Shingo Kitagawa

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Date of birth: 4 December 1993 • Nationality: Japan • Hometown: Kyoto, Japan

EDUCATION

The University of Tokyo, Bunkyo, Tokyo, Japan

Ph.D. in Creative Informatics, Information Science and Technology — Apr 2019 – Mar 2022
Thesis: Robot system architecture of transversal learning between maneuvering and autonomy using tangible interface
Supervisor: Prof. Kei Okada
Focus: Robotics, Teleoperation, User Interface, Manipulation, Manipulation Learning, Deep Learning

M.S. in Creative Informatics, Information Science and Technology — Apr 2017 – Mar 2019
Thesis: Research on a self-supervised learning system of robotic recognition and behavior for manipulation tasks with dual-arm robot
Supervisor: Prof. Masayuki Inaba
Focus: Robotics, Manipulation, Manipulation Learning, Deep Learning

B.S. in Mechano-Informatics, Engineering — Apr 2012 – Mar 2017
Supervisor: Prof. Kei Okada
Focus: Robotics, Manipulation, Manipulation Learning, Deep Learning

École Polytechnique Fédérale de Lausanne, Écublens, Canton of Vaud, Switzerland

Exchange student in Mechanical Engineering, Engineering — Sep 2014 – Aug 2015

WORK EXPERIENCE

GITAI USA, Inc., Torrance, CA, United states

Robotics Software Engineer — Oct 2023 – Present
Project: Space robotics
Focus: Robotics, Manipulation, Teleoperation

GITAI Japan, Inc., Ota, Tokyo, Japan

Robotics Software Engineer — Apr 2023 – Sep 2023
Project: Space robotics
Focus: Robotics, Manipulation, Teleoperation

The University of Tokyo, Bunkyo, Tokyo, Japan

Project Assistant Professor — Apr 2022 – Mar 2023
Project: Automation for customer service at restaurants using robots
Focus: Robotics, Manipulation, Human Recognition, State Machine

Preferred Networks, Chiyoda, Tokyo, Japan

Part-time Engineer — Feb 2018 – Dec 2018
Project: ChainerCV: Deep Learning Computer Vision Software
Focus: Robotics, Object Recognition, Instance Segmentation, Deep Learning

Internship — Aug 2018
Project: Manipulation Learning from Human Observation and Demonstration using Object Affordance Recognition
Focus: Robotics, Manipulation, Manipulation Learning, Deep Learning

RESEARCH EXPERIENCE

German Aerospace Center, Institute of Robotics and Mechatronics, Weßling, Bavaria, Germany

Visiting Researcher — Feb 2020
Project: Manipulation Learning from Human Direct Teaching using Gaussian Mixture Model
Supervisors: Dr. Daniel Leidner, Prof. Kei Okada
Focus: Robotics, Manipulation, Manipulation Learning, Gaussian Mixuture Model

PUBLICATIONS

JOURNALS

- Y. Obinata, K. Kawaharazuka, N. Kanazawa, N. Yamaguchi, N. Tsukamoto, I. Yanokura, S. Kitagawa, K. Okada and M. Inaba, “Situation classification of living environment by daily life support robot using pre-trained large-scale vision-language model”, *Advanced Robotics*, volume 39, issue 7, pp. 323–337, Apr 2025.
- S. Kitagawa, S. Hasegawa, N. Yamaguchi, K. Okada and M. Inaba, “Online tangible robot programming: interactive automation method from teleoperation of manipulation task”, *Advanced Robotics*, volume 37, issue 16, pp. 1063–1081, Aug 2023.

- S. Kitagawa, S. Hasegawa, N. Yamaguchi, K. Okada and M. Inaba, “Miniature Tangible Cube: Concept and Design of Target-Object-Oriented User Interface for Dual-Arm Telemanipulation”, *IEEE Robotics and Automation Letters*, volume 6, Issue 4, pp. 6977–6984, Jul 2021.
- S. Kitagawa, K. Wada, S. Hasegawa, K. Okada and M. Inaba, “Few-experiential learning system of robotic picking task with selective dual-arm grasping”, *Advanced Robotics*, volume 34, issue 18, pp. 1171–1189, Jun 2020.

BOOKS

- S. Kitagawa, K. Wada, K. Okada and M. Inaba, “Learning-Based Task Failure Prediction for Selective Dual-Arm Manipulation in Warehouse Stowing”, *In: Strand, M., Dillmann, R., Menegatti, E., Ghidoni, S. (eds) Intelligent Autonomous Systems 15. IAS 2018*, volume 867, pp. 428-439, Dec 2018.

CONFERENCES

- Y. Obinata, K. Kawaharazuka, N. Kanazawa, N. Yamaguchi, N. Tsukamoto, I. Yanokura, S. Kitagawa, K. Shinjo, K. Okada and M. Inaba, “Semantic Scene Difference Detection in Daily Life Patroling by Mobile Robots Using Pre-Trained Large-Scale Vision-Language Model”, *Proceedings of The 2023 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, Oct 2023.
- T. Yoshida, N. Okazaki, K. Takaki, M. Hirose, S. Kitagawa, and M. Inami, “Flexel: A Modular Floor Interface for Room-Scale Tactile Sensing”, *UIST ’22: Proceedings of the 35th Annual ACM Symposium on User Interface Software and Technology*, Oct 2022.
- S. Wakabayashi, S. Kitagawa, K. Kawaharazuka, T. Murooka, K. Okada and M. Inaba, “Grasp Pose Selection Under Region Constraints for Dirty Dish Grasps Based on Inference of Grasp Success Probability through Self-Supervised Learning”, *Proceedings of 2022 International Conference on Robotics and Automation (ICRA)*, pp. 8312-8318, May 2022.
- T. Hirose, S. Kitagawa, S. Hasegawa, Y. Kakiuchi, K. Okada and M. Inaba, “Waterproof Soft Robot Hand with Variable Stiffness Wire-driven Finger Mechanism Using Low Melting Point Alloy for Contact Pressure Distribution and Concentration”, *Proceedings of 2022 IEEE 5th International Conference on Soft Robotics (RoboSoft)*, pp. 109-116, Apr 2022.
- A. Fujii, K. Kochigami, S. Kitagawa, K. Okada and M. Inaba, “Development and Evaluation of Mixed Reality Co-eating System: Sharing the Behavior of Eating Food with a Robot Could Improve Our Dining Experience”, *Proceedings of 2020 29th IEEE International Conference on Robot and Human Interactive Communication (RO-MAN)*, pp. 357-362, Sep 2020.
- S. Hasegawa, K. Wada, S. Kitagawa, Y. Uchimi, K. Okada and M. Inaba, “GraspFusion: Realizing Complex Motion by Learning and Fusing Grasp Modalities with Instance Segmentation”, *Proceedings of 2019 International Conference on Robotics and Automation (ICRA)*, pp. 7235-7241, May 2019.
- S. Kitagawa, K. Wada, S. Hasegawa, K. Okada and M. Inaba, “Multi-stage Learning of Selective Dual-arm Grasping Based on Obtaining and Pruning Grasping Points Through the Robot Experience in the Real World”, *Proceedings of 2018 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, pp. 7123-7130, Oct 2018.
- K. Wada, S. Kitagawa, K. Okada and M. Inaba, “Instance Segmentation of Visible and Occluded Regions for Finding and Picking Target from a Pile of Objects”, *Proceedings of 2018 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, pp. 2048-2055, Oct 2018.

See more…

AWARDS & SCHOLARSHIPS

- JSPS Research Fellowship for Young Scientists (DC2), Apr 2020 – Mar 2022
  Japan Society for the Promotion of Science
- 2019 IEEE RAS Japan Joint Chapter Young Award (ICRA2019) May 2019
  S. Hasegawa, K. Wada, S. Kitagawa, Y. Uchimi, K. Okada and M. Inaba: GraspFusion:Realizing Complex Motion by Learning and Fusing Grasp Modalities with Instance Segmentation
- Toyota Dwango Advanced Artificial Intelligence Scholarship, Apr 2018 – Mar 2019
  Toyota, Dwango
- 2018 IEEE RAS Japan Joint Chapter Young Award (IROS2018) Oct 2018
  K. Wada, S. Kitagawa, K. Okada and M. Inaba: Instance Segmentation of Visible and Occluded Regions for Finding and Picking Target from a Pile of Objects
- Amazon Picking Challenge, Amazon Robotics Challenge 2016 – 2017
  5th Picking Task Award, 8th Stowing Task Award
  Leader of the UTokyo Team (Team-K)

- International Bio-molecular Design Competition 2012 (BIOMOD 2012), Nov 2012
  Gold Project Award, 3rd Audience Choice Award, 3rd Best Project Website Award, 2nd Best Presentation Award
  Member and Presentor of the UTokyo Team (Team-Komaba)

LANGUAGES

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

SKILLS

Linux (Ubuntu, Debian), Windows, Mac OS, Python, C++, Lisp, C, Java Script, Cuda, Perl, PHP, Scala, Java, LaTeX, MongoDB, InfluxDB, MATLAB, Adobe InDesign, Adobe Photoshop, Adobe Illustrator, Microsoft Word, Microsoft Excel, Microsoft PowerPoint, Davinci Resolve.

INTERESTS

Skiing, hiking, swimming, watching movies.

[*CV compiled on 2025-05-16*]