# **Innsbruck Pointing Dataset**

Deictic gestures – pointing at things in human-human collaborative tasks – constitute a pervasive, non-verbal way of communication, used e.g. to direct attention towards objects of interest. In a human-robot interactive scenario, in order to delegate tasks from a human to a robot, one of the key requirements is to recognize and estimate the pose of the pointing gesture.

#### **Dataset Features**

- Two types of pointing gestures: (1) Natural pointing with index finger, and (2) Tool pointing with white board marker.
- 9 participants pointing at 10 objects performing both the types of pointing gestures.
- Pointing gestures recorded with RGB-D with Kinect sensor.
- 180 RGB-D test images available with the ground truth to evaluate 3D pointing direction.
- Publicly available to Download (~100MB).

#### **Sample Images**



Marked points (red - hand, green - objects) are the 2D locations used as the ground truth.

#### Reference

Dadhichi Shukla, Ozgur Erkent, Justus Piater, Probabilistic detection of pointing directions for human robot interaction. International Conference on Digital Image Computing: Techniques and Applications, 2015.PDF.

### **BibTex**

```
@InProceedings{Shukla-2015-DICTA,
   title = {{Probabilistic detection of pointing directions for human robot
interaction}},
   author = {Shukla, Dadhichi and Erkent, Ozgur and Piater, Justus},
   booktitle = {{International Conference on Digital Image Computing:
Techniques and Applications}},
   year = 2015,
   month = 11,
   url = {https://iis.uibk.ac.at/public/papers/Shukla-2015-DICTA.pdf}}
```

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