My research interests include Computer vision, Image processing, Pattern recognition, and Artificial intelligence.

I am mainly working on algorithms for intelligent vehicles/Driving assistance systems. Including Stereo vision, Lane detection, Road surface estimation, Obstacle detection, and Tracking.

Stereo vision:

Along with active sensors, disparity map estimation from stereo vision is a widely used technique to estimate the depth map. Using the left image and the right images taken exactly at the same time, Disparity map estimation algorithms can generate 3D depth map necessary for many applications.

(a)
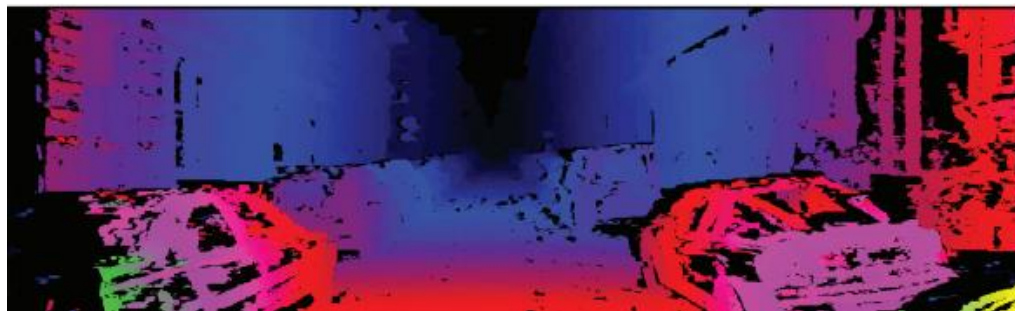
(b)

A robust and accurate **road model estimation algorithm** can greatly improve the performance of many Advanced Driver Assistance Systems applications such as lane detection, obstacle detection and road marking recognition.

Lane detection is one of the key elements of the Driver assistance systems (DAS) and it is necessary for lane departure warning systems or fully autonomous ground vehicles