Continuous Energy Minimization for Multi-Target Tracking A, Milan, S. Roth, Konrad Schindler (PAMI 2014)



- To handle the large space of possible trajectory hypotheses, existing methods limit the state space, by some form of data-driven or regular discretization
- Contributions:
 - Proposes an energy that corresponds to a more complete representation of the problem, rather than one that is amenable to global optimization
 - Besides the image evidence, the energy function takes into account physical constraints, such as target dynamics, mutual exclusion, and track persistence
 - Constructs a optimization scheme that alternates between continuous conjugate gradient descent and discrete trans-dimensional jump moves

Evaluates on sequences from VS-PETS 2009/2010, TUD-Stadtmitte benchmarks