5th International Workshop on
Recovering 6D Object Pose (R6D)

ICCV 2019, October 28, Seoul, Korea

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Covered topics

- **6D object pose estimation (aka 3D object detection)**
  - Robustness to occlusion and background clutter
  - Detection of multiple object instances
  - Effective synthesis of training data
  - Pose estimation of non-rigid objects and object categories
  - ...
- 6D object tracking
- 3D object modeling and reconstruction
- Robotic manipulation and interaction
- ...

History

ICCV 2015, Santiago

ECCV 2016, Amsterdam

ICCV 2017, Venice

ECCV 2018, Munich

Workshop papers

7/12 accepted papers, 3 extended abstracts

2015: 12 extended abstracts
2016: 9/11 accepted papers, 3 extended abstracts
2017: 9/14 accepted papers, 6 extended abstracts
2018: 10/13 accepted papers, 3 extended abstracts

33 reviewers, 2-4 reviews per paper

Accepted papers presented as orals and posters

Extended abstracts presented as posters

18 posters invited from the main conference

Accepted workshop papers

CullNet: Calibrated and Pose Aware Confidence Scores for Object Pose Estimation, Kartik Gupta, Lars Petersson, Richard Hartley

CorNet: Generic 3D Corners for 6D Pose Estimation of New Objects without Retraining, Giorgia Pitteri, Vincent Lepetit, Slobodan Ilic

Unsupervised Joint 3D Object Model Learning and 6D Pose Estimation for Depth-Based Instance Segmentation, Yuanwei Wu, Tim K Marks, Anoop Cherian, Siheng Chen, Chen Feng, Guanghui Wang, Alan Sullivan

An Annotation Saved is an Annotation Earned: Using Fully Synthetic Training for Object Detection, Stefan Hinterstoisser, Olivier Pauly, Hauke Heibel, Martina Marek, Martin Bokeloh

HomebrewedDB: RGB-D Dataset for 6D Pose Estimation of 3D Objects, Roman Kaskman, Sergey Zakharov, Ivan Shugurov, Slobodan Ilic

**A Refined 3D Pose Dataset for Fine-Grained Object Categories**, Yaming Wang, Yi Yang

Satellite Pose Estimation with Deep Landmark Regression and Nonlinear Pose Refinement, Bo Chen, Jiewei Cao, Alvaro Parra, Tat-Jun Chin

BOP Challenge 2019

The goal of BOP (Benchmark for 6D Object Pose Estimation):
To capture the state of the art in estimating the 6D object pose in RGB/RGB-D images.

Since ECCV'18 paper:
1. New online evaluation system at: https://bop.felk.cvut.cz
2. New task and evaluation metrics.
3. More datasets (MVTec ITODD, HomebrewedDB, YCB-Video).

BOP Challenge 2019
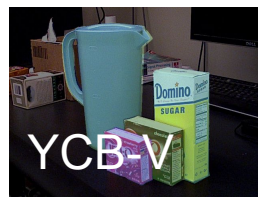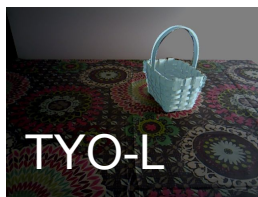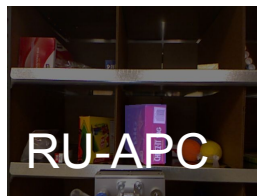
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More details at 17:00!

Online traffic

10K visits (5.1K users) of the workshop websites since ECCV'18.

4.3K visits (1.4K users) of the BOP Challenge 2019 website.

227 members in the BOP Google Group:
https://groups.google.com/forum/#!forum/bop-benchmark

Workshop program (cmp.felk.cvut.cz/sixd/workshop_2019)

13:30 **opening**

13:40 **invited talk 1: Slobodan Ilic**, Domain Adaptation for 6D Object Pose Recovery from Synthetic Data

14:10 **invited talk 2: Eric Brachmann**, Robust Pose Optimization Made Differentiable

14:40 **oral presentations of workshop papers**

15:30 **coffee break**

16:00 **invited talk 3: Vincent Lepetit**, 3D Pose Estimation and 3D Model Retrieval for Objects in the Wild

16:30 **invited talk 4: Matthias Nießner**, 9DOF Scan2CAD Alignment in 3D Scans

17:00 **results of the BOP Challenge 2019**

17:20 **awards, discussion, closing**

17:30 **poster session - stands 56 - 85** (workshop papers, extended abstracts, invited posters)