Zhiwen Fan

⊙ **Website**   ✜ **Google Scholar**
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RESEARCH INTERESTS

Efficient Deep Models for 2D/3D Visual Data & Medical Data Processing & Implicit Neural Representation and Neural Radiance Field & Real-world Large-Scale CAD Drawing and Its Recognition.

SELECTED PUBLICATIONS

ICCV 2023 (Accepted) [link]: **Zhiwen Fan***, Chenxin Li*, Brandon Y Feng*, Zhangyang Wang, "StegaNeRF: Embedding Invisible Information within Neural Radiance Fields"

ICCV 2023 (Accepted) [link]: Wenyan Cong, Hanxue Liang, Peihao Wang, **Zhiwen Fan**, Tianlong Chen, Mukund Varma, Yi Wang, Zhangyang Wang, "Enhancing NeRF akin to Enhancing LLMs: Generalizable NeRF Transformer with Mixture-of-View-Experts"

CVPR 2023 (Hightlight) [link]: Dejia Xu, Yifan Jiang, Peihao Wang, **Zhiwen Fan**, Yi Wang, Zhangyang Wang, "NeuralLift-360: Lifting An In-the-wild 2D Photo to A 3D Object with 360 Views"

ICLR 2023 [link]: **Zhiwen Fan**, Peihao Wang, Xinyu Gong, Yifan Jiang, Dejia Xu, Zhangyang Wang, "NeRF-SOS: Any-View Self-supervised Object Segmentation from Complex Real-World Scenes"

ASP-DAC 2023 : **Zhiwen Fan***, Yimeng Zhang*, Akshay Karkal Kamath*, Qiucheng Wu*, Wuyang Chen, Zhangyang Wang, Shiyu Chang, Sijia Liu, Cong Hao, "Data-Model-Circuit Tri-Design for Ultra-Light Video Intelligence on Edge Devices"

NeurIPS 2022 : **Zhiwen Fan***, Hanxue Liang*, Rishov Sarkar, Ziyu Jiang, Tianlong Chen, Kai Zou, Yu Cheng, Cong Hao, Zhangyang Wang, "M^{3}ViT: Mixture-of-Experts Vision Transformer for Efficient Multi-task Learning with Model-Accelerator Co-design"

NeurIPS 2022 : Dejia Xu*, Peihao Wang*, Yifan Jiang, **Zhiwen Fan**, Zhangyang Wang, "Signal Processing for Implicit Neural Representations"

ECCV 2022 [link]: **Zhiwen Fan***, Yifan Jiang*, Peihao Wang*, Xinyu Gong, Dejia Xu, Zhangyang Wang, "Unified Implicit Neural Stylization"

ECCV 2022 [link]: Dejia Xu*, Yifan Jiang*, Peihao Wang, **Zhiwen Fan**, Humphrey Shi, Zhangyang Wang, "SinNeRF: Training Neural Radiance Fields on Complex Scenes from a Single Image"

ECCV 2022 [link]: Hanxue Liang , Hehe Fan, **Zhiwen Fan**, Yi Wang, Tianlong Chen, Yu Cheng, Zhangyang Wang, "Point Cloud Domain Adaptation via Masked Local 3D Structure Prediction"

ICML 2022 [link]: Peihao Wang, **Zhiwen Fan**, Tianlong Chen, Zhangyang Wang, "Neural Implicit Dictionary Learning via Mixture-of-Expert Training".

CVPR 2022(Oral) [link]: **Zhiwen Fan**, Tianlong Chen, Peihao Wang, Zhangyang Wang, "CADTransformer: Panoptic Symbol Spotting Transformer for CAD Drawings".

CVPR 2022 [link]: Tianlong Chen, Peihao Wang, **Zhiwen Fan**, Zhangyang Wang, "Aug-NeRF: Training Stronger Neural Radiance Fields with Triple-Level Physically-Grounded Augmentations".

3DV 2021 [link]: Rakesh Shrestha, **Zhiwen Fan**, Qingkun Su, Zuozhuo Dai, Siyu Zhu, Ping Tan, "MeshMVS: Multi-View Stereo Guided Mesh Reconstruction".

ICCV 2021 [link]: **Zhiwen Fan***, Lingjie Zhu*, Honghua Li, Xiaohao Chen, Siyu Zhu, Ping Tan, "FloorPlanCAD: A Large-Scale CAD Drawing Dataset for Panoptic Symbol Spotting".

CVPR 2020(Oral) [link]: **Zhiwen Fan***, Xiaodong Gu*, Siyu Zhu, Zuozhuo Dai, Feitong Tan, Ping Tan "Cascade Cost Volume for High-Resolution Multi-View Stereo and Stereo Matching".

IPMI 2019 [link]: **Zhiwen Fan***, Liyan Sun*, Xinghao Ding, Yue Huang, John Paisley "Joint CS-MRI reconstruction and segmentation with a unified deep network".

ACM MM 2019 [link]: **Zhiwen Fan***, Huafeng Wu*, Xueyang Fu, Yue Huang, Xinghao Ding "Residual-guide network for single image deraining".

ECCV 2018 [link]: **Zhiwen Fan***, Liyan Sun*, Xinghao Ding, Yue Huang, Congbo Cai, John Paisley, "A Segmentation-aware Deep Fusion Network for Compressed Sensing MRI".

AAAI 2018 [link]: **Zhiwen Fan**[*][1], Liyan Sun*, Yue Huang, Xinghao Ding, John Paisley "Compressed Sensing MRI Using a Recursive Dilated Network".

TIP 2019 [link]: Liyan Sun, **Zhiwen Fan**, Xueyang Fu, Yue Huang, Xinghao Ding, John Paisley, "A deep information sharing network for multi-contrast compressed sensing MRI reconstruction", Transactions on Image Processing.

MRI 2019 [link]: Liyan Sun, **Zhiwen Fan***, Xinghao Ding, Yue Huang, John Paisley, "Region-of-interest undersampled MRI reconstruction: A deep convolutional neural network approach", Magnetic resonance imaging.

MRI 2019 [link]: Liyan Sun, **Zhiwen Fan**, Xinghao Ding, Congbo Cai, Yue Huang, John Paisley "A divide-and-conquer approach to compressed sensing MRI", Magnetic resonance imaging.

PROFESSIONAL EXPERIENCE

Google	May. 2022 - May. 2023
Research Intern, Supervisor: Sergio Orts Escolano and Alexander Koumis	
The University of Texas at Austin	Aug. 2021 - Present
Research Assistant, Supervisor: Prof. Zhangyang (Atlas) Wang	
Alibaba Cloud	Jul. 2019 - Aug. 2021
Senior Algorithm Engineer, Supervisor: Prof. Ping Tan, Dr. Siyu Zhu	
Xiamen University	Aug. 2016 - Jun. 2019
Research Assistant, Supervisor: Prof. Xinghao Ding	

EDUCATION

The University of Texas at Austin (UT Austin)	Aug. 2021 - Present
Ph.D. Student, Electrical and Computer Engineering	Advisor: Prof. Zhangyang (Atlas) Wang
Xiamen University (XMU)	Sep. 2016 - Jun. 2019
Master, Electronic and Communication Engineering	Advisor: Prof. Xinghao Ding
Shandong Agriculture University (SDAU)	Sep. 2012 - Jun. 2016
Bachelor, Electronic Information Science and Technology	

HONORS

Fellowship & Awards

• **Qualcomm Innovation Fellowship** [Qualcomm News] [UT News]	Aug. 2022
• Professional Development Award of UT Austin	Jul. 2022
• 3rd place of University Demo Best Demonstration at 59th Design Automation Conference	Jul. 2022
• Outstanding Graduates of Xiamen University	Jun. 2019
• The First Prize Scholarship of Xiamen University	2016-2018
• AAAI 2018 Travel Award	Jan. 2018
• Outstanding Graduates of Shandong Province	Jun. 2016

INVITED TALKS

• Unified Implicit Neural Stylization" at Xiamen University and Kungfu.ai.	Jul. 2022

SERVICES

Journal Reviewer: TPAMI, TIP, IJCV, Neurocomputing

Conference Reviewer: NeurIPS'22/23, ECCV'22, ICML'22/23, CVPR'22/23, ICCV'21/23, AAAI'21, ICME'19

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[1]A marker * denotes equal-contribution first authorship.