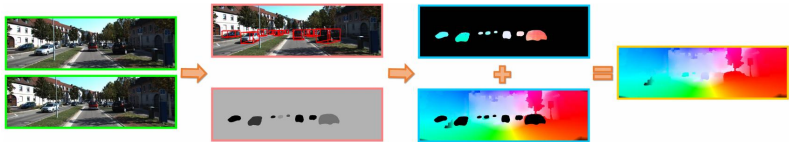


# Exploiting Semantic Information and Deep Matching for Optical Flow

M. Bai, W. Luo, K. Kundu, R. Urtasun (ECCV 2016)



- ▶ Optical flow for autonomous driving
- ▶ Assumptions
  - ▶ Static background
  - ▶ Small number of rigidly moving objects
- ▶ Foreground/background segmentation using semantic segmentation network in combination with 3D object detection
- ▶ Propose a siamese network with product layer that learns flow matching with uncertainty
- ▶ Restrict the flow matches to lie on its epipolar line
- ▶ Slanted plane model for background flow estimation
- ▶ Evaluation on KITTI 2015