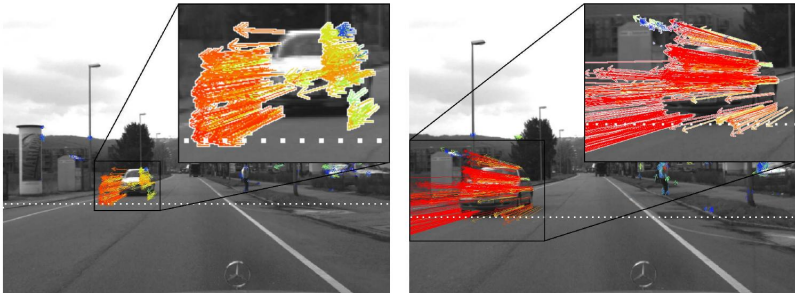


6D-Vision: Fusion of Stereo and Motion for Robust Environment Perception

U. Franke, C. Rabe, H. Badino and S. Gehrig (DAGM 2005)



- ▶ Obstacle avoidance in mobile robotics needs a robust perception of the environment
- ▶ Simultaneous estimation of depth and motion for image sequences
- ▶ 3D position and 3D motion are estimated with Kalman-Filters
- ▶ Ego-motion is assumed to be known (they use inertial sensors)
- ▶ 2000 points are tracked with KLT tracker
- ▶ Multiple filters with different initializations improve the convergence rate
- ▶ Only qualitative results
- ▶ Runs in real-time