Curriculum Vitae – Shuhei Watanabe

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General Information

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GitHub	https://github.com/nabenabe0928
Homepage	https://nabenabe0928.github.io

Education

10.2020 – Present	**Albert–Ludwigs–Universität Freiburg** - Freiburg, Germany. Master of Computer Science. Supervisor: Prof. Frank Hutter. Overall GPA: 1.1/5.0 (1.0 is the best grade). The expected graduation on 2023 Summer.
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. Overall GPA: 3.78/4.0 (4.0 is the best grade). 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

2023 Summer –	**Preferred networks inc.** - Tokyo, Japan. Research engineer.
12.2020 – Present	**The Machine Learning Lab in Albert–Ludwigs–Universität Freiburg** - Freiburg, Germany. Research assistant. Developing AutoML system named Auto-Pytorch. GitHub URL: `https://github.com/automl/Auto-PyTorch`

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.

Awards / Honors

10.2022 **ELIZA MSc Scholarship** (€1,000/month)

10.2022 **Deutschlandstipendium** (€300/month)

07.2022 **1st Prize in AutoML2022: Multiobjective Hyperparameter Optimization for Transformers**

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%).
URL: `https://www.jsme.or.jp/archive/award/shou4-19.pdf`

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%).
URL: `https://www.ieice.org/~prmu/jpn/award_list.html`

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

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

Referred Journal Publications

1. ◯ Y. Ozaki, Y. Tanigaki, **S. Watanabe**, M. Nomura, M. Onishi. Multiobjective Tree-structured Parzen Estimator. Journal of Artificial Intelligence Research 2022 (JAIR2022).

Referred Conference Publications

1. ◯ S. Shigenaka, S. Takami, **S. Watanabe**, Y. Tanigaki, Y. Ozaki, M. Onishi. MAS-Bench: Parameter Optimization Benchmark for Multi-agent Crowd Simulation. International Conference on Autonomous Agents and MultiAgent Systems (AAMAS2021).
2. ◯ ♣ M. Nomura, ♣ **S. Watanabe**, Y. Akimoto, Y. Ozaki, M. Onishi. Warm Starting CMA-ES for Hyperparameter Optimization. Association for the Advancement of Artificial Intelligence (AAAI2021). (AR: 1692/9034=19%).
3. ◯ S. Takenaga, **S. Watanabe**, M. Nomura, Y. Ozaki, M. Onishi, H. Habe. Evaluating Initialization of Nelder–Mead Method for Hyperparameter Optimization in Deep Learning. International Conference on Pattern Recognition (ICPR2020). Oral presentation.
4. ◯ Y. Ozaki, Y. Tanigaki, **S. Watanabe**, M. Onishi. Multiobjective Tree-structured Parzen Estimator for Computationally Expensive Optimization Problems. The Genetic and Evolutionary Computation Conference (GECCO2020).
5. ◯ **S. Watanabe**, Y. Ozaki, Y. Bando, M. Onishi. 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. ◯ **S. Watanabe**, N. Awad, M. Onishi, F. Hutter. Multi-objective Tree-structured Parzen Estimator Meets Meta-learning. Workshop on Meta-Learning at NIPS 2022 (MetaLearn2022).
2. ◯ **S. Watanabe**, F. Hutter. c-TPE: Generalizing Tree-structured Parzen Estimator with Inequality Constraints for Continuous and Categorical Hyperparameter Optimization. Workshop on Gaussian Processes, Spatiotemporal Modeling, and Decision-making Systems at NIPS 2022 (GPSMDM2022).
3. ◯ ♣ M Nomura, ♣ **S. Watanabe**, Y. Ozaki, M. Onishi. Warm Starting Method for CMA-ES. Workshop on Meta-Learning at NIPS 2019 (MetaLearn2019).

4. ◯ Y. Ozaki, ◯ **S. Watanabe**, M. Onishi. Accelerating the Nelder–Mead Method with Predictive Evaluation. Workshop on Automated Machine Learning at ICML 2019 (AutoML2019).

Non-peer Reviewed Publications

1. ◯ **S. Watanabe**, Y. Ozaki, M. Onishi. 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. The Characteristics Required in Hyper-parameter Optimization of Deep Learning Algorithms (JSAI2020).

Certificates

TOEFL iBT	Total 100 (R: 29, L: 25, S: 22, W: 24).
GRE	Q: 168 (93%), V: 152 (54%), W: 4.0 (57%).
Atcoder[1]	Highest rating 1626 (Approx. Top 3.5%)

Language Skills

English	CEFR C1.
Japanese	Mother Tongue.
German	CEFR B1.
French	CEFR A2.

[1] https://atcoder.jp/users/nabenabe0928