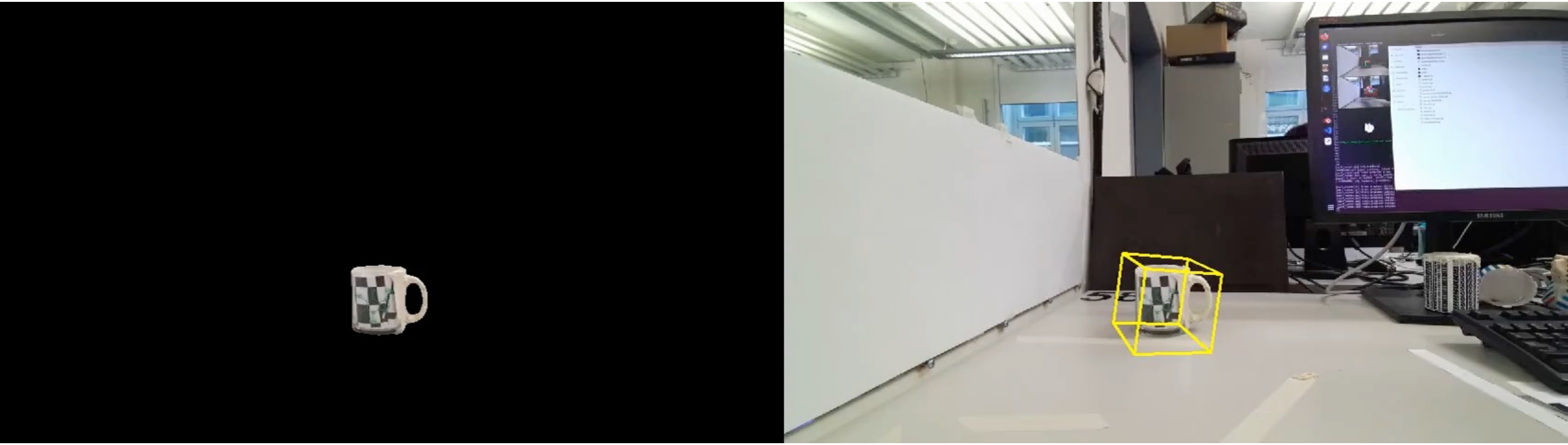
MOT & Reconstruction W17

- New squared texture videos in my dataset
  - Version black/white and colored
- ICP for Chamfer Distance
  - Output: transformation matrix
- BOP challenge papers

MOT & Reconstruction W17



MOT & Reconstruction W17

	Date (UTC)	Method	Test image	AR_{Core}
1	2023-09-27	GPose2023	RGB-D	0.856
2	2023-09-24	GPose2023-OfficialDet	RGB-D	0.851
3	2023-09-27	GPose2023-PBR	RGB-D	0.844
4	2022-10-15	GDRNPP-PBRReal-RGBD-MModel	RGB-D	0.837
5	2022-10-15	GDRNPP-PBR-RGBD-MModel	RGB-D	0.827
6	2023-09-27	ZebraPoseSAT-EffnetB4_refined(Def...	RGB-D	0.813
7	2022-10-14	GDRNPP-PBRReal-RGBD-MModel-Fast	RGB-D	0.805
8	2023-09-25	OfficialDet-PFA-Mixpbr-RGB-D	RGB-D	0.800
9	2022-10-13	GDRNPP-PBRReal-RGBD-MModel-Offici...	RGB-D	0.798
10	2023-09-26	GDRNPPDet_PBRReal+GenFlow-MultiHypo	RGB-D	0.792
11	2022-10-11	RADet+PFA-MixPBR-RGBD	RGB-D	0.787
12	2022-10-12	RADet+PFA-MixPBR-RGBD-Fast	RGB-D	0.771
13	2022-10-16	RCVPose 3D_SingleModel_VIVO_PBR	RGB-D	0.768
14	2022-10-15	ZebraPoseSAT-EffnetB4 + ICP (Defa...	RGB-D	0.765
15	2022-10-12	RADet+PFA-PBR-RGBD	RGB-D	0.762
16	2021-12-22	SurfEmb-PBR-RGBD	RGB-D	0.758
17	2024-01-14	HccePose(efficientnet-b4 & Defaul...	RGB	0.758
18	2023-09-25	ZebraPoseSAT-EffnetB4(DefaultDete...	RGB	0.749

- Best papers do not have code available
- Focus on GDRNPP & ZebraPose
- ? Include one RGB (no D) implementation ?

MOT & Reconstruction W17

- GDRNPP (2022)
  - (no paper available)
  - GT object a priori
  - Improved version of GDR-Net
    - + Domain randomization operations during training
    - + Convnext rather than resnet-34
  - Yolox as detection method
  - Data augmentation and ranger optimizer
  - Pose refinement through depth informations

MOT & Reconstruction W17

- ZebraPose (2023)
  - RGBD
  - Focus on occlusion
    - GT object a priori
    - 3D surface encoding
  - 2D Detector via encoder-decoder NN
  - Pose estimation matching with 3D surface code table

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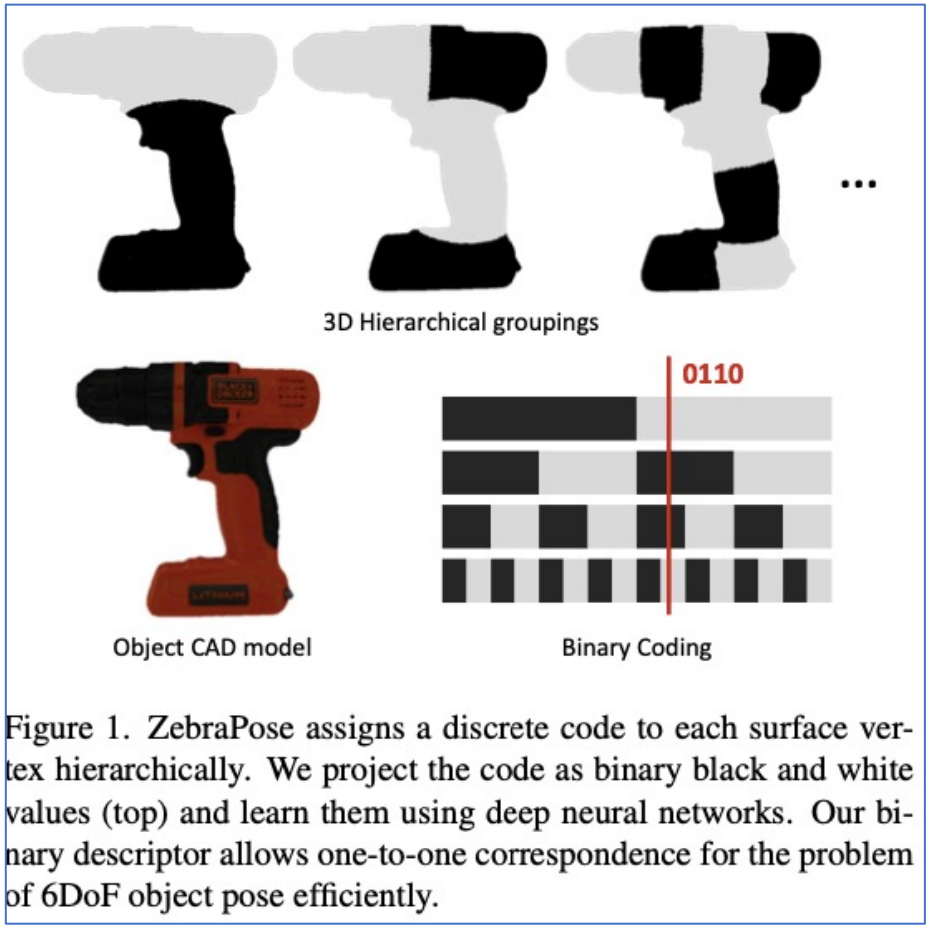

Figure 1. ZebraPose assigns a discrete code to each surface vertex hierarchically. We project the code as binary black and white values (top) and learn them using deep neural networks. Our binary descriptor allows one-to-one correspondence for the problem of 6DoF object pose efficiently.