

# 專 題 演 講

講 者： 陳建志 Prof. Jen-Jee Chen

(National Yang Ming Chiao Tung University)

題 目： Using AI and V2X communications to provide driving assistance

摘 要：

Collecting vehicle surrounding information is a key issue for accident prevention and autonomous driving applications. Although GPS and 4G/LTE are widely accepted, it is still a challenge for a vehicle to get complete information of its surrounding vehicles. To alleviate this problem, we consider the integration of multi-sensory data through V2X (Vehicle-to-Everything) communications to help a vehicle to understand its complex surroundings. Moreover, collecting real datasets on the road are always a tough job (especially, V2X communications are not yet widely deployed). Therefore, we generate the simulated V2X datasets in various scenarios based on the open source simulation platform, CARLA. With both small real datasets and simulated datasets, we evaluate several AI fusion algorithms that can integrate four types of sensory inputs: V2X communications, GPS, camera, and inertial data. Through such fusions, it is possible for a vehicle to visually see the driving states of its surrounding vehicles.