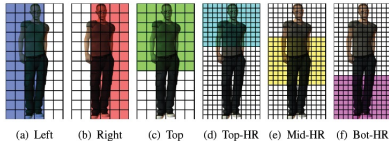


Monocular 3D Scene Understanding with Explicit Occlusion Reasoning

C. Wojek, S. Walk, S. Roth and B. Schiele (CVPR 2011)



- ▶ Monocular 3D scene tracking-by-detection with explicit object-object occlusion reasoning
- ▶ Tracking the complete scene rather than an assembly of individuals
- ▶ Extension of detection approaches HOG and DPM to enable the detection of partially visible humans
- ▶ Integration of the detections into a 3D scene model
- ▶ Full object and object part detectors are combined in a mixture of experts based on visibility
- ▶ Visibility is obtained from the 3D scene model
- ▶ More robust detection and tracking of partially visible pedestrians
- ▶ Evaluation on two challenging sequences ETH-Linthescher and ETH-PedCross2 recorded from a moving car in busy pedestrian zones