

**PhD**

**Tracking without bells and whistles ax1903.05625 iccv19**

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Review of **graph optimization** based MOT and also of **motion models** used in MOT (mostly pedestrians)

main idea is to use the regression branch of faster RCNN for frame to frame tracking by extracting features from the current frame and then using object locations from the previous frame as input for the ROI pooling process to regress their locations into the current frame

Seems to be far too straightforward to even be accepted in ICCV

Postprocessing of the tracking results is still riddled with heuristics and all of the usual ones including thresholds on the score provided by the detector as well as the intersection over union thresholds for suppressing duplicates and starting new trajectories

Also uses a couple of straightforward motion models including camera motion compensation based on image registration and the usual constant velocity assumption – Seems nothing new at all

Similarly uses some short-term appearance model or re-identification based on Siamese matching – This too is riddled with heuristics

Performance seems comparable to the state of the art but that is hardly surprising given that much simpler trackers have been shown to manage this too

Provides highly detailed analysis of the causes of failures in this one as well as other trackers which seems to justify its acceptance in ICCV more

This includes the so-called Oracle trackers where specific components within the proposed tracker are replaced using ground truth information to analyse how much performance improvement can thus be achieved and therefore create an upper bound on how far this tracker can be further improved by extensions

Supposed to propose a new MOT paradigm that is different from the existing tracking by detection but there seems to be nothing new in the proposed methods – mainly seems to be advocating replacing detectors by the proposed tracktor thingy