

Tung-I Chen

Curriculum Vitae

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📄 tung-i.github.io/

Education

- Ph.D. in CS **University of Massachusetts Amherst, Amherst, MA**
◦ College of Information and Computer Sciences, 2023-present
- M.S. in CS **National Taiwan University, Taipei, Taiwan**
◦ Computer Science and Information Engineering, 2019-2021
- B.S. in BME **National Cheng Kung University, Tainan, Taiwan**
◦ Biomedical Engineering, 2015-2019

Publications

- Under Submission **VM-NIF: Real-time View Morphing via Neural Implicit Function**
(2025) Tung-I Chen, D.-Y. Lee, G.-M. Su, Mohammad Hajiesmaili, Ramesh K. Sitaraman
Patent Filed by Dolby
- ICRA 2023 **CFVS: Coarse-to-Fine Visual Servoing for 6-DoF Object-Agnostic Peg-In-Hole Assembly**
Bo-Siang Lu, Tung-I Chen, H.-Y. Lee, Winston H Hsu
Accepted by International Conference on Robotics and Automation (ICRA), 2023 [\[Paper\]](#)
- ICRA 2023 **Coarse-to-Fine Point Cloud Registration with SE (3)-Equivariant Representations**
Cheng-Wei Lin, Tung-I Chen, H.-Y. Lee, W.-C. Chen, Winston H Hsu
Accepted by International Conference on Robotics and Automation (ICRA), 2023 [\[Paper\]](#)
- ECCV 2022 **D2ADA: Dynamic Density-Aware Active Domain Adaptation for Semantic Segmentation**
Tsung-Han Wu, Y.-S. Liou, S.-J. Yuan, H.-Y. Lee, Tung-I Chen, Winston H Hsu
Accepted by European Conference on Computer Vision (ECCV), 2022 [\[Paper\]](#)
- TMM 2021 **Dual-Awareness Attention for Few-Shot Object Detection**
Tung-I Chen, Y.-C. Liu, H.-T. Su, Y.-C. Chang, Y.-H. Lin, J.-F. Yeh, Winston H Hsu
Accepted by IEEE Transactions on Multimedia (TMM), 2021 [\[Paper\]](#) [\[Code\]](#)
- IROS 2021 **ODIP: Towards Automatic Adaptation for Object Detection by Interactive Perception**
Tung-I Chen, J.-W. Wang, Winston H Hsu
Accepted by International Conference on Intelligent Robots and Systems (IROS), 2021 [\[Paper\]](#) [\[Video\]](#)
- NeurIPS 2019 **Batch-Wise Dice Loss: Rethinking the Data Imbalance for Medical Image Segmentation**
Yu-Cheng Chang, Jhih-Yuan Lin, Min-Sheng Wu, Tung-I Chen, Winston H Hsu
Accepted by Medical Imaging meets NeurIPS, 2019 [\[Paper\]](#)

Research Summary

- 2025-present **Project: Viewport Adaptive 3D Gaussian Splatting**
Develop practical solutions for volumetric video streaming using dynamic 3D Gaussian Splatting
◦ Explore compression of feature planes using standard video codecs
◦ Develop viewport-adaptive transcoding for dynamic 3D Gaussian Splatting
- 2023-2024 **Project: 3D Teleconferencing System**
Develop human avatars that can be created, delivered, and reconstructed with low latency
◦ Explore viewport-adaptive streaming for 360° video delivery
◦ Enable 8K real-time video streaming using NVIDIA Video Codec SDK [\[Code\]](#)

- 2021-2022 **Project: Domain Adaptation and Anomaly Detection in Autonomous Driving**
Provide models with the ability to handle the unexpected and be adapted to new environments
- Develop anomaly-aware models to enhance safety of autonomous driving
 - Reduce the cost of fine-tuning by actively selecting the most effective samples
- 2019-2021 **Project: Few-Shot Learning for Robotic Grasping**
Enable a robotic arm to successfully grasp novel objects using only a small set of samples
- Develop a model that can detect novel objects according to the query images
 - Develop a pipeline to generate bounding box annotations without human labeling

Experiences

- Summer 2024 **Dolby PhD Research Intern, Sunnyvale, CA**
Novel-view synthesis, Multi-view images
- Fall 2024 **UMass CICS Teaching Assistant, MA**
CS311 Introduction to Algorithms
- Fall 2023 **UMass CICS Teaching Assistant, MA**
CS578 Distributed Computing and Systems
- 2021-2022 **NTU CICS Research Assistant, Taiwan**
Few-Shot Learning, Domain Adaptation

Skills

- Programming **Python, C++, MATLAB, PyTorch, ONNX**
- Tools **AWS, FFmpeg, Docker, Git, NVENC/NVDEC**
- Theory **Queueing Theory**
- Language **Mandarin (Native Speaker), English**

References

- Ph.D. Advisor **Prof. Ramesh Sitaraman**
Professor, Department of CICS, University of Massachusetts Amherst, MA [\[Webpage\]](#)
- Ph.D. Advisor **Prof. Mohammad Hajiesmaili**
Associate Professor, Department of CICS, University of Massachusetts Amherst, MA [\[Webpage\]](#)
- M.S. Advisor **Prof. Winston Hsu**
Professor, Department of Computer Sciences, National Taiwan University, Taiwan [\[Webpage\]](#)
- B.S. Mentor **Prof. Yu-Hua Dean Fang**
Associate Professor, Radiology and Neurology, University of Alabama at Birmingham [\[Webpage\]](#)