



# Yida WANG

PH.D · LI AUTO INC. · — CITATIONS 762, H-INDEX 14

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## Education

### Technische Universität München

PH.D. in Computer Science

### Beijing University of Posts and Telecommunications

M.Sc.ENG. in Electronics and Communication Engineering

### Beijing University of Posts and Telecommunications

B.Sc. in Communication Engineering

## Publications

### [1] GeoDrive: 3D Geometry-Informed Driving World Model with Precise Action Control

ANTHONY CHEN, WENZHAO ZHENG, **YIDA WANG**, XUEYANG ZHANG, KUN ZHAN, PENG JIA, KURT KEUTZER, SHANGHANG ZHANG, UNDER REVIEW

### StreetCrafter: Street View Synthesis with Controllable Video Diffusion Models

[2] YUNZHI YAN, ZHEN XU, HAOTONG LIN, HAIAN JIN, HAORY GUO, **YIDA WANG**, KUN ZHAN, XIANPENG LANG, HUJUN BAO, XIAOWEI ZHOU, SIDA PENG, CONFERENCE ON COMPUTER VISION AND PATTERN RECOGNITION (CVPR)<sup>2025</sup>

### Drivedreamer4d: World Models are Effective Data Machines for 4d Driving Scene Representation

[3] GUOSHENG ZHAO, CHAOJUN NI, XIAOFENG WANG, ZHENG ZHU, XUEYANG ZHANG, **YIDA WANG**, GUAN HUANG, XINZE CHEN, BOYUAN WANG, YOUYI ZHANG, WENJUN MEI, XINGANG WANG, CONFERENCE ON COMPUTER VISION AND PATTERN RECOGNITION (CVPR)<sup>2025</sup>

### ReconDreamer: Crafting World Models for Driving Scene Reconstruction via Online Restoration

[4] CHAOJUN NI, GUOSHENG ZHAO, XIAOFENG WANG, ZHENG ZHU, WENKANG QIN, GUAN HUANG, CHEN LIU, YUYIN CHEN, **YIDA WANG**, XUEYANG ZHANG, YIFEI ZHAN, KUN ZHAN, PENG JIA, XIANPENG LANG, XINGANG WANG, WENJUN MEI, CONFERENCE ON COMPUTER VISION AND PATTERN RECOGNITION (CVPR)<sup>2025</sup>

### Efficient Multi-View Driving Scenes Generation Based on Video Diffusion Transformer

[5] JUNPENG JIANG, GANGYI HONG, HENG TONG HU, LIJUN ZHOU, TIANYI YAN, **YIDA WANG**, KUN ZHAN, PENG JIA, XIANPENG LANG, MIAO ZHANG, ICLR W<sup>2025</sup>

### High-fidelity Endoscopic Image Synthesis by Utilizing Depth-guided Neural Surfaces

[6] BAORU HUANG, **YIDA WANG**, ANH NGUYEN, DANIEL ELSON, FRANCISCO VASCONCELOS, DANAIL STOYANOV, CVPR W<sup>2024</sup>

### RaNeuS: Ray-adaptive Neural Surface Reconstruction

[7] **YIDA WANG**, DAVID JOSEPH TAN, NASSIR NAVAB, FEDERICO TOMBARI, IEEE CONFERENCE ON 3D VISION (3DV)<sup>2024</sup> [ORAL]

### SecNet: Semantic Eye Completion in Implicit Field

[8] **YIDA WANG**, YIRU SHEN, DAVID JOSEPH TAN, FEDERICO TOMBARI, SACHIN TALATHI, NEURIPS GAZE MEETS ML (PMLR)<sup>2022</sup>

### Lidar Upsampling with Sliced Wasserstein Distance

[9] ARTEM SAVKIN, **YIDA WANG**, SEBASTIAN WIRKERT, NASSIR NAVAB, FEDERICO TOMBARI, IEEE ROBOTICS AND AUTOMATION LETTERS (RAL)<sup>2022</sup>

### Self-supervised Latent Space Optimization with Nebula Variational Coding

[10] **YIDA WANG**, DAVID JOSEPH TAN, NASSIR NAVAB, FEDERICO TOMBARI, IEEE TRANSACTIONS ON PATTERN ANALYSIS AND MACHINE INTELLIGENCE (T-PAMI)<sup>2022</sup>

### Learning Local Displacements for Point Cloud Completion

[11] **YIDA WANG**, DAVID JOSEPH TAN, NASSIR NAVAB, FEDERICO TOMBARI, CONFERENCE ON COMPUTER VISION AND PATTERN RECOGNITION (CVPR)<sup>2022</sup>

- [12] **SoftPool++: An Encoder-Decoder Network for Point Cloud Completion**  
YIDA WANG, DAVID JOSEPH TAN, NASSIR NAVAB, FEDERICO TOMBARI, [INTERNATIONAL JOURNAL OF COMPUTER VISION \(IJCV\)](#)<sup>2022</sup>
- [13] **SoftPoolNet: Shape Descriptor for Point Cloud Completion and Classification**  
YIDA WANG, DAVID JOSEPH TAN, NASSIR NAVAB, FEDERICO TOMBARI, [EUROPEAN CONFERENCE ON COMPUTER VISION \(ECCV\)](#)<sup>2020</sup> [Oral] [DEMO](#)
- [14] **Structure-SLAM: Low-Drift Monocular SLAM in Indoor Environments**  
YANYAN LI, NIKOLAS BRASCH, YIDA WANG, NASSIR NAVAB, FEDERICO TOMBARI, [INTERNATIONAL CONFERENCE ON INTELLIGENT ROBOTS AND SYSTEMS \(IROS\)](#)<sup>2020</sup>
- [15] **ForkNet: Multi-branch Volumetric Semantic Completion from a Single Depth Image**  
YIDA WANG, DAVID JOSEPH TAN, NASSIR NAVAB, FEDERICO TOMBARI, [INTERNATIONAL CONFERENCE ON COMPUTER VISION \(ICCV\)](#)<sup>2019</sup>
- [16] **Variational Object-aware 3D Hand Pose from a Single RGB Image**  
YIDA WANG\*, YAFEI GAO\*, PIETRO FALCO, NASSIR NAVAB, FEDERICO TOMBARI, [THE IEEE INTERNATIONAL CONFERENCE ON ROBOTICS AND AUTOMATION \(ICRA\)](#)<sup>2019</sup> [DEMO](#)
- [17] **Adversarial Semantic Scene Completion from a Single Depth Image**  
YIDA WANG, DAVID JOSEPH TAN, NASSIR NAVAB AND FEDERICO TOMBARI, [IEEE CONFERENCE ON 3D VISION \(3DV\)](#)<sup>2018</sup> [DEMO](#)
- [18] **Generative Model with Coordinate Metric Learning for Object Recognition Based on 3D Models**  
YIDA WANG AND WEIHONG DENG, [IEEE TRANSACTIONS ON IMAGE PROCESSING \(TIP\)](#)<sup>2018</sup>
- [19] **ZigzagNet: Efficient Deep Learning for Real Object Recognition Based on 3D Models**  
YIDA WANG, CAN CUI AND WEIHONG DENG, [ASIA CONFERENCE ON COMPUTER VISION \(ACCV\)](#)<sup>2016</sup>
- [20] **Self-restraint Object Recognition by Model Based CNN Learning**  
YIDA WANG AND WEIHONG DENG, [INTERNATIONAL CONFERENCE ON IMAGE PROCESSING \(ICIP\)](#)<sup>2016</sup>
- [21] **Large-Scale 3D Shape Retrieval from ShapeNet Core55**  
CO-AUTHORED, [EUROGRAPHICS \(EG\)](#)<sup>2016</sup>
- [22] **Face Recognition Using Local PCA Filters**  
YIDA WANG, SHASHA LI, JIANI HU AND WEIHONG DENG, [CCBR](#)<sup>2015</sup>

## Awards

<b>Fellows</b>	2017-2021, MLH <sup>[1]</sup> , TUM <sup>[2]</sup> and Bleence <sup>[3]</sup>	Munich, Germany
<b>Contest</b>	2016, Microsoft Open Source Challenge 2 <sup>nd</sup> prize	Redmond, U.S.A
	2016, BUPT Innovation Awards 1 <sup>st</sup> prize	Beijing, PRC
	2015, Tianchi Big Data Contest final list	Hangzhou, PRC
	2013, SCILAB Scientific open source Contest 1 <sup>st</sup> prize	Hefei, PRC
	2009, National Math, Chemistry and Physics Contest of Senior High 3 <sup>rd</sup> , 1 <sup>st</sup> and 2 <sup>nd</sup> prize	Dalian, PRC
<b>Awards</b>	2019, Outstanding oversea PhD student	Munich, Germany
	2017, Excellent Master Graduate of Beijing City	Beijing, PRC
	2016, National Master Scholarship	Beijing, PRC
	2014, Excellent Bachelor Graduate of Beijing City	Beijing, PRC
<b>Others</b>	2016, Capital College Track and Field Games 4×400 Gold medal	Beijing, PRC
	2015, Beijing International Triathlon Bronze medal	Beijing, PRC
	2014, Capital College Track and Field Games 3000 steeplechase Bronze medal	Beijing, PRC

## Experience

<b>Li Auto Inc. (Chehejia)</b>	Shenzhen, China
SENIOR R&D ENGINEER	Jan. 2024 -
• Dynamic streets simulation and diffusion synthesis	
<b>Synthia</b>	London, UK
RESEARCH INTERN	Jun. 2022 - Oct. 2022
• High-fidelity Neural Actor	

## Facebook Reality Lab

RESEARCH INTERN

Seattle, USA

Jun. 2021 - Oct. 2021

- Single-view semantic 3D eye reconstruction for eye tracking

## OpenCV & Google

SOFTWARE ENGINEER

Beijing, PRC

Apr. 2015 - Sep. 2016

- An initial developer of [tiny-dnn](#), which is the deep learning backend for OpenCV.
- Contributed 3 OpenCV modules: [3D multi-task learning](#), [quantized deep learning](#) and [super resolution](#).

## Skills

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### Programming

C/C++, Python, LaTeX, CUDA, Matlab, Scilab, shell, markdown

### Pattern Recognition

Bayesian Inference, Tensor Algebra, Deep Learning, 3D Vision

### Languages

English (TOEFL: 92 & CET-6: 552), Chinese, Deutsch