Monocular 3D Pose Estimation and Tracking by Detection
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(a)　　　(b)　　　(c)　　　(d)　　　(e)

- 3D pose estimation from image sequences using tracking by detection
- Methods so far worked well in controlled environments but struggle with real world scenarios
- Three staged approach
  - Initial estimate of 2D articulation and viewpoint of the person using an extended 2D person detector
  - Data association and accumulation into robust estimates of 2D limbs positions using a HMM based tracking approach
  - Estimates used as robust image observation to reliably recover 3D pose in a Bayesian framework using hGPLVM as temporal prior
- Evaluation on HumanEva II and a novel real world dataset TUD Stadtmitte for qualitative results