

Haibin Huang | @ByteDance

1199 Coleman Ave – San Jose, CA 95110

✉ jackiehuanghaibin@gmail.com • 🌐 <https://brotherhuang.github.io/>

Education

2011–2017: M.S. and Ph.D. in Computer Science, University of Massachusetts, Amherst, MA.

2005–2011: B.S. and M.S. in Mathematics, Zhejiang University, Hangzhou, China.

Work Experience

Generative AI Researcher @ ByteDance, 2024.03-Present

Senior Staff Research Scientist @ Kuaishou Technology, 2019.11-2024.03

Research Scientist @ Megvii/Face++ Research, 2017.10- 2019.11

Research Experience

Computer Graphics

3D Computer vision

Computational Photography

Generative AI

Tech Transfers

Neural Portrait Stylization: Efficient solution for real-time portrait stylization on mobile devices (Kuaishou 2020-2021)

Super Night Shot: Revolutionary low-light imaging solution on Android devices (Megvii 2019)

Academic Services

Journal editorial board: The Visual Computer Associate Editor (2022.9 - Present)

Selected Publications

[50] Shiyuan Yang, Liang Hou, **Haibin Huang**, Chongyang Ma, Pengfei Wan, Di Zhang, Xiaodong Chen, Jing Liao “Direct-a-Video: Customized Video Generation with User-Directed Camera Movement and Object Motion”, SIGGRAPH 2024

[49] Xun Guo, Mingwu Zheng, Liang Hou, Yuan Gao, Yufan Deng, Pengfei Wan, Di Zhang, Yufan Liu, Weiming Hu, Zhengjun Zha, **Haibin Huang***, Chongyang Ma “I2V-Adapter: A General Image-to-Video Adapter for Diffusion Models”, SIGGRAPH 2024, *corresponding author

[48] Zeyu Huang, Honghao Xu, **Haibin Huang**, Chongyang Ma, Hui Huang, Ruizhen Hu “Spatial and Surface Correspondence Field for Interaction Transfer”, SIGGRAPH 2024

[47] Haotian Yang, Mingwu Zheng, Chongyang Ma, Yu-Kun Lai, Pengfei Wan, **Haibin Huang*** “VRMM: A Volumetric Relightable Morphable Head Model Prior”, SIGGRAPH 2024, *corresponding author

[46] Haowen Sun, Ruikun Zheng, **Haibin Huang**, Chongyang Ma, Hui Huang, Ruizhen Hu “LGTM: Local-to-Global Text-Driven Human Motion Diffusion Model”, SIGGRAPH 2024

[45] Nisha Huang, Yuxin Zhang, Fan Tang, Chongyang Ma, **Haibin Huang**, Weiming Dong, Changsheng Xu “Diffstyler: Controllable dual diffusion for text-driven image stylization”, TNNLS 2024

[44] Mengtian Li, Yi Dong, Minxuan Lin, **Haibin Huang***, Pengfei Wan, Chongyang Ma “Multi-Modal Face Stylization with a Generative Prior”, PG 2023, *corresponding author

[43] Haotian Yang, Mingwu Zheng, Wanquan Feng, **Haibin Huang**, Yu-Kun Lai, Pengfei Wan, Zhongyuan Wang, Chongyang Ma “Towards Practical Capture of High-Fidelity Relightable Avatars”, SIGGRAPH ASIA 2023

[42] Yuxin Zhang, Weiming Dong, Fan Tang, Nisha Huang, **Haibin Huang**, Chongyang Ma, Tong-Yee Lee, Oliver Deussen, Changsheng Xu “ProSpect: Expanded Conditioning for the Personalization of Attribute-aware Image Generation”, SIGGRAPH ASIA 2023

[41] Changxing Deng, Ao Luo, **Haibin Huang**, Shaodan Ma, Jiangyu Liu, Shuaicheng Liu “3D Explicit Motion Disentangling for Efficient Optical Flow Estimation”, ICCV 2023

[40] Xiangyu Zhu, Dong Du, **Haibin Huang**, Chongyang Ma, Xiaoguang Han “3D Keypoint Estimation using Implicit Representation Learning”, SGP 2023

[39] Yuxin Zhang, Fan Tang, Weiming Dong, **Haibin Huang**, Chongyang Ma, Tong-Yee Lee, Changsheng Xu “A Unified Arbitrary Style Transfer Framework via Adaptive Contrastive Learning”, TOG 2023

[38] Yuxin Zhang, Nisha Huang, Fan Tang, **Haibin Huang**, Chongyang Ma, Weiming Dong, Changsheng Xu “Inversion-Based Creativity Transfer with Diffusion Models”, CVPR 2023

[37] Yujian Zheng, Zirong Jin, Moran Li, **Haibin Huang**, Chongyang Ma, Shuguang Cui, Xiaoguang Han “HairStep: Transfer

Synthetic to Real Using Strand and Depth Maps for Single-View 3D Hair Modeling ", CVPR 2023

- [36] Gengxin Liu, Qian Sun, **Haibin Huang**, Chongyang Ma, Yulan Guo, Li Yi, Hui Huang, Ruizhen Hu "Semi-Weakly Supervised Object Kinematic Motion Prediction ", CVPR 2023
- [35] Xueyi Liu, Ji Zhang, Ruizhen Hu, **Haibin Huang**, He Wang, Li Yi "Self-Supervised Category-Level Articulated Object Pose Estimation with Part-Level SE(3) Equivariance ", ICLR 2023
- [34] Wuqin Liu, Minxuan Lin, **Haibin Huang**, Chongyang Ma, Yu Song, Weiming Dong, Changsheng Xu "Emotion-Aware Music Driven Movie Montage ", CVM 2023
- [33] Moran Li, **Haibin Huang***, Yi Zheng, Mengtian Li, Nong Sang, Chongyang Ma "Implicit Neural Deformation for Multi-View Face Reconstruction ", PG 2022, *corresponding author
- [32] Yiqin Zhao, Chongyang Ma, **Haibin Huang**, Tian Guo "LitAR: Visually Coherent Lighting for Mobile Augmented Reality ", IMWUT 2022
- [31] Youwei Li, **Haibin Huang**, Lanpeng Jia, Haoqiang Fan, Shuaicheng Liu "D2C-SR: A Divergence to Convergence Approach for Image Super-Resolution ", ECCV 2022
- [30] Yuxin Zhang, Fan Tang, Weiming Dong, **Haibin Huang**, Chongyang Ma, Tong-Yee Lee, Changsheng Xu "Domain Enhanced Arbitrary Image Style Transfer via Contrastive Learning ", SIGGRAPH 2022
- [29] Ziwei Luo, **Haibin Huang**, Lei Yu, Youwei Li, Haoqiang Fan, Shuaicheng Liu "Deep Constrained Least Squares for Blind Image Super-Resolution ", CVPR 2022
- [28] Yiqun Lin, Lichang Chen, **Haibin Huang**, Chongyang Ma, Xiaoguang Han, Shuguang Cui "Task-Aware Sampling Layer for Point-Wise Analysis ", TVCG 2022
- [27] Zejia Su, **Haibin Huang**, Chongyang Ma, Hui Huang, Ruizhen Hu "Point cloud completion on structured feature map with feedback network ", CVMJ 2022
- [26] Luanmin Chen, Juzhan Xu, Chuan Wang, **Haibin Huang**, Hui Huang and Ruizhen Hu "UprightRL: Upright Orientation Estimation of 3D Shapes via Reinforcement Learning ", PG 2021
- [25] Siming Yan, Zhenpei Yang, Chongyang Ma, **Haibin Huang**, Etienne Vouga, Qixing Huang "HPNet: Deep Primitive Segmentation Using Hybrid Representations ", ICCV 2021
- [24] Haitao Yang, Zaiwei Zhang, Siming Yan, **Haibin Huang**, Chongyang Ma, Yi Zheng, Chandrajit Bajaj, Qixing Huang "Scene Synthesis via Uncertainty-Driven Attribute Synchronization ", ICCV 2021
- [23] Yisheng He, **Haibin Huang**, Haoqiang Fan, Qifeng Chen, Jian Sun "FFB6D: A Full Flow Bidirectional Fusion Network for 6D Pose Estimation ", CVPR 2021
- [22] Shen Cheng, Yuzhi Wang, **Haibin Huang**, Donghao Liu, Haoqiang Fan, Shuaicheng Liu "NBNet: Noise Basis Learning for Image Denoising with Subspace Projection ", CVPR 2021
- [21] Yingying Deng, Fan Tang, Weiming Dong, **Haibin Huang**, Chongyang Ma, Changsheng Xu "Arbitrary Video Style Transfer via Multi-Channel Correlation ", AAAI 2021
- [20] Albert Zhao, Tong He, Yitao Liang, **Haibin Huang**, Guy Van den Broeck, Stefano Soatto "SAM: Squeeze-and-Mimic Networks for Conditional Visual Driving Policy Learning ", CoRL 2020
- [19] Yuzhi Wang, **Haibin Huang**, Qin Xu, Jiaming Liu, Yiqun Liu, Jue Wang "Practical Deep Raw Image Denoising on Mobile Devices", ECCV 2020
- [18] Yiqun Lin, Zizheng Yan, **Haibin Huang**, Dong Du, Ligang Liu, Shuguang Cui, Xiaoguang Han "FPConv: Learning Local Flattening for Point Convolution ", CVPR 2020
- [17] Yisheng He, Wei Sun, **Haibin Huang**, Jianran Liu, Haoqiang Fan, Jian Sun "PVN3D: A Deep Point-wise 3D Keypoints Voting Network for 6DoF Pose Estimation ", CVPR 2020
- [16] Yuqian Zhou, Jianbo Jiao, **Haibin Huang**, Yang Wang, Jue Wang, Honghui Shi, Thomas Huang "When AWGN-based Denoiser Meets Real Noises ", AAAI 2020
- [15] Shaofan Cai, Xiaoshuai Zhang, Haoqiang Fan, **Haibin Huang**, Jiangyu Liu, Jiaming Liu, Jiaying Liu, Jue Wang, Jian Sun "Disentangled Image Matting ", ICCV 2019
- [14] Yi He, Jiayuan Shi, Chuan Wang, **Haibin Huang**, Jiaming Liu, Guanbin Li, Risheng Liu, Jue Wang "Semi-supervised Skin Detection by Network with Mutual Guidance ", ICCV 2019
- [13] Yang Wang, **Haibin Huang***, Chuan Wang, Tong He, Jue Wang, Minh Hoai "GIF2Video: Color Dequantization and Temporal Interpolation of GIF images ", CVPR 2019 *corresponding author
- [12] Tong He, **Haibin Huang***, Li Yi, Yuqian Zhou, Chihao Wu, Jue Wang, Stefano Soatto "GeoNet: Deep Geodesic Networks for Point Cloud Analysis ", CVPR 2019, *corresponding author
- [11] Chuan Wang, **Haibin Huang**, Xiaoguang Han, Jue Wang "Video Inpainting by Jointly Learning Temporal Structure and Spatial Details", AAAI 2019
- [10] Li Yi, **Haibin Huang**, Difan Liu, Evangelos Kalogerakis, Hao Su, Leonidas Guibas "Deep Part Induction from Articulated Object Pairs", SIGGRAPH ASIA 2018
- [9] Hao Wang, Nadav Schor, Ruizhen Hu, **Haibin Huang**, Daniel Cohen-Or, Hui Huang "Global-to-Local Generative Model for 3D Shapes ", SIGGRAPH ASIA 2018

- [8] **Haibin Huang**, Evangelos Kalogerakis, Siddhartha Chaudhuri, Duygu Ceylan, Vladimir G. Kim, M. Ersin Yumer “Learning Local Shape Descriptors from Part Correspondences With Multi-view Convolutional Networks ”, TOG 2018
- [7] ZhaoLiang Lun, Changqing Zou, **Haibin Huang**, Evangelos Kalogerakis, Ping Tan, Marie-Paule Cani, Hao Zhang “Learning to Group Discrete Graphical Patterns ”, SIGGRAPH ASIA 2017
- [6] Xiaoguang Han, Zhen Li, **Haibin Huang**, Evangelos Kalogerakis, Yizhou Yu “High Resolution Shape Completion Using Deep Neural Networks for Global Structure and Local Geometry Inference ”, ICCV 2017
- [5] Amir Arsalan Soltani, **Haibin Huang**, Jiajun Wu, Tejas Kulkarni, Joshua Tenenbaum “Synthesizing 3D Shapes via Modeling Multi-View Depth Maps and Silhouettes with Deep Generative Networks ”, CVPR 2017
- [4] **Haibin Huang**, Evangelos Kalogerakis, M. Ersin Yumer , Radomír Měch “Shape Synthesis from Sketches via Procedural Models and Convolutional Networks ”, TVCG 2017
- [3] **Haibin Huang**, Evangelos Kalogerakis, Benjamin Marlin “Analysis and synthesis of 3D shape families via deep-learned generative models of surfaces ”, SGP 2015
- [2] Chongyang Ma, **Haibin Huang**, Alla Sheffer, Evangelos Kalogerakis, Rui Wang “Analogy-Driven 3D Style Transfer ”, EG 2014
- [1] Yahan Zhou, **Haibin Huang**, Li-Yi Wei and Rui Wang, “Point Sampling with General Noise Spectrum”, SIGGRAPH 2012