

Yuedong (Donny) CHEN

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Education

- Monash University, Melbourne, Australia** (Top 8 University in Australia) Jul 2021 - Nov 2024
Ph.D. Candidate in Information Technology. Supervisors: Jianfei Cai (IEEE Fellow), Tat-Jen Cham (with NTU, SG)
• Research topic: reconstructing and editing 3D scenes by leveraging sparse-view 2D data
- Sun Yat-sen University, Guangzhou, China** (Top 10 University in China) Aug 2016 - Jun 2018
M.E. in Software Engineering GPA: 3.9/4.0
- Sun Yat-sen University, Guangzhou, China** (Top 10 University in China) Sept 2012 - Jun 2016
B.E. in Software Engineering GPA: 3.7/4.0
• Additional program: exchange student at National Chi Nan University (Taiwan) for one semester.

Research Interests

3D Computer Vision, Generative Modeling, Neural Rendering, Affective Computing

Selected Publications

- MVSplat360: Feed-Forward 360 Scene Synthesis from Sparse Views** NeurIPS
Yuedong Chen, Chuanxia Zheng, Haofei Xu, Bohan Zhuang, Andrea Vedaldi, Tat-Jen Cham, and Jianfei Cai 2024
TL;DR: MVSplat360 is a feed-forward model that combines 3DGS with SVD to achieve 360° NVS for complex scenes with ≤ 5 input views.
- MVSplat: Efficient 3D Gaussian Splatting from Sparse Multi-View Images** ECCV (Oral)
Yuedong Chen, Haofei Xu, Chuanxia Zheng, Bohan Zhuang, Marc Pollefeys, Andreas Geiger, Tat-Jen Cham and Jianfei Cai 2024
• **TL;DR:** MVSplat is an efficient feed-forward 3D Gaussian Splatting model learned from sparse multi-view images.
• **Featured at:** GitHub (800+ Stars); HackerNews (130+ Upvotes)
- MuRF: Multi-Baseline Radiance Fields** CVPR
Haofei Xu, Anpei Chen, Yuedong Chen, Christos Sakaridis, Yulun Zhang, Marc Pollefeys, Andreas Geiger, *et al.* 2024
TL;DR: MuRF is a feed-forward approach for sparse view reconstruction with small and large baselines, and varying numbers of views.
- Explicit Correspondence Matching for Generalizable Neural Radiance Fields** Under Review at TPAMI
Yuedong Chen, Haofei Xu, Qianyi Wu, Chuanxia Zheng, Tat-Jen Cham, and Jianfei Cai 2023
TL;DR: MatchNeRF is a generalizable NeRF approach that employs explicit correspondence matching as the geometry prior.
- Sem2NeRF: Converting Single-View Semantic Masks to Neural Radiance Fields** ECCV
Yuedong Chen, Qianyi Wu, Chuanxia Zheng, Tat-Jen Cham, and Jianfei Cai 2022
TL;DR: Sem2NeRF pioneers the task of converting a single-view object semantic mask to the corresponding 3D scene.
- Object-Compositional Neural Implicit Surfaces** ECCV
Qianyi Wu, Xian Liu, Yuedong Chen, Kejie Li, Chuanxia Zheng, Jianfei Cai, and Jianmin Zheng 2022
TL;DR: ObjectSDF extracts the high-fidelity geometry of each object from a sparse set of input images and semantic masks.
- Towards Unbiased Visual Emotion Recognition via Causal Intervention** ACMMM
Yuedong Chen, Xu Yang, Tat-Jen Cham, and Jianfei Cai 2022
- GeoConv: Geodesic Guided Convolution for Facial Action Unit Recognition** Pattern Recognition
Yuedong Chen, Guoxian Song, Zhiwen Shao, Jianfei Cai, Tat-Jen Cham, and Jianming Zheng 2022
- Label Distribution Learning on Auxiliary Label Space Graphs for Facial Expression Recognition** CVPR
Shikai Chen, Jianfeng Wang, Yuedong Chen, Zhongchao Shi, Xin Geng, and Yong Rui 2020
- Facial Motion Prior Networks for Facial Expression Recognition** IEEE VCIP (Oral)
Yuedong Chen, Jianfeng Wang, Shikai Chen, Zhongchao Shi, and Jianfei Cai 2019

Work Experience

- Monash University** Melbourne, Australia
Research Fellow. Supervisors: Hamid Rezaatofghi, Ian Reid Nov 2024 - Present
• Work on research related to 3D vision and indoor navigation.

Monash University

Research Assistant (Part-time). Supervisors: Jianfei Cai, Reza Haffari

- Project name: dialogue assistance for negotiations in cross-cultural settings: a neuro-symbolic computational approach
- Help implement the multi-modal emotion recognition system

Melbourne, Australia

Feb 2022 - Nov 2022

Institute for Media Innovation (IMI), Nanyang Technological University (NTU)

Research Associate. Supervisors: Jianfei Cai, Tat-Jen Cham

- Research topic: enhancing visual emotion recognition by using human prior knowledge.
- Two conference papers accepted by: IEEE VCIP-19, ACMMM-22. One journal paper accepted by: Pattern Recognition.

Singapore, Singapore

Jan 2019 - Apr 2021

AI Lab, Lenovo Research

Research Intern. Supervisors: Jianfeng Wang, Zhongchao Shi

- Research topic: improving facial expression recognition through label enhancement.
- One paper accepted by: CVPR-20. One popular re-implementation project: ganimation_replicate (Starred:230+).

Beijing, China

Jul 2018 - Dec 2018

Professional Skills

Programming Python (PyTorch, NumPy, etc.), C++, HTML/CSS, JavaScript, etc.

Languages English (working proficiency), Teochew (native speaker), Mandarin Chinese (native speaker), Cantonese (fluent).

Academic Services

Invited Talks

Wayve UK (08/11/24), ECCV24 Oral (02/10/24), CAD&CG Lab ZJU(30/08/24), SHUZHUYANYU (27/08/24), 3DCVer (20/08/24)

Conference Reviewer

ECCV('24), CVPR('23,'24,'25), ICCV('23), NeurIPS('24), ICLR('25), 3DV('24), ACMMM('21-'24), AAAI('24), ACCV('24), ISMAR('23,'24), IEEEVR('24)

Journal Reviewer

TPAMI, IJCV, TIP, TMM, TCSVT, TOMM, TVCJ, Computers & Graphics, The Visual Computer