

# Ryo Eguchi, MS

**Personal:**

Day of birth: October 21, 1993

Place of birth: Kanagawa, Japan

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**Education:**

2018: MS (Engineering), Center for Space and Environment Design Engineering, School of Science for Open and Environmental Systems, Graduate School of Keio University

**Thesis:** “Spatiotemporal and Kinetic Gait Analysis System Fusing Laser Range Sensor and Instrumented Insoles”

2016: BS (Engineering), Dept. of System Design Engineering, Faculty of Science and Technology, Keio University

**Thesis:** “Kinetic and Spatiotemporal Gait Analysis of Patients with Parkinson’s Disease”

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**Teaching experiences:**

2016–2017: Computer Programming Exercise (C++), Teaching Assistant

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**Research support:**

2018: KLL (Keio Leading-edge Laboratory of Science and Technology) Ph.D. Program Research Grant

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**Honors / Awards / Scholarships:**

2018: Fujiwara Scholarship (Graduate School of Science and Technology endowment)

2017: SMC 2017 Student Travel Grant (IEEE International Conference on Systems, Man, and Cybernetics)

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**Publications (peer review):***Journal articles*

1. **Ryo Eguchi**, Masaki Takahashi, Validity of the Nintendo Wii Balance Board for Kinetic Gait Analysis, *Applied Sciences*, Vol. 8, No. 2 (285), 2018.

*Conference proceedings*

1. **R. Eguchi**, M. Takahashi, “Accessible Calibration of Insole Force Sensors Using the Wii Balance Board for Kinetic Gait Analysis.” IEEE Sensors 2018 Conference, New Delhi, India, October 2018. (Accepted for poster presentation)
2. H. Iijima, **R. Eguchi**, T. Aoyama, M. Takahashi, “Acceleration patterns of the trunk during walking in individuals with varus thrust: toward an establishment of the pathomechanics of varus thrust.” 2018 OARSI World Congress on Osteoarthritis, Liverpool, United Kingdom, April 2018. Poster No. 728. (Osteoarthritis and Cartilage, Vol. 26, S395)
3. H. Iijima, A. Yorozu, Y. Suzuki, **R. Eguchi**, T. Aoyama, M. Takahashi, “Specific contribution of hip abductor muscle strength to turning movement in individuals with knee osteoarthritis.” 2018 OARSI World Congress on Osteoarthritis, Liverpool, United Kingdom, April 2018. Poster No. 716. (Osteoarthritis and Cartilage, Vol. 26, S388).

4. **R. Eguchi**, A. Yorozu, M. Takahashi, “Accessible Ground Reaction Force Estimation Using Insole Force Sensors without Force Plates.” 2017 Asian Control Conference (ASCC2017), pp. 2861-2865, Gold Coast, Australia, December 2017. (Oral presentation)
5. **R. Eguchi**, A. Yorozu, M. Takahashi, “Kinetic and Spatiotemporal Gait Analysis System Using Instrumented Insoles and Laser Range Sensor.” 2017 IEEE International Conference on Systems, Man, and Cybernetics (SMC2017), pp. 705-709, Banff, Canada, October 2017. (Oral presentation)
6. **R. Eguchi**, A. Yorozu, T. Fukumoto, M. Takahashi, “Ground Reaction Force Estimation Using Insole Plantar Pressure Measurement System from Single-Leg Standing.” The 2016 IEEE International Conference on Multisensor Fusion and Integration for Intelligent Systems (MFI2016), pp. 109-113, Baden-Baden, Germany, September 2016. (Oral presentation)

*In review or preparation for revised submission*

1. **R. Eguchi**, A. Yorozu, T. Fukumoto, M. Takahashi, Force Plate-Free Calibration of Instrumented Insoles for Kinetic Gait Analysis, IEEE Sensors Journal. (In preparation for revised submission)
2. **R. Eguchi**, A. Yorozu, M. Takahashi, Spatiotemporal and Kinetic Gait Analysis System Based on Multisensor Fusion of Laser Range Sensor and Instrumented Insoles, IEEE Transactions on Systems, Man, and Cybernetics: Systems. (In preparation for revised submission)