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. [Paper] [Video]

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.