Mallikarjun Byrasandra, Varun Jampani.

Research Intern Snap Research, Los Angeles, CA, USA, Aug 2021 - Mar 2022.

Research Focus: 3D Human Reconstruction, Human Performer Stylization.

Mentor: Jian Wang.

Research Scientist Facebook Reality Lab Research, Sausalito, CA, USA, Jan 2021 - July 2021.

Intern Research Focus: Neural Representation Learning of Human Body.

Mentor: Tony Tung, Nikolaos Sarafianos.

Research Intern Adobe Research, San Jose, CA, USA, May 2019 - Aug 2019.

Research Focus: Deep Video Matting.

Mentor: Brian Price, Joon-Young Lee, Ning Xu, Scott Cohen.

Research Assistant University of California, Merced, CA, USA, Aug 2018 - Present.

Research Focus: Instance Segmentation & Video Matting & Reconstruction.

Advisor: Ming-Hsuan Yang.

#### TEACHING EXPERIENCE

Teaching Assistant: Electrical Engineering and Computer Science, University of California, Merced, CA, USA.

Fall 2018 CSE165: Introduction to Object Orient Program.

Spring 2019 CSE021: Introduction to Computing II.

Fall 2019 CSE175: Introduction to Artificial Intelligence.

## PROFESSIONAL SERVICE

Conference Reviewer: International Conference on Learning Representations (ICLR).

Conference on Computer Vision and Pattern Recognition (CVPR). Association for the Advancement of Artificial Intelligence (AAAI). Winter Conference on Applications of Computer Vision (WACV).

European Conference on Computer Vision (ECCV). International Conference on Computer Vision (ICCV).

Journal Reviewer: ACM Transactions on Graphics (ToG).

IEEE Transactions on Visualization and Computer Graphics (TVCG).
IEEE Transactions on Neural Networks and Learning Systems (TNNLS).

IEEE Transactions on Multimedia (TMM).

Graduate Dean's Dissertation Fellowship, 2024.

Third Place (3rd), 1st International Workshop and Challenge on People Analysis: From

Face, Body and Fashion to 3D Virtual Avatars (ECCV 2022).

Outstanding Reviewer of CVPR 2021.

Excellent Postgraduate of Dalian City, 2018.

Excellent Postgraduate of Dalian University of Technology, 2017.

Excellent Graduate of Dalian University of Technology, 2015.

Merit Student of Dalian University of Technology, 2014.

National Scholarship, 2013.

Outstanding Merit Student of Dalian University of Technology, 2013.

National Encouragement Scholarship, 2012.

## TECHNICAL SKILL

Language: Python, MATLAB, C/C++, LATEX.

Framework: Pytorch, Caffe, Tensorflow.

Other Tools: Vim, Git.

## **REFERENCE**

Ph.D. Advisor: Ming-Hsuan Yang 2, Professor, University of California, Merced.

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