TUAN-ANH VU

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WORKING EXPERIENCE

2025 - now	**Postdoctoral Scholar**, The University of California, Los Angeles. **Supervisor:** Prof. M. Khalid Jawed
	Research Projects: • Drone Navigation for Biological Pest Control in High Tunnels
	• 3D Scene Reconstruction of Plants and Farms for Agricultural Robots
2025 - now	**CEO**, Computer Vision for Developing Countries (NPO). Entity No.: B20250147416, EIN: 39-2483919

EDUCATION

2019 - 2024	**Ph.D. in Computer Science and Engineering**, The Hong Kong University of Science and Technology
	Supervisor: Prof. Sai-Kit Yeung
	Dissertation title: Robust Scene Understanding in Challenging Scenarios
2011 - 2016	**B.Sc. in Computer Science**, International University - Vietnam National University HCM City
	Supervisor: Senior Lecturer Synh Viet-Uyen Ha
	Thesis title: Extend Traffic Signs Detection and Recognition Algorithm in Nighttime in Viet Nam

SELECTED PUBLICATIONS

* denotes equal contribution, # denotes guidance role for juniors or corresponding author

PEER-REVIEWED PAPERS

2025   Hai Nguyen-Truong*, E-Ro Nguyen*, **Tuan-Anh Vu**#, Binh-Son Hua, Minh-Triet Tran, and Sai-Kit Yeung, *"Vision-Aware Text Features in Referring Image Segmentation: From Object to Context Understanding"*, WACV'25. (Link)

2024   Ziqiang Zheng, Yiwei Chen, Huimin Zeng, **Tuan-Anh Vu**, Binh-Son Hua, Sai-Kit Yeung, *"MarineInst: A Foundation Model for Marine Image Analysis with Instance Visual Description"*, ECCV'24. **Oral** - **2.3% of 8,585 submissions** (Link)

2024   Yingshu Chen, Huajian Huang#, **Tuan-Anh Vu**, Ka-Chun Shum, Sai-Kit Yeung, *"StyleCity: Large-Scale 3D Urban Scenes Stylization"*, ECCV'24, ECCV'24 CV4Metaverse workshop **Oral** and US Patent (Filling). (Link)

2024   **Tuan-Anh Vu***, Srinjay Sarkar*, Zhiyuan Zhang, Binh-Son Hua, and Sai-Kit Yeung, *"Test-Time Augmentation for 3D Point Cloud Classification and Segmentation"*, 3DV'24. (Link)

2023   Tan-Sang Ha*, Hai Nguyen-Truong*, **Tuan-Anh Vu**#, and Sai-Kit Yeung, *"MarineVRS: Marine Video Retrieval System with Explainability via Semantic Understanding"*, OCEANS'23, Limerick. **Oral** (Link)

2023   Quang-Trung Truong, **Tuan-Anh Vu**, Tan-Sang Ha, Jakub Lokoc, Ajay Joneja, and Sai-Kit Yeung, *"Marine Video Kit: A New Marine Video Dataset for Content-based Analysis and Retrieval"*, MMM'23. **Oral** (Link)

2022   **Tuan-Anh Vu**, Duc-Thanh Nguyen, Binh-Son Hua, Quang-Hieu Pham and Sai-Kit Yeung, *"RFNet-4D: Joint Object Reconstruction and Flow Estimation from 4D Point Clouds"*, ECCV'22. **Oral** - **2.7% of 5,803 submissions** (Link)

2022   Yingshu Chen, **Tuan-Anh Vu**, Binh-Son Hua and Sai-Kit Yeung, *"Time-of-Day Neural Style Transfer for Architectural Photographs"*, IEEE ICCP'22. **Oral** (Link)

PREPRINTS

2025   Jaehwan Jeong*, **Tuan-Anh Vu***, Radha Lahoti, Vivek Alumootil, Sangpil Kim#, M. Khalid Jawed#, *"Vision-Guided Targeted Grasping and Vibration for Robotic Pollination in Controlled Environments"*, RA-L (under review). (Link)

2025   Jaehwan Jeong, **Tuan-Anh Vu**#, Mohammad Jony, Shahab Ahmad, Md Mukhlesur Rahman, Sangpil Kim#, M. Khalid Jawed#, *"AgriChrono: A Multi-modal Dataset Capturing Crop Growth and Lighting Variability with a Field Robot"*, RA-L (under review). (Link)

2025   Vivek Alumootil, **Tuan-Anh Vu**#, M. Khalid Jawed, *"DePT3R: Joint Dense Point Tracking and 3D Reconstruction of Dynamic Scenes in a Single Forward Pass"*, WACV'26 (under review). (Link)

2025   Gyusam Chang, **Tuan-Anh Vu**#, Vivek Alumootil, Harris Song, Deanna Pham, Sangpil Kim, M. Khalid Jawed, *"Reconstruction Using the Invisible: Intuition from NIR and Metadata for Enhanced 3D Gaussian Splatting"*, AAAI'26 (under review). (Link)

2025   Harris Song*, **Tuan-Anh Vu***#, Sanjith Menon, Sriram Narasimhan, M. Khalid Jawed, *"HiddenObject: Modality-Agnostic Fusion for Multimodal Hidden Object Detection"*, WACV'26 (under review). (Link)

2024   **Tuan-Anh Vu**, Duc-Thanh Nguyen#, Nhat Minh Chung, Qing Guo#, Binh-Son Hua, Ivor W. Tsang, and Sai-Kit Yeung, *"Catch Me If You Can Describe Me: Open-Vocabulary Camouflaged Instance Segmentation with Diffusion"*, ECCV'24 CV4Ecology workshop and IJCV SI Invitation (major revision). (Link)

2024 **Tuan-Anh Vu**, Ziqiang Zheng, Chengyang Song, Qing Guo#, Ivor W. Tsang, and Sai-Kit Yeung, *"A Large-Scale Video Dataset for Moving Camouflaged Animals Understanding"*, CVPR'25 CV4Animal **(Oral with Travel Award)** and IJCV SI Invitation (under review). (Link)

2024 **Tuan-Anh Vu**, Hai Nguyen-Truong, Ziqiang Zheng, Binh-Son Hua#, Qing Guo#, Ivor W. Tsang, and Sai-Kit Yeung, *"Power of Boundary and Reflection: Semantic Transparent Object Segmentation using Pyramid Vision Transformer with Transparent Cues"*, ECCV'24 TRICKY workshop and WACV'26 (under review). (Link)

2024 **Tuan-Anh Vu#**, Duc-Thanh Nguyen#, Binh-Son Hua, Quang-Hieu Pham, and Sai-Kit Yeung, *"RFNet-4D++: Joint Object Reconstruction and Flow Estimation from 4D Point Clouds with Cross-Attention Spatio-Temporal Features"*, IJCV, under review. (Link)

2024 Nhat Minh Chung, Sensen Gao, **Tuan-Anh Vu**, Jie Zhang, Aishan Liu, Yun Lin, Jin Song Dong, Qing Guo, *"Towards Transferable Attacks Against Vision-LLMs in Autonomous Driving with Typography"*, preprint. (Link)

2024 Ziqiang Zheng, Jipeng Zhang, **Tuan-Anh Vu**, Shizhe Diao, and Sai-Kit Yeung, *"MarineGPT: Unlocking Secrets of "Ocean" to the Public"*, preprint. (Link)

2023 Ziqiang Zheng, Yiwei Chen, Jipeng Zhang, **Tuan-Anh Vu**, Huimin Zeng, Yue W. Tim, and Sai-Kit Yeung, *"Exploring Boundary of GPT-4V on Marine Analysis: A Preliminary Case Study"*, preprint. (Link)

EXPERIENCES

2024 - 2025	**Organizer**, Computer Vision for Developing Countries (CV4DC) Workshop, ACCV'24 - ICCV'25 (Website)
2021 - NOW	**Conference Reviewer:** CVPR'22-26, ICCV'23-25, ECCV'22-24, NeurIPS'24-25, ICML'25, ICLR'25-26, AAAI'25-26, IJCAI'25, AISTATS'25-26, ICRA'25, WACV'22-26, ACM MM'25, ECAI'25, ICMI'25, ISVC'25, ACCV'22-24, ICME'23
2021 - NOW	**Journal Reviewer:** International Journal of Computer Vision, IEEE Transactions on Image Processing, IEEE Transactions on Multimedia, IEEE Robotics and Automation Letters, IEEE Transactions on Artificial Intelligence, Elsevier Expert Systems With Applications, Elsevier Neurocomputing, Elsevier Computer-Aided Design, Elsevier Engineering Applications of Artificial Intelligence, IET Image Processing, Springer Visual Intelligence, PeerJ Computer Science, Vietnam Journal of Computer Science
2020 - 2024	**Teaching Assistant**, CSE - HKUST (COMP2011, COMP4431, ISDN2300, ISDN2400, ISDN5300, CSIT6000L)
2015 - 2019	**Teaching Assistant** (IT130IU, IT131IU, IT097IU , IT092IU), and **Research Assistant**, CSE - HCMIU-VNU

HONORS & AWARDS

JAN 2025	**Doctoral Consortium (Travel Award)**, WACV'25, supervised by Prof. Richard Souvenir and Sharon X. Huang
OCT 2024	**UGC Research Travel Grant**, The Hong Kong University of Science and Technology (for attending ECCV'24)
OCT 2024	**Doctoral Consortium**, ECCV'24, supervised by Prof. Leonidas Guibas
JUNE 2024	**Doctoral Consortium**, IEEE CAI'24, supervised by Prof. Ivor Tsang
JAN 2024	**2nd Place**, USV-based Obstacle Segmentation Challenge, WACV'24 Workshop on Maritime Computer Vision
2023 - 2024	**ARAP Research Award**, Centre for Frontier AI Research, A*STAR
JAN 2023	**2nd Place**, USV-based Obstacle Segmentation Challenge, WACV'23 Workshop on Maritime Computer Vision
NOV 2022	**UGC Research Travel Grant**, The Hong Kong University of Science and Technology (for attending ECCV'22)
JUNE 2022	**Travel Grant**, EPFL CIS Edge AI Summer School 2022
AUG 2020	**Best Poster Award**, Machine Learning Summer School - Indonesia (MLSS-Indo) 2020
2019 - 2024	**Postgraduate Scholarship**, The Hong Kong University of Science and Technology
JUL 2019	**Scholarship for SENG Summer Camp for Elite Students**, Hong Kong University of Science and Technology
2017	**Scholarship for Master by Research program in Information Technology**, HCMIU-VNU
2014 - 2015	**Scholarship for Excellent Academic Performance**, HCMIU-VNU

REFERENCES

Prof. Sai-Kit Yeung
Department of Computer Science and Engineering
The Hong Kong University of Science and Technology

Senior Lecturer Duc Thanh Nguyen
School of Information Technology
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Asst. Prof. Binh-Son Hua
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