

Train Frontal Obstacle Detection Method with Camera – LiDAR Fusion

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Recently, the importance of obstacle detection methods for railways is increasing. In field of automobiles, obstacle detection systems with cameras and sensors have been introduced to a production vehicle. However, in railways, a practical detection system does not exist because longer detective distance is required than in the case of automobiles. Therefore, we have developed an obstacle detection method to integrate camera images and point cloud data from LiDAR in front of a train. Our method consists of the detection area limitation part and detection part. We confirm our method detects a person 200 m away, which the camera alone cannot detect, with 45 % accuracy at night.