

A. Artifact Appendix¹

In the *LiVSec* project, we develop 1) a deep learning-based 3D face authentication system; 2) a perturbation generator that can generate real-time perturbations to prevent the face models in the surveillance video from being exploited to spoof the face authentication, while maintaining the required quality and functionality of the 3D video surveillance; and 3) an end-to-end security-preserving live 3D video surveillance system integrating the perturbation generator. The detail of this project is described in our recently-accepted MMSys’23 paper:

Zhongze Tang, Huy Phan, Xianglong Feng, Bo Yuan, Yao Liu, and Sheng Wei. 2023. Security-Preserving Live 3D Video Surveillance. In Proceedings of the 14th ACM Multimedia Systems Conference (MMSys ’23), June 7–10, 2023, Vancouver, BC, Canada.

The GitHub repository of this project is at

<https://github.com/hwsel/LiVSec>

which contains both the code and the instructions for the following three components:

- Reproduce the experimental results reported in the paper.
- Train your own 3D face authentication model and the real-time perturbation generator.
- Set up the end-to-end security-preserving live 3D video surveillance system integrating the perturbation generator.

We recommend that interested readers follow the code and instructions in the GitHub repository to reproduce our system and results.

¹ This appendix is only for the reproducibility review at MMSys’23 and not intended for publication with the camera-ready paper.