

Obstacle Detection Method Using Cameras and Sensors for Train Forward Surveillance

Ryo KAGEYAMA Nozomi NAGAMINE Junki YOSHINO

In train forward surveillance, it is important to establish sensing technology to reliably detect distant obstacles in front of trains. Therefore, we have developed a method for detecting obstacle in front of trains using cameras and sensors. The developed method detects obstacles such as people and vehicles by combining multiple sensors within the detection area around the railroad tracks. In this paper, we report on the results of a study of sensor configurations suitable for obstacle detection, the detail of detection algorithm using cameras and LiDARs or a stereo camera. In addition to these, the relationship between distance to obstacles and detection performance is also reported.