# Kentaro Wada

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Date of birth: 31 January 1994 • Nationality: Japan • Portfolio: wkentaro.com

#### **EDUCATION Imperial College London** PhD in Computing 2018 - 2022Supervisors: Prof. Andrew Davision, Dr. Stefan Leutenegger University of Tokyo MS in Information Science and Technology 2016 - 2018BE in Mechano-Informatics 2012 - 2016Supervisors: Prof. Masayuki Inaba, Prof. Kei Okada DISTINCTION PhD President's Scholarship of Imperial College London 2018 - 2022Full funded scholarship, and fifty PhD students are selected each year. IEEE Robotics and Automation Society Japan Joint Chapter Young Award at IROS2018 2018 *Five Japanese students are nominated based on their papers at the conference.* Google Summer of Code Student 2016 Completed an open source project from the Open Source Robotics Foundation.

#### **PUBLICATIONS**

**Kentaro Wada**, Edgar Sucar, Stephen James, Daniel Lenton, and Andrew J. Davison, "MoreFusion: Multi-object Reasoning for 6D Pose Estimation from Volumetric Fusion", *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020.

**Kentaro Wada**, Kei Okada, and Masayuki Inaba, "Joint Learning of Instance and Semantic Segmentation for Robotic Pick-and-Place with Heavy Occlusions in Clutter", *IEEE International Conference on Robotics and Automation (ICRA)*, 2019. [Paper] [Video]

**Kentaro Wada**, Shingo Kitagawa, Kei Okada, and Masayuki Inaba, "Instance Segmentation of Visible and Occluded Regions for Finding and Picking Target from a Pile of Objects", *IEEE International Conference on Intelligent Robots and Systems (IROS)*, 2018. [Paper] [Video]

**Kentaro Wada**, Kei Okada, and Masayuki Inaba, "Probabilistic 3D Multilabel Real-time Mapping for Multi-object Manipulation", *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2017. [Paper] [Video]

**Kentaro Wada**, Makoto Sugiura, Iori Yanokura, Yuto Inagaki, Kei Okada, and Masayuki Inaba, "Pick-and-Verify: Verification-based Highly Reliable Picking System for Various Target Objects in Clutter", *Journal of Advanced Robotics*, 2017. [Paper] [Video]

## RESEARCH EXPERIENCE

Leading the UTokyo Team at the Amazon Robotics Challenge

*2015 – 2017* 

JSK Robotics Laboratory at the University of Tokyo

Objectives: To develop a robust state-of-the-art robot picking system for warehouse automation. 2015 edition: Verification based robust picking system by in-hand recognition. 2016 edition: Deep learning based 3D semantic segmentation. 2017 edition: Few-shot deep learning of novel object segmentation using only instance images.

## KEY SKILLS

- Programming skills, especially with Python and C++, trained in the research use and contributions to open source projects at GitHub.
- Experience and knowledge of constructing a large robot vision system integrating various kinds of hardware and software with the Robot Operating System (ROS).
- Knowledge of deep learning implementation with the frameworks including, Chainer, PyTorch and Caffe, and GPU computing using CUDA.

### **INTERESTS**

Deep learning, Real-time SLAM, Robotic manipulation.