# LIN HUANG

Page: https://linhuang17.github.io/ **Google Scholar**
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## EDUCATION

**State University of New York at Buffalo**, Buffalo, USA *Jan. 2019 – Aug. 2023*
*Doctorate of Philosophy in Computer Science and Engineering*
- Advisor: Prof. Junsong Yuan

**University of Southern California**, Los Angeles, USA *Jan. 2017 - Dec. 2018*
*Master of Science in Electrical Engineering* GPA: 4.0/4.0
- Masters Students Honors Fellow

**Lanzhou University**, Lanzhou, China *Sep. 2012 - Jun. 2016*
*Bachelor of Engineering in Electronic Information Science and Technology* GPA: 4.57/5.00
- Outstanding Bachelor Thesis: Blind Per Tone Equalization Using Support Vector Machine for OFDM

## RESEARCH INTERESTS

Human-centric Motion Perception/Analysis/Generation, Character Animation, Animatable Avatar, 6-DoF Object Pose Estimation, and 3D Reconstruction

## WORK EXPERIENCE

**NetEase Information Technology Corp.**, Irvine, CA, USA *Oct. 2023 - Present*
*AI Engineer*

**Microsoft Corporation, Azure AI**, Redmond, WA, USA *May. 2022 - Aug. 2022*
*Research Intern*
- Supervisor: Dr. Chung-Ching Lin, Dr. Kevin Lin, Dr. Lin Liang, Dr. Lijuan Wang, Dr. Zicheng Liu
- 3D Hand Pose Estimation (**NVF[CVPR'23]**): Proposed the first 3D implicit representation-based unified solution to estimate camera-space 3D hand pose and noticeably outperforms existing methods for both absolute and relative hand pose estimation.

**Meta (formerly Facebook, Inc.), Reality Labs**, Redmond, WA, USA *Dec. 2021 - Apr. 2022*
*Part-Time Student Researcher*
- Supervisor: Dr. Tomas Hodan
- Interaction Tracking (**NCF[ECCV'22]**): Proposed the first formulation using 3D implicit representation for 6D rigid object pose estimation given a single RGB image and noticeably outperforms existing methods especially in challenging cases with occlusion.

**Meta (formerly Facebook, Inc.), Reality Labs**, Redmond, WA, USA *Aug. 2021 - Dec. 2021*
*Research Intern*
- Supervisor: Dr. Tomas Hodan
- Interaction Tracking

**Kwai Inc., Y-tech Lab**, Seattle, WA, USA *May. 2020 - Aug. 2020*
*Research Intern*
- Supervisor: Dr. Jianchao Tan, Dr. Ji Liu
- 3D Pose Estimation (**Hand-Transformer[ECCV'20], HOT-Net[MM'20]**): Proposed the very first models to connect the structured hand(-object) pose estimation tasks with the Transformer-based transduction frameworks in the NLP field.

## SELECTED PUBLICATIONS (GOOGLE SCHOLAR)

1. ***Lin Huang***, *Chung-Ching Lin, Kevin Lin, Lin Liang, Lijuan Wang, Junsong Yuan, and Zicheng Liu*
   Neural Voting Field for Camera-Space 3D Hand Pose Estimation
   IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**) 2023, Vancouver
   [**Project**][**Paper**][**Suppl.**][**arXiv**][**Code**][**Video**]

2. *Jiyang Li,* ***Lin Huang***, *Siddharth Shah, Sean J Jones, Yincheng Jin, Dingran Wang, Adam Russell, Seokmin Choi, Yang Gao, Junsong Yuan, and Zhanpeng Jin*
   SignRing: Continuous American Sign Language Recognition Using IMU Rings and Virtual IMU Data
   ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (**IMWUT**) 2023
   [**Paper**]

3. ***Lin Huang***, *Tomas Hodan, Lingni Ma, Linguang Zhang, Luan Tran, Christopher Twigg, Po-Chen Wu, Junsong Yuan, Cem Keskin, and Robert Wang*
   Neural Correspondence Field for Object Pose Estimation
   European Conference on Computer Vision (**ECCV**) 2022, Tel-Aviv
   [**Project**][**Paper**][**arXiv**][**Code**]

4. ***Lin Huang****, Boshen Zhang*, Zhilin Guo*, Yang Xiao, Zhiguo Cao, and Junsong Yuan*
   Survey on Depth and RGB Image-based 3D Hand Shape and Pose Estimation
   Virtual Reality and Intelligent Hardware (**VRIH**) 2021
   [**Paper**]

5. ***Lin Huang***, *Jianchao Tan, Jingjing Meng, Ji Liu, and Junsong Yuan*
   HOT-Net: Non-Autoregressive Transformer for 3D Hand-Object Pose Estimation
   ACM International Conference on Multimedia (**ACM MM**) 2020, Seattle
   [**Paper**][**Video**]

6. ***Lin Huang***, *Jianchao Tan, Ji Liu, and Junsong Yuan*
   Hand-Transformer: Non-Autoregressive Structured Modeling for 3D Hand Pose Estimation
   European Conference on Computer Vision (**ECCV**) 2020, Glasgow
   [**Paper**][**Video**]

7. *Yujun Cai,* ***Lin Huang***, *Yiwei Wang, Tat-Jen Cham, Jianfei Cai, Junsong Yuan, Jun Liu, Xu Yang, Yiheng Zhu, Xiaohui Shen, Ding Liu, Jing Liu, and Nadia Magnenat Thalmann*
   Learning Progressive Joint Propagation for Human Motion Prediction
   European Conference on Computer Vision (**ECCV**) 2020, Glasgow
   [**Paper**]

## PROFESSIONAL SERVICES

**Conference Reviewer**

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|---|---|
| - IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) | *2021'22'23'24'26* |
| - European Conference on Computer Vision (ECCV) | *2022'24* |
| - International Conference on Computer Vision (ICCV) | *2021'23* |
| - ACM MULTIMEDIA (ACM MM) | *2024* |
| - IEEE/CVF Winter Conference on Applications of Computer Vision (WACV) | *2024'25* |
| - IEEE International Conference on Image Processing (ICIP) | *2022'23'24* |
| - International Conference on Pattern Recognition (ICPR) | *2024* |
| - IEEE World Forum on Internet of Things (WF-IOT) | *2020* |

**Journal Reviewer**

- IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)
- IEEE Transactions on Image Processing (TIP)
- International Journal of Computer Vision (IJCV)
- IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)
- IEEE Transactions on Instrumentation  Measurement (TIM)
- The Visual Computer (TVCJ)
- Journal of Visual Communication and Image Representation (JVCI)
- Machine Vision and Applications (MVAP)
- Signal Processing: Image Communication (SPIC)
- Pattern Recognition (PR)

## TEACHING

**Teaching Assistant**, State University of New York at Buffalo

- CSE531: Analysis of Algorithms I *Spring 2023*
- CSE191: Introduction to Discrete Structures *Spring 2021*
- CSE555: Introduction to Pattern Recognition *Fall 2020*
- CSE587: Data Intensive Computing *Spring 2020*

## CONTESTS

**National Undergraduate Electronic Design Contest**, China *Summer 2015*

*Group Leader*

- Wireless Video Communication Network
- The Second Prize of National Undergraduate Electronic Design Contest

## HONORS & AWARDS

**Masters Students Honors Fellow**, USC Viterbi School of Engineering *2018*

**Outstanding Graduate**, Lanzhou University *2016*

**Pacemaker to Merit Student**, Lanzhou University *2013'14*

**First-class Scholarship**, Lanzhou University *2014*

**Second-class Scholarship**, Lanzhou University *2012'13*