

# TUAN-ANH VU

## PERSONAL DATA

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## EDUCATION

2019 - 2024 **Ph.D. in Computer Science and Engineering**, 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: Synh Viet-Uyen Ha, Ph.D.  
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

- 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 2024. **Oral** ([Link](#))
- 2024 Yingshu Chen, Huajian Huang#, **Tuan-Anh Vu**, Ka-Chun Shum, Sai-Kit Yeung, “*StyleCity: Large-Scale 3D Urban Scenes Stylization*”, ECCV 2024. ([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*”, International Conference on 3D Vision (3DV), 2024. ([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 2023, 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*”, 29th International Conference on Multimedia Modeling (MMM), 2023. **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*”, Proceeding of European Conference on Computer Vision (ECCV), 2022. **Oral** - acceptance rate of 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 International Conference on Computational Photography (ICCP), 2022. **Oral** ([Link](#))

## PREPRINTS

- 2024 **Tuan-Anh Vu**, Binh-Son Hua#, Hai Nguyen-Truong, Ziqiang Zheng, 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 2024 TRICKY workshop (IEEE Transactions on Image Processing, 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*”, IJCV SI Invitation, 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 **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 2024 workshop (NeurIPS 2024, under review). ([Link](#))
- 2024 Hai Nguyen-Truong\*, E-Ro Nguyen\*, **Tuan-Anh Vu**#, Binh-Son Hua, Minh-Triet Tran, and Sai-Kit Yeung, “*Improving Referring Image Segmentation using Vision-Aware Text Features*”, WACV 2025, 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*”, NeurIPS 2024, under review. ([Link](#))

- 2024    Ziqiang Zheng, Jipeng Zhang, **Tuan-Anh Vu**, Shizhe Diao, and Sai-Kit Yeung, “*MarineGPT: Unlocking Secrets of “Ocean” to the Public*”, Nature Machine Intelligence, in submission. ([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

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- 2024 - NOW    **Organizer**, Computer Vision for Developing Countries (CV4DC) Workshop 2024, ACCV 2024 ([Website](#))
- 2023 - NOW    **Research Attachment**, Centre for Frontier AI Research, A\*STAR
- 2021 - NOW    **Reviewer**, CVPR’22-24, ICCV’23, ECCV’22-24, NeurIPS’24, AAAI’25, WACV’22-25, ACCV’22-24, IEEE TAI
- 2020 - NOW    **Teaching Assistant**, CSE - HKUST (COMP2011, COMP4431, ISDN2300, ISDN2400, ISDN5300, CSIT6000L)
- 2015 - 2019    **Teaching Assistant** (IT130IU, IT131IU, IT097IU , IT092IU), **Research Assistant**, CSE - HCMIU-VNU

## HONORS & AWARDS

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- JAN 2024    **2nd Place**, USV-based Obstacle Segmentation Challenge at WACV 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 at WACV Workshop on Maritime Computer Vision
- NOV 2022    **UGC Research Travel Grant**, Hong Kong University of Science and Technology (for attending ECCV 2022)
- 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**, 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

## SKILLS

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|-------------|---|
| Languages   | Vietnamese (native), English (fluent), Cantonese (beginner) |
| Programming | Python, C/C++, Java, HTML/CSS, ...                          |
| Frameworks  | Pytorch, TensorFlow, OpenCV, Qt, OpenGL, WebGL, ...         |

## REFERENCES

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**Prof. Sai-Kit Yeung**  
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The Hong Kong University of Science and Technology  
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**Senior Lecturer Duc Thanh Nguyen**  
School of Information Technology  
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