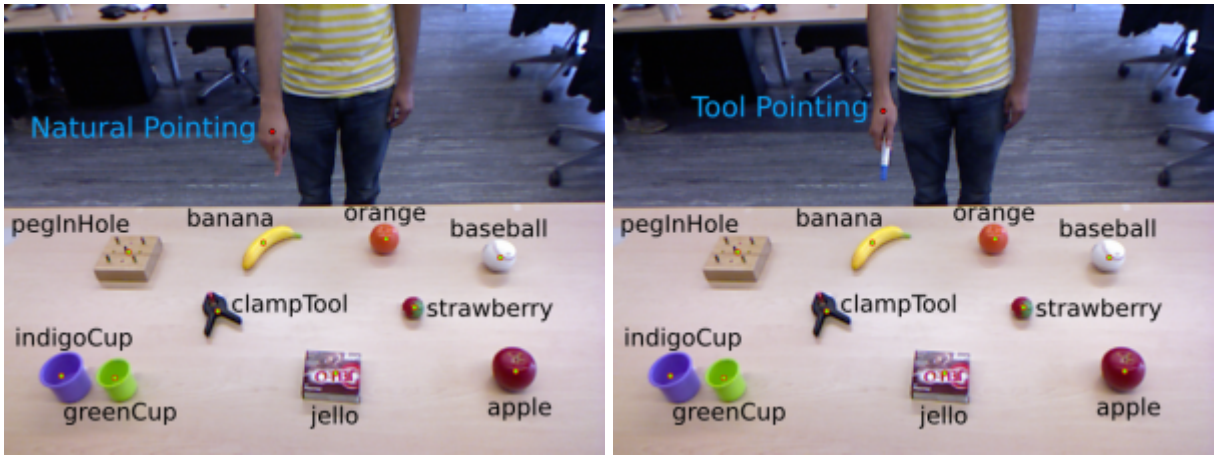
# Innsbruck Pointing Dataset

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 (100.5MB).

### 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.PDFBibTex

### Acknowledgement

The research leading to these results has received funding from the European Community's Seventh Framework Programme FP7/2007-2013 (Specific Programme Cooperation, Theme 3, Information and Communication Technologies) under grant agreement no. 610878, 3rd HAND.

### Contact

dadhichi**[dot]**shukla**[at]**uibk**[dot]**ac**[dot]**at