

Ce Zheng

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Education

University of Central Florida Ph.D. in Computer Science. Advised by Prof. Chen Chen	FL, USA 2021/8-2023/12
University of North Carolina at Charlotte Ph.D. student in Electrical Engineering. Advised by Prof. Chen Chen	NC, USA 2020/8-2021/5
Tufts University Master of Science in Electrical Engineering. Advised by Prof. Shuchin Aeron	MA, USA 2017/8-2019/8
University of Bridgeport Bachelor of Science in Electrical Engineering	CT, USA 2012/8-2016/5

Employment

Carnegie Mellon University Postdoctoral Fellow at the Robotics Institute, with Prof. László A. Jeni.	PA, USA 2024/4-now
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Research Interests

My research interests cover Computer Vision, AIGC, and Vision Language Models. More specifically:

- 3D Vision, Human Pose Estimation (HPE), and Human Mesh Recovery (HMR),
- Generative AI (Diffusion-based Generation/Synthesis),
- Vision Language Models for Human Understanding,
- Efficient Networks,
- ...

Selected Publications (900+ citations in Apr 2024)

CVPR, ICCV, NeurIPS, IJCAI, IROS are the top conferences in Computer Science, highlighted by CSRankings.org.

ACM Multimedia is the top conference in the field of multimedia.

- Qucheng Peng, **Ce Zheng**, Chen Chen. "A Dual-Augmentor Framework for Domain Generalization in 3D Human Pose Estimation". Proceedings of the IEEE / CVF Computer Vision and Pattern Recognition Conference. (CVPR 2024)
- Xianpeng Liu, **Ce Zheng**, Ming Qian, Nan Xue, Chen Chen, Zhebin Zhang, Chen Li, Tianfu Wu. "Multi-View Attentive Contextualization for Multi-View 3D Object Detection". Proceedings of the IEEE / CVF Computer Vision and Pattern Recognition Conference. (CVPR 2024)
- **Ce Zheng**, Xianpeng Liu, Guo-Jun Qi, and Chen Chen. "POTTER: Pooling Attention Transformer for Efficient Human Mesh Recovery". Proceedings of the IEEE / CVF Computer Vision and Pattern Recognition Conference. (CVPR 2023)
- **Ce Zheng**, Matias Mendieta, Taojiannan Yang, Guo-Jun Qi, and Chen Chen. "FeatER: An Efficient Network for Human Reconstruction via Feature Map-Based Transformer". Proceedings of the IEEE / CVF Computer Vision and Pattern Recognition Conference. (CVPR 2023)

- Qitao Zhao, **Ce Zheng**, Mengyuan Liu, Pichao Wang, and Chen Chen. "PoseFormerV2: Exploring Frequency Domain for Efficient and Robust 3D Human Pose Estimation". Proceedings of the IEEE / CVF Computer Vision and Pattern Recognition Conference. (**CVPR 2023**)
- Qitao Zhao, **Ce Zheng**, Mengyuan Liu, and Chen Chen. "Context-Aware PoseFormer: Single Image Beats Hundreds for 3D Human Pose Estimation". Thirty-seventh Conference on Neural Information Processing Systems. (**NeurIPS 2023**)
- Qucheng Peng, **Ce Zheng**, Chen Chen. "Source-free Domain Adaptive Human Pose Estimation". Proceedings of the IEEE/CVF International Conference on Computer Vision. (**ICCV 2023**)
- Xianpeng Liu, **Ce Zheng**, Kelvin Cheng, Nan Xue, Guo-Jun Qi, Tianfu Wu. "Monocular 3D Object Detection with Bounding Box Denoising in 3D by Perceiver". Proceedings of the IEEE/CVF International Conference on Computer Vision. (**ICCV 2023**)
- **Ce Zheng**, Matias Mendieta, and Chen Chen. "POSTER: A Pyramid Cross-Fusion Transformer Network for Facial Expression Recognition". Proceedings of the IEEE/CVF International Conference on Computer Vision. Proceedings of the IEEE/CVF International Conference on Computer Vision. (**ICCV Workshop 2023**)
- **Ce Zheng**, Wenhan Wu, Taojiannan Yang, Sijie Zhu, Chen Chen, ..., Nasser Kehtarnavaz, and Mubarak Shah. "Deep Learning-Based Human Pose Estimation: A Survey". **ACM Computing Surveys 2023 (IF=16.6)**
- Yilei Hua, Wenhan Wu, **Ce Zheng**, Aidong Lu, Mengyuan Liu, Chen Chen, Shiqian Wu. "Part Aware Contrastive Learning for Self-Supervised Action Recognition". International Joint Conferences on Artificial Intelligence. (**IJCAI 2023**)
- Shengnan Hu, **Ce Zheng**, Zixiang Zhou, Chen Chen, Gita Sukthankar. "LAMP: Leveraging Language Prompts for Multi-person Pose Estimation". **IROS 2023**
- **Ce Zheng**, Matias Mendieta, Pu Wang, Aidong Lu, and Chen Chen. "A Lightweight Graph Transformer Network for Human Mesh Reconstruction from 2D Human Pose". **ACM Multimedia 2022**
- **Ce Zheng**, Sijie Zhu, Matias Mendieta, Taojiannan Yang, Chen Chen, and Zhengming Ding. "3d human pose estimation with spatial and temporal transformers". Proceedings of the IEEE/CVF International Conference on Computer Vision. (**ICCV 2021**)
- Ming Li, Jun Liu, **Ce Zheng**, Xinming Huang. and Ziming Zhang. " Exploiting Multi-view Part-wise Correlation via an Efficient Transformer for Vehicle Re-Identification". **IEEE Transactions on Multimedia 2021 (IF=7.3)**
- **Ce Zheng**, Yecheng Lyu, Ming Li, and Ziming Zhang. "LodoNet: A Deep Neural Network with 2D Keypoint Matching for 3D LiDAR Odometry Estimation". **ACM Multimedia 2020**

Research and Teaching Experience

Research Assistant

Center for Research in Computer Vision, directed by Prof. Mubarak Shah (IEEE and ACM Fellow)

- Transformer-based 3D Human Pose Estimation and mesh recovery, at **University of Central Florida**, Advisor: Prof. Chen Chen, 2021/8 - 2023/12.

Research Assistant

Department of Electrical Engineering

- Deep learning Lidar Odometry Estimation at **Worcester Polytechnic Institute**, Advisor: Prof. Ziming Zhang, 2019/9 - 2020/5.
- Machine Learning Colorimetric Sensor Prediction at **Tufts University**, Advisor: Prof. Eric Miller and Prof. Shuchin Aeron, 2017/9 - 2019/5

Teaching Assistant

Department of Electrical Engineering

- Lab TA for EE 403: Electronics at **Tufts University** (2019/1 - 2019/5)
- TA for EE 541: MEMS at **University of Bridgeport** (2016/1 - 2016/5)

Internships

InnoPeak Technology, Seattle, WA

Research Intern in Computer Vision, advised by Dr. Guo-Jun Qi (*IEEE Fellow*) 2022/5-2022/8

- Developing a transformer-based model for human mesh recovery from single images.
- First author paper: "POTTER: Pooling Attention Transformer for Efficient Human Mesh Recovery", accepted in CVPR 2023.

Academic Services

Reviewer

- Conference: CVPR, ICCV, NeurIPS, ICLR, SIGGRAPH Asia, ECCV, ACM MM...
- Journal: TPAMI, ACM Computing Surveys, IJCV, TIP, TCSVT, CVIU, TNNLS, Neurocomputing, Neural Networks...

Scholastic Achievements

- **Recipient of the Outstanding Dissertation Award from the University of Central Florida**, distinguished as the sole awardee in the Engineering, Physical, Mathematical, and Life Sciences category.
- Eta Kappa Nu (HKN) member, Tufts University
- The School of Engineering Reed Award, 2016 in University of Bridgeport
- Magna Cum Laude Honor, 2016 in University of Bridgeport
- Academic Accomplishment Award, 2016 in University of Bridgeport.
- Services Award, 2016 in University of Bridgeport.
- Academic Merit Scholarship from University of Bridgeport.