Kentaro Wada

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Date of birth: 31st January 1994 • Nationality: Japan

EDUCATION

University of Tokyo, Japan — *April 2012 – Present*
MS in Information Science and Technology
BE in Mechano-Informatics
Advisors: Prof. Masayuki Inaba, Associate Prof. Kei Okada.

PORTFOLIO

wkentaro.com
Extensive listing of cocurricular and research projects.

DISTINCTION

University of Tokyo, Toyota Dwango Advanced AI Fellowship — *2017*

Google Summer of Code Student — *2016*
Completed an open source project from Open Source Robotics Foundation.

5th Place Winners (Pick Task) at the Amazon Picking Challenge — *2016*
An internationally recognized permier robotics competition.

PUBLICATIONS

Kentaro Wada, Shun Hasegawa, Shingo Kitagawa, Yuto Uchimi, Naoya Yamaguchi, Kei Okada, and Masayuki Inaba, "Few-shot Learning based on Context-aware Network Expansion with Artificial Training Data for Picking in Warehouse Automation", in *Under review at IEEE International Conference on Robotics and Automation (ICRA)*. 2018. [Paper] [Movie]

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

Shun Hasegawa, **Kentaro Wada**, Yusuke Niitani, Kei Okada, and Masayuki Inaba, "A Three-Fingered Hand with a Suction Gripping System for Picking Various Objects in Cluttered Narrow Space", in *Proceedings of the 2017 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2017. [Paper] [Movie]

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] [Movie]

Kentaro Wada, Masaki Murooka, Kei Okada, and Masayuki Inaba, "3D Object Segmentation for Shelf Bin Picking by Humanoid with Deep Learning and Occupancy Voxel Grid Map", in *Proceedings of the 2016 IEEE-RAS International Conference on Humanoid Robotics (Humanoids)*, 2016. [Paper] [Movie]

Yuki Furuta, **Kentaro Wada**, Masaki Murooka, Shunichi Nozawa, Yohei Kakichi, Kei Okada and Masayuki Inaba, "Transformable Semantic Map Based Navigation using Autonomous Deep Learning Object Segmentation", in *Proceedings of the 2016 IEEE-RAS International Conference on Humanoid Robotics (Humanoids)*, 2016. [Paper] [Movie]

RESEARCH EXPERIENCE

JSK Robotics Laboratory, The University of Tokyo

- Graduate Research Student, Computer Science Department — October 2016 – Present
  - Project: Study of Robotic Manipulation with Learning for Object Segmentation (Master Thesis)
  - Supervisors: Prof. Masayuki Inaba and Associate Prof. Kei Okada
  - Focus: Deep Learning, 3D Vision, Robotic Manipulation
- Research Assistant — October 2015 – March 2017
  - Project: Picking General Objects with Verification-based Vision System
  - Supervisors: Associate Prof. Kei Okada
  - Focus: Deep Learning, 3D Vision, Robotic Manipulation
- Undergraduate Research Student, Engineering Department — April 2015 – March 2016
  - Project: Learning for Picking through Experience of Verification-based Perception System (Bachelor Thesis)
  - Supervisors: Prof. Masayuki Inaba and Associate Prof. Kei Okada
  - Focus: Deep Learning, 3D Vision, Robotic Manipulation

Tanaka Kenji Laboratory, The University of Tokyo

- Research Assistant — May 2014 – March 2015
  - Project: Customer Clustering with Big Data Analysis of Purchase History
  - Supervisors: Associate Prof. Kenji Tanaka
  - Focus: Machine Learning, Data Mining

PROFESSIONAL AFFILIATIONS & ACTIVITIES

Amazon Robotics Challenge 2017, Nagoya, Japan

- K. Wada, S. Hasegawa, S. Kitagawa, Y. Uchimi, N. Yamaguchi, K. Okada and M. Inaba
- 12th/13th place in 16 teams for pick/stow tasks.
- A core member the team composed of 5 students and 2 professors.
- Especially worked for object recognition. — April 2017 – July 2017

Amazon Picking Challenge 2016, Leipzig, Germany

- K. Wada, S. Hasegawa, S. Kitagawa, Y. Niitani, M. Bando, K. Okada and M. Inaba
- 5th/8th place in 16 teams for pick/stow tasks.
- A core member of the team composed of 5 students and 2 professors.
- Especially worked for object recognition. — April 2016 – July 2016

Google Summer of Code 2016, Tokyo, Japan

- K. Wada, F. Proctor, S. Edwards
- Student, Passed the Final Evaluation — May 2016 – August 2016

Amazon Picking Challenge 2015, Seattle, USA

- K. Wada, I. Yanokura, M. Sugiura, Y. Inagaki, K. Okada and M. Inaba
- 8th place in 28 teams.
- A core member of the team composed of 4 students and 2 professors.
- Worked for object recognition and robotic manipulation. — October 2014 – May 2015

OTHER WORK EXPERIENCE

Donuts Co. Ltd., Tokyo, Japan

- Internship as a system integrator — September 2013 – January 2014
  - Frontend of e-commerce site with HTML, CSS and Javascript.
  - Posting system construction with PHP.

Honda Research Institute, Tokyo, Japan

- Internship as a researcher — August 2014 – September 2014
  - Road scene recognition with deep learning

LANGUAGES

- Japanese: Native language.
- English: Fluent (listening, speaking, reading, writing).
- Chinese: Basic (listening, speaking, reading, writing).

SKILLS

- Programming Languages: Python, C++, C, Bash, Zsh, HTML, CSS, Javascript, PHP, Lisp
- Frameworks: Chainer, Caffe, scikit-learn, ROS, PCL, OpenCV, scikit-image, flask

INTERESTS

Deep learning, Scene understanding, 3D reconstruction, Real-time vision system.

REFERENCES

- **Professor Masayuki Inaba**
  Professor of Mechano-Informatics Department
  The University of Tokyo
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  inaba@jsk.imi.i.u-tokyo.ac.jp • +81 (3) 5841-7416

- **Associate Professor Kei Okada**
  Associate Professor of Mechano-Informatics Department
  The University of Tokyo
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[*CV compiled on 2017-11-28*]