Discrete-Continuous Optimization for Multi-Target Tracking A. Andriyenko, K. Schindler and S. Roth (CVPR 2012)



- Multi-target tracking consists of the discrete problem of data association and the continuous problem of trajectory estimation
- Both problems were tackled separately using precomputed trajectories for data association
- Discrete-continuous optimization that jointly addresses data association and trajectory estimation
- Continuous trajectory model using cubic B-splines
- Discrete association using a MRF that assigns each observation to a trajectory or identifies it as outlier
- Combined formulation with label costs to avoid too many trajectories
- Evaluation on the TUD datasets