

3rd Workshop on Observing and Understanding Hands in Action

In conjunction with ICCV 2017, October 23rd, 2017 Venice, Italy.

Development of RGB-D sensors and camera miniaturization (wearable cameras, smart phones, ubiquitous computing) have opened the door to a whole new range of technologies and applications which require detecting hands and recognizing hand poses in a variety of scenarios. Most hand tracking data sets and papers have been focused on near-range front-on scenarios, yet there remain many challenges. The community needs to get past this and our goal is to push the boundaries of 3D hand articulation estimation/tracking, and to evaluate a "breadth of applications" including sign language recognition, desktop interaction, egocentric views, object manipulations, far range and over-the-shoulder driver footage.

Our program will feature several high-quality invited talks, poster presentations, and a panel discussion to identify key research questions and highlight future research directions. We invite submissions of theoretical and applied papers in all areas covered by the workshop, including, but not limited to:

- Hand detection
- Hand pose and gesture recognition
- 3D articulated hand tracking
- Hand modelling and rendering
- Grasping and object manipulation
- Hand activity recognition
- Gesture interfaces
- Egocentric vision systems
- Structured prediction
- Applications of hand pose estimation. AR/VR, robotics, haptics, driving, etc.

The 2017 Hands in the Million Challenge on 3D Hand Pose Estimation: In the spirit of Chalearn "looking at people" for body pose estimation or Pascal VOC Challenge for object recognition, we organize a challenge associated with this workshop. The goal of this challenge is to assess how far is the state of the art in terms of solving the problem of 3D hand pose estimation as well as detect major failure and strength modes of both systems and evaluation metrics that can help to identify future research directions. The challenge consists of a standardized dataset, an evaluation protocol for two different tasks, and a public competition.

In addition to regular papers, we also invite **extended abstracts** of ongoing or published work, and invite authors of previous and ongoing work to submit empirical results to our challenge. For more information, please visit:

<http://icvl.ee.ic.ac.uk/hands17/>

Organizers

Tae-Kyun Kim, Imperial College London, UK
 Antonis Argyros, U. Crete and FORTH, Greece
 G.Garcia-Hernando, Imperial College London, UK
 Iason Oikonomidis, U. Crete and FORTH, Greece
 Vincent Lepetit, TU Graz, Austria
 Mohan Trivedi, UC San Diego, USA
 Karthik Ramani, Purdue University, USA
 Jamie Shotton, Microsoft Research, UK
 Björn Stenger, Rakuten Institute of Tech, Japan
 Gregory Rogez, INRIA, France
 Danhang Tang, Perceptive IO, USA
 Eshed Ohn-Bar, UC San Diego, USA
 Shanxin Yuan, Imperial College London, UK
 Qi Ye, Imperial College London, UK

Invited speakers

Yiannis Aloimonos, University of Maryland, USA
 Yaser Sheikh, Carnegie Mellon University, USA
 Kris Kitani, Carnegie Mellon University, USA
 TBC, Intel Corporation, USA
 (one extra speaker TBD)

Important dates

Submission deadline:	July 31st
Notification of acceptance:	August 14th
Camera ready deadline:	August 24th
Challenge submission	September, 15th
Workshop:	October 23 rd

