

# Ailing Zeng

SHB 1026, CUHK  
Shatin, Hong Kong SAR, China  
☎ +86 13005414090  
✉ ailingzengzzz@gmail.com  
🌐 <https://ailingzeng.site>



## Research Interest

3D Human Pose Estimation in images/videos, Human Action Recognition/Analysis, Motion Prediction

## Education

- 2017.08- **Ph.D.**, *Department of Computer Science & Engineering*, The Chinese University of  
2022.02 Hong Kong, Hong Kong SAR  
Full Postgraduate Studentship, Supervisor: Qiang Xu
- 2013.09- **B.Eng., Electronic Engineering / Finance mathematics**, *Xiamen University*,  
2017.06 Xiamen, China  
School Ranking: 1/95

## Publication

- ECCV 2022 **DeciWatch: A Simple Baseline for 10× Efficient 2D and 3D Pose Estimation**  
**Ailing Zeng**, Xuan Ju, Lei Yang, Ruiyuan Gao, Xizhou Zhu, Bo Dai, Qiang Xu, European Conference on Computer Vision (ECCV), 2022
- ECCV 2022 **SmoothNet: A Plug-and-Play Network for Refining Human Poses in Videos**  
**Ailing Zeng**, Lei Yang, Xuan Ju, Jiefeng Li, Jianyi Wang, Qiang Xu, European Conference on Computer Vision (ECCV), 2022
- ECCV 2022 **HuMMan: Multi-Modal 4D Human Dataset for Versatile Sensing and Modeling**  
Zhongang Cai\*, Daxuan Ren\*, **Ailing Zeng\***, Zhengyu Lin\*, Tao Yu\*, Wenjia Wang\*, Xiangyu Fan, Yang Gao, Yifan Yu, Liang Pan, Fangzhou Hong, Mingyuan Zhang, Chen Change Loy, Lei Yang, Ziwei Liu, European Conference on Computer Vision (ECCV), 2022
- ICLR 2022 **T-WaveNet: A Tree-Structured Wavelet Neural Network for Time Series Signal Analysis**  
Minhao Liu, **Ailing Zeng**, Qiuxia Lai, Qiang Xu, Tenth International Conference on Learning Representations (ICLR'22)
- Arxiv 2022 **Are Transformers Effective for Time Series Forecasting?**  
**Ailing Zeng**, Muxi Chen, Lei Zhang, Qiang Xu (under review)
- ICCV 2021 **Learning Skeletal Graph Neural Networks for Hard 3D Pose Estimation**,  
**Ailing Zeng**, Xiao Sun, Lei Yang, Nanxuan Zhao, Minhao Liu, Qiang Xu, The International Conference on Computer Vision (ICCV'21)

- ICCV 2021 **Human Pose Regression with Residual Log-likelihood Estimation**, Jiefeng Li, Siyuan Bian, **Ailing Zeng**, Can Wang, Bo Pang and Cewu Lu, The International Conference on Computer Vision (ICCV'21, Oral)
- CISP-BMEI 2021 **Skimming and Scanning for Untrimmed Video Action Recognition**, Yunyan Hong\*, **Ailing Zeng\***, Min Li, Cewu Lu, Li Jiang, Qiang Xu  
The International Congress on Image and Signal Processing, BioMedical Engineering and Informatics (CISP-BMEI'21)
- IJCAI 2021 **Information Bottleneck Approach to Spatial Attention Learning**, Qiuxia Lai, Yu Li, **Ailing Zeng**, Minhao Liu, Qiang Xu, Hanqiu Sun, The International Joint Conference on Artificial Intelligence (IJCAI'21)
- Arxiv 2021 **Time Series is a Special Sequence: Forecasting with Sample Convolution and Interaction**  
Minhao Liu, **Ailing Zeng**, Qiuxia Lai, Qiang Xu (under review)
- Arxiv 2021 **Hop-Aware Dimension Optimization for Graph Neural Networks**  
**Ailing Zeng**, Minhao Liu, Zhiwei Liu, Ruiyuan Gao, Qiang Xu (under review)
- ECCV 2020 **SRNet: Improving Generalization in 3D Human Pose Estimation with a Split-and-Recombine Approach**  
**Ailing Zeng**, Xiao Sun, Fuyang Huang, Minhao Liu, Qiang Xu, Stephen Lin, The European Conference on Computer Vision (ECCV'20)
- WACV 2020 **DeepFuse: An IMU-Aware Network for Real-Time 3D Human Pose Estimation from Multi-View Image**, Fuyang Huang, **Ailing Zeng**, Minhao Liu, Qiang Xu, The Winter Conference on Applications of Computer Vision (WACV'20)
- ICCV 2019 **Differentiable Kernel Evolution**, Yu Liu, Jihao Liu, **Ailing Zeng**, Xiaogang Wang, The International Conference on Computer Vision (ICCV'19)
- BMVC 2018 **Structure-Aware 3D Hourglass Network for Hand Pose Estimation from Single Depth Image**, Fuyang Huang, **Ailing Zeng**, Minhao Liu, Jing Qin, Qiang Xu, The British Machine Vision Conference (BMVC'18)

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## Work Experience

- Nov.2020- **Research intern**, *Sensetime Research*, X-Lab  
Apr.2022 Worked on robust 3D human pose estimation and body reconstruction from videos.
- Dec.2019- **Research intern**, *Microsoft Asia Research*, Visual Computing Group  
Sep.2020 Worked on improving the generalization ability of single-view 3D human pose estimation from either images or videos.
- Jun.2018- **Research intern**, *Baidu Research*  
Sep.2018 Worked on 2D human pose estimation.

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## Honors and Awards

- Full Postgraduate Studentship, CUHK (2017 - 2021)
- Excellent League Member, Top 1% student of Xiamen University
- National Scholarship (2015)