

## **LiDAR guided Small Obstacle Segmentation ABSTRACTS**

Small obstacles fall precariously on the border of being classified as drivable space or obstacles. It is Detecting small obstacles on the road is critical for autonomous driving. We present a method to reliably detect prudent for the planning module of an autonomous car to be informed of the small obstacles in its such obstacles through a multi-modal framework of sparse LiDAR(VLP-16) and Monocular vision. LiDAR is environment. employed to provide additional context in the form of confidence maps to monocular segmentation networks. We show significant performance gains when the contextis fed as an additional input to monocular semantic segmentation frameworks. We present our results on a custom collected dataset. Semantic prediction LiDAR Confidence Map of Semantic prediction using Confidence Module scene without using Confidence Confidence Map the Scene Map Point Cloud Current Aggregated C. Confidence Map Confidence Map Confidence Temporal Aggregatio Prediction **Confidence Map** Point Cloud **Overall Pipeline** B. Previous Confidence Region to be matched Confidence Module Pipeline **Break Point Detection** Aggregated Confidence Map **Current Confidence Map** Past Confidence Map **Final Prediction** 



## **METHOD**



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**Technology, Social Impact** 

## **OBJECTIVE**

Research Center Name: Robotics Research Centre, CVIT



