Jing Lin Nov. 26, 2023

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INFORMATION Homepage: https://jinglin7.github.io Google Scholar GitHub

RESEARCH INTERESTS 3D Human-Scene Perception and Generation,

Image and Video Restoration

EDUCATION Tsinghua University, China

Oct 2021 – Jun 2024

Master, GPA: 3.83/4.0,

Major: Electronic Information, Advisor: Haoqian Wang

Harbin Institute of Technology (Shenzhen), China Oct 2017 – Jun 2021

Bachelor, GPA: 91.294/100,

Major: Department of Automation

Project Experience 3D Human-Scene Perception from In-the-Wild Images/Videos

July 2022 – Sept 2023

- Develop a one-stage method OSX and build an upper-body dataset UBody for whole-body human mesh recovery (CVPR 2023).
- Design an automatic pipeline to annotate large-scale high-quality 3D human motion from in-the-wild videos and build a text-motion dataset Motion-X (NeurIPS 2023).

Grounded-Segment-Anything

Mar 2023 – Sept 2023

- Combine OSX with grounded-SAM and support promptable 3D human mesh recovery.
- Maintain the project GitHub repository (11K stars) and address raised issues.

# SELECTED PUBLICATIONS

I have published 7 papers as the first or co-first author, including  $2\times ICML$ ,  $2\times CVPR$ ,  $1\times ECCV$ ,  $2\times NeurIPS$ . According to Google Scholar, I have obtained 470 citations.

- 1. **Jing Lin\***<sup>1</sup>, Ailing Zeng\*, Shunlin Lu\*, Yuanhao Cai, Ruimao Zhang, Haoqian Wang, Lei Zhang, "Motion-X: A Large-scale 3D Expressive Whole-body Human Motion Dataset", *Conference on Neural Information Processing Systems* (**NeurIPS**), 2023. [Code] [Star: 261]
- 2. **Jing Lin**, Ailing Zeng, Haoqian Wang, Lei Zhang, Li Yu, "One-Stage 3D Whole-Body Mesh Recovery with Component Aware Transformer", *IEEE/CVF Conference on Computer Vision and Pattern Recognition* (**CVPR**), 2023. [Code] [Star: 457]
- 3. Jing Lin\*, Yuanhao Cai\*, Xiaowan Hu, Haoqian Wang, Youliang Yan, Xueyi Zou, Henghui Ding, Yulun Zhang, Radu Timofte, and Luc Van Gool. "Flow-Guided Sparse Transformer for Video Deblurring", *International Conference on Machine Learning* (ICML), 2022. [Code] [136]
- 4. **Jing Lin\***, Xiaowan Hu\*, Yuanhao Cai, Haoqian Wang, Youliang Yan, Xueyi Zou, Yulun Zhang, Luc Van Gool. "Unsupervised Flow-Aligned Sequence-to-Sequence Learning for Video Restoration", *International Conference on Machine Learning* (**ICML**), 2022. [Code] [Star: 137]

 $<sup>^1\</sup>star$  indicates equal contribution.

- 5. Yuanhao Cai\*, **Jing Lin**\*, Xiaowan Hu, Haoqian Wang, Xin Yuan, Yulun Zhang, Radu Timofte, Luc Van Gool. "Coarse-to-Fine Sparse Transformer for Hyperspectral Image Reconstruction", *European Conference on Computer Vision* (**ECCV**), 2022. [Code] [Star: 439]
- 6. Yuanhao Cai\*, **Jing Lin**\*, Xiaowan Hu, Haoqian Wang, Xin Yuan, Yulun Zhang, Radu Timofte, and Luc Van Gool. "Mask-Guided Spectral-Wise Transformer for Efficient Hyperspectral Image Reconstruction", *IEEE/CVF Conference on Computer Vision and Pattern Recognition* (**CVPR**), 2022. [Code] [Star: 439]
- 7. Yuanhao Cai\*, **Jing Lin\***, Haoqian Wang, Xin Yuan, Henghui Ding, Yulun Zhang, Radu Timofte, Luc Van Gool. "Degradation-Aware Unfolding Half-Shuffle Transformer for Spectral Compressive Imaging", *Conference on Neural Information Processing Systems* (**NeurIPS**), 2022. [Code] [Star: 439]

#### TECHNICAL REPORTS

I have won the champion of NTIRE Spectral Recovery Challenge at CVPR 2022, and third place of NTIRE video super-resolution challenge at CVPR 2021. I play a hand-on role and wrote all the codes and performed experiments in these challenges.

1. Yuanhao Cai\*, **Jing Lin\***, Zudi Lin, Haoqian Wang, Yulun Zhang, Hanspeter Pfister, Radu Timofte, and Luc Van Gool. "MST++: Multi-stage Spectral-wise Transformer for Efficient Spectral Reconstruction", *IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops* (**CVPRW Oral** & **Winner Award** of NTIRE Challenge on Spectral Reconstruction from RGB), 2022.

[Code] [Star: 351] [Video] [Slide] [Poster] [Workshop Paper] [Leaderboard]

## GITHUB REPOSITORY

I'm passionate about open-source. Codes and datasets from my projects are released in GitHub, where I receive over 13K stars. Here are three important repositories:

- 1. MST: This repo is a comprehensive toolbox for spectral compressive imaging, in which I've reproduced seven previous works and supported eleven reconstruction methods.
- 2. OSX: This is a repo for whole-body mesh recovery. We provide detailed instructions for data and model preparation, model training, and inference. We hope to help researchers shift from SMPL-based mesh recovery to SMPLX-based whole-body mesh recovery.
- 3. Grounded-SAM: During my internship at the International Digital Economy Academy (IDEA), I collaborated on the Grounded-SAM project, which aims to detect and segment anything with text inputs and has earned over 11K stars.

## Honors and Awards

- National Scholarship
- Winner of NTIRE Spectral Reconstruction Challenge at CVPR 2022

2019, 2023

- Third Place of NTIRE Video Super-Resolution Challenge at CVPR 2021
- Outstanding Graduates 2021
- First Class Scholarship 2019, 2020, 2022

#### SKILLS

- Language: Chinese (native), English (TOFEL: 94, CET-4:600, CET-6:499)
- Computing Skills: Algorithms, Data Structure, Machine Learning.
- Programming: Python, C/C#/C++, Matlab, LATeX.
- Programming Frameworks: Pytorch, Scikit-Learn