SHENG-MING, TANG

shengming0308@gapp.nthu.edu.tw ◇ +886-928-239-912
https://github.com/ShengMingTang ◇ https://www.linkedin.com/in/shengming-tang-280271202/

EDUCATIONS

- **National Tsing Hua University (NTHU)**, Hsinchu, Taiwan 2021-Present
  M.S. in Computer Science
  Thesis Topic: Optimal Camera Placement for 6 DoF Immersive Video Streaming without access to 3D contents
  Advisor: Cheng-Hsin Hsu
  GPA: 4.26/4.30
- **National Tsing Hua University (NTHU)**, Hsinchu, Taiwan 2016-2021
  B.S. in Computer Science (CS) / B.E. in Power Mechanical Engineering (PME)
  GPA: 3.85/4.30

PUBLICATIONS

[1] **S. Tang**, Y. Sun, J. Fang, K. Lee, C. Wang and C. Hsu, "Optimal Camera Placement for 6 Degree-of-Freedom Immersive Video Streaming Without Accessing 3D Scenes", in Proc. of *Interactive eXtended Reality (IXR'22)*, Lisbon, Portugal, October 2022.

[2] **S. Tang**, C. Hsu, Z. Tian, and X. Su, "An Aerodynamic, Computer Vision, and Network Simulator for Networked Drone Applications", in Proc. of *ACM Annual International Conference on Mobile Computing and Networking (MobiCom'21)*, New Orleans, USA, February 2022, Poster Paper.

[3] Y. Sun, **S. Tang**, C. Wang, and C. Hsu, "On Objective and Subjective Quality of 6DoF Synthesized Live Immersive Videos", in Proc. of *ACM Multimedia Workshop on Quality of Experience in Visual Multimedia Applications (QoEVMA'22)*, Lisbon, Portugal, October 2022.

EXPERIENCE AND PROJECTS

- **Networking and Multimedia Systems Lab, NTHU (Research Assistant)** February 2021 - Present
  Previous work on drone/network co-simulator lacked either aerodynamics, computer vision, or network simulations. To combine all features together, I have implemented $AirSim^N$, which combined NS-3 (network simulator) and AirSim (drone simulator). This is the first project that **enabled drone aerodynamics, computer vision, network simulations**. This work was open-source and accepted by **MobiCom'21 Poster Session** in the first semester of my master life. With my research interests in VR, our team noticed that VR intellectual property (IP) is leaked to some users during scene transmission. We want to design an algorithm that keeps the scene accessible to the users while respecting the privacy of the content creators. I spent at least a year developing algorithms that solve the optimal camera placement problem by requesting rendering access to the scenes. This work was published and presented at workshop of **Interactive eXtended Reality 2022 (IXR'22)**.
- **Internship in MediaTek** July 2022 - August 2022
  I worked in MediaTek to implement proof of concepts in cloud gaming by extending Air Light VR (ALVR). Working in this project requires skills in multiple programming languages such as python, c++, Java and Rust. Knowledge in multimedia and network is also needed to optimize the system. The work is demonstrated to the fellows in MediaTek to proof my comprehensive programming ability and problem solving skills.
- **Teaching Assistant in Multimedia Course** February 2022 - June 2022
  My job includes answering questions from the students in the Q&A session and designing one course project by extending a grand challenge of ACM Multimedia 2021. Adding to that, with my passion in teaching, I also designed a bonus problem set which guides the students to dive into the details and beauty of DCT.

SCHOLARSHIP AND AWARDS

- Academic Excellence Award (Ranked first in that semester), NTHU 2019
- ACM Multimedia Student Travel Grant, Lisbon, Portugal 2022