

# Curriculum Vitae – Shuhei Watanabe

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## General Information

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**Homepage** <https://nabenabe0928.github.io>

**Github** <https://github.com/nabenabe0928>

## Education

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10.2020 – 07.2022 **Albert–Ludwigs–Universität Freiburg** - Freiburg, Germany.  
Master of Computer Science. Supervisor: Frank Hutter.

09.2015 – 03.2020 **The University of Tokyo** - Tokyo, Japan.  
Bachelor in Systems Innovation, Faculty of Engineering.  
I was absent from the university from 04.2018 to 08.2019.  
The GPA in the Faculty of Engineering: 3.85/4.3.  
Graduated with **the Best GPA** out of 37 students.

04.2014 – 08.2015 **The University of Tokyo** - Tokyo, Japan.  
Bachelor of College of Arts and Science, Natural Science 1.

## Employment

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09.2018 – 09.2020 **National Institute of Advanced Industrial Science and Technology (AIST)** - Tokyo, Japan.  
Technical Staff, full-time job.  
Studying AutoML, especially Hyperparameter Optimization.

04.2018 – 08.2018 **M3, inc.** - Tokyo, Japan.  
Market Researcher and Consultant, full-time job(internship).  
Consulting the methods to lay out the genome business.

02.2016 – 03.2018 **CA Tech Kids, inc.** - Tokyo, Japan.  
Programming mentor, part-time job.  
Teaching programming to elementary school students.

## Awards / Honors

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- 09.2020    **ITO Foundation for International Education Exchange**  
(\$2,000/month for 2 years, AR: 13/193=6.7%).
- 03.2020    **Hatakeyama Award from The Japan Society of Mechanical Engineers**  
This award is for the distinctive grades at the mechanical engineering related faculties at the University of Tokyo (AR: 5/340=1.5%).
- 05.2019    **PRMU 2018 Yearly Research Encouragement Award** for the paper *Speed up of Hyper-parameter Tuning with Nelder-Mead Method by Parallel Computing*, jointly with Yoshihiko Ozaki, Masaki Onishi. 3 papers were selected out of 170 papers. (AR: 3/170=1.8%).
- 10.2014    **1st Prize in the freshman team Hokei in the National Intercollegiate Taido Tournament.** Taido is one of the Japanese traditional martial arts.

## Publications

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I list acceptance rate for prizes or conferences where available as "AR: (papers accepted)/(papers submitted)=(percentage)". ○ refers to the presenter. ♣ refers to the equally contributed authors.

## Theses

1. ○ **S Watanabe**. (2018). Bachelor thesis. A Study on the Spontaneously Emerged Cooperation in a Collective Game with AI Type Agents. The University of Tokyo, Tokyo, Japan.

## Referred Conference Publications

1. ○ M Nomura, ♣ **S Watanabe**, Y Akimoto, Y Ozaki, M Onishi (2021). Warm Starting CMA-ES for Hyperparameter Optimization. Association for the Advancement of Artificial Intelligence (AAAI2021). To appear. (AR: 1692/9034=19%)
2. ○ S Takenaga, **S Watanabe**, M Nomura, Y Ozaki, M Onishi, H Habe (2020). Evaluating Initialization of Nelder-Mead Method for Hyperparameter Optimization in Deep Learning. International Conference on Pattern Recognition (ICPR2020). To appear. Oral presentation.
3. ○ Y Ozaki, Y Tanigaki, **S Watanabe**, M Onishi (2020). Multiobjective Tree-structured Parzen Estimator for Computationally Expensive Optimization Problems. The Genetic and Evolutionary Computation Conference (GECCO2020). (AR: 149/415=36%). Oral presentation.

4. ○ **S Watanabe**, Y Ozaki, Y Bando, M Onishi (2019). Speeding up of the Nelder–Mead Method by Data–driven Speculative Execution. Asian Conference on Pattern Recognition (ACPR2019). Oral presentation. (AR: 128/273=46%, **oral presentation: 36/273=13%**)

## Referred Workshop Publications

1. ○ Y Ozaki, ○ **S Watanabe**, M Onishi (2019). Accelerating the Nelder–Mead Method with Predictive Evaluation. 6th ICML Workshop on Automated Machine Learning (AutoML2019) (AR: 29/50=58%).
2. ○ ♣ M Nomura, ♣ **S Watanabe**, Y Ozaki, M Onishi (2019). Warm Starting Method for CMA-ES. Workshop on Meta-Learning at NIPS 2019 (MetaLearn2019) (AR: 58/84=69%).

## Non-peer Reviewed Publications

1. ○ **S Watanabe**, Y Ozaki, M Onishi (2019). Speed up of Hyper-parameter Tuning with Nelder–Mead Method by Parallel Computing. Pattern Recognition and Media Understanding (PRMU2019). **PRMU 2018 Yearly Research Encouragement Award** (AR: 3/170=1.8%).
2. ○ **S Watanabe**, M Nomura, M Onishi (2020). The Characteristics Required in Hyperparameter Optimization of Deep Learning Algorithms (JSAI2019).

## Research Skills

I rate my skill on a scale from ++ (very good) to ×× (no knowledge). My code is available here: <https://github.com/nabenabe0928>

<b>Python</b>	++	Main language in my research.
<b>Pytorch</b>	++	Main framework for deep-learning models in my research.
<b>Singularity</b>	++	Used this container to manage environments.
<b>Shell</b>	++	Used to manage experiments automatically.
<b>Github</b>	++	Used to participate in developments in AIST.
<b>HPC</b>	++	Used HPC called ABCI to conduct experiments in AIST.
<b>MS Office</b>	++	Used in consulting companies for half a year.
<b>Java</b>	++	Main language in the research for bachelor's thesis.
<b>Tensorflow</b>	+	Used when conducting experiments for bachelor's thesis.
<b>Keras</b>	+	Used when conducting experiments for bachelor's thesis.
<b>C++</b>	+	Only for coding competitions.

## Linear Algebra & Calculus

- ++ Top 5% in *Exercises for Mathematics 1, 2* from 09.2016 to 08.2017 which is the latest grades related to the knowledge.

## Certificates

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**TOEFL iBT** Total 100 (R: 29, L: 25, S: 22, W: 24).

**GRE** Q: 168 (93%), V: 152 (54%), W: 4.0 (57%).

## Language Skills

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**English** CEFR C1.

**Japanese** Mother Tongue.

**German** CEFR A2.

**French** CEFR A2.