A General Framework for Tracking Multiple People from a Moving Camera
W. Choi, C. Pantofaru and S. Savarese (PAMI 2013)

- Tracking multiple, possibly interacting, people from a mobile vision platform
- Joint estimation of camera’s ego-motion and the people’s trajectory in 3D
- Tracking problem formulated as finding a MAP solution and solved using Reversible Jump Markov Chain Monte Carlo Particle Filtering
- Combination of multiple observation cues face, skin color, depth-based shape, motion, and target specific appearance-based detector
- Modelling interaction with two modes: repulsion and group movement
- Automatic detection of static features for camera estimation
- Evaluation on the challenging ETH dataset and a Kinect RGB-D dataset containing dynamic in- and outdoor scenes