Han Bao

Address	Room 515, Faculty of Science Building No. 7, 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-0033, Japan
Mobile Phone	+81-80-8232-6278
Email	tsutsumi@ms.k.u-tokyo.ac.jp
Website	`https://hermite.jp/`

Profile

Han Bao is a graduate student at the University of Tokyo, pursuing Ph.D. course in computer science. My primal research interest lies in loss functions, which is devoted to semi-supervised learning, class-imbalanced classification, transfer learning, and robust learning.

Education

2019- **The University of Tokyo**, Ph.D. in Computer Science
Supervisor: Masashi Sugiyama
Research Field: Machine Learning

2017-2019 **The University of Tokyo**, M.Sc. in Computer Science
Supervisor: Masashi Sugiyama
Research Field: Machine Learning

2013-2017 **The University of Tokyo**, B.Sc. in Information Science
Supervisor: Masashi Sugiyama
Research Field: Machine Learning

Publication

8. Nordström, M., **Bao, H.**, Löfman, F., Hult, H., Maki, A., and Sugiyama, M. Calibrated Surrogate Maximization of Dice. In *Proceedings of 23rd International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI2020)*, LNCS 12264:269–278, 2020.

7. **Bao, H.**, Scott, C., and Sugiyama, M. Calibrated Surrogate Losses for Adversarially Robust Classification. In *Proceedings of 33rd Annual Conference on Learning Theory (COLT2020)*, PMLR 125:408–451, 2020.

6. **Bao, H.** and Sugiyama, M. Calibrated Surrogate Maximization of Linear-fractional Utility in Binary Classification. In *Proceedings of 23rd International Conference on Artificial Intelligence and Statistics (AISTATS2020)*, PMLR 108:2337–2347, 2020.

5. Wu, Y.-H., Charoenphakdee, N., **Bao, H.**, Tangkaratt, V., and Sugiyama, M. Imitation Learning from Imperfect Demonstration. In *Proceedings of International Conference on Machine Learning (ICML2019)*, PMLR 97:6818–6827, 2019.

4. Kuroki, S., Charoenphakdee, N., **Bao, H.**, Honda, J., Sato, I., and Sugiyama, M. Unsupervised Domain Adaptation Based on Source-guided Discrepancy. In *Proceedings of AAAI Conference on Artificial Intelligence (AAAI2019)*, 33 01:4122–4129, 2019.

3. **Bao, H.**, Niu, G., and Sugiyama, M. Classification from Pairwise Similarity and Unlabeled Data. In *Proceedings of International Conference on Machine Learning (ICML2018)*, PMLR 80:461–470, 2018.

2. **Bao, H.**, Sakai, T., Sato, I., and Sugiyama, M. Convex Formlation of Multiple Instance Learning from Positive and Unlabeled Bags. *Neural Networks* 105:132–141, 2018.

1. **Bao, H.**, Usui, T., and Matsuura, K. Improving Optimization Level Estimation of Malware by Feature Selection (in Japanese). In *Proceedings of the 32nd Symposium on Cryptography and Information Security*, 2015.

Employment & Activity

Oct 2019 - Feb 2020 University of Michigan
Visiting Scholar

Research on theory of loss functions and adversarial learning with Prof. Clayton Scott. The result is published at COLT2020.

Apr 2017 - Present RIKEN AIP
Research Assistant

Research on learning paradigm under limited information. Belong to Imperfect Learning Team led by Masashi Sugiyama.

Apr 2017 - Dec 2018 Preferred Networks
Engineer / Researcher

Make Chainer (deep learning framework) faster and more scalable on the distributed environment, especially working on model-parallel deep learning.

Skills: C++, MPI, Python, Chainer

Project Page: `https://github.com/chainer/chainermn`

Aug 2016 - Sep 2016 Preferred Networks
Internship

Research on automatic generation of motions for 3D-avatars.

Skills: Python, Chainer, OpenGL, GLSL

Awards & Funding

Nov 2019 **Student presentation award** at 22nd Information-Based Induction Sciences Workshop (IBIS2019)

2019-2022 **JSPS Research Fellowship DC1**
Japanese domestic research fellowship provided for promising Ph.D. students.
100K USD for three years.

Nov 2018 **Best poster award** at Japan-Israel Machine Learning Meeting 2018

2018-2020 **ACT-I, JST**
A research funding for promising young researchers sponsored by JST.
30K USD for a year and a half.

2017-2018 **AIP Challenge Program: 1st place among 40 researchers**
A research funding for promising young researchers sponsored by JST.
10K USD for half a year.

Professional Activities

2020 Reviewer of AISTATS, ICML, NeurIPS

2019 Reviewer of AAAI, AISTATS, ICML, NeurIPS