

AKIFUMI OKUNO

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Yoshida-Honmachi, Sakyo-ku, Kyoto, Japan. (postal code: 606-8317)

I got master's degree in mathematical statistics in 2016 (Osaka University), and I am currently working as a technical staff-I of RIKEN center for advanced intelligence project (AIP) towards doctoral degree.

PUBLICATIONS

Journal paper (refereed)

1. [Akifumi Okuno](#) and Hidetoshi Shimodaira. "Hyperlink Regression via Bregman Divergence." *accepted to Neural Networks*.
 \triangleright <https://arxiv.org/abs/1908.02573>

Conference papers (refereed)

5. Geewook Kim, [Akifumi Okuno](#), Kazuki Fukui, and Hidetoshi Shimodaira. "Representation Learning with Weighted Inner Product for Universal Approximation of General Similarities." International Joint Conference on Artificial Intelligence (**IJCAI**) 2019.
 \triangleright <https://www.ijcai.org/proceedings/2019/699>
4. [Akifumi Okuno](#) and Hidetoshi Shimodaira. "Robust Graph Embedding with Noisy Link Weights." International Conference on Artificial Intelligence and Statistics (**AISTATS**) 2019. PMLR 89:664-673.
 \triangleright <http://proceedings.mlr.press/v89/okuno19b.html>
3. [Akifumi Okuno](#), Geewook Kim, and Hidetoshi Shimodaira. "Graph Embedding with Shifted Inner Product Similarity and Its Improved Approximation Capability." International Conference on Artificial Intelligence and Statistics (**AISTATS**) 2019. PMLR 89:644-653.
 \triangleright <http://proceedings.mlr.press/v89/okuno19a.html>
2. [Akifumi Okuno](#), Tetsuya Hada, and Hidetoshi Shimodaira. "A probabilistic framework for multi-view feature learning with many-to-many associations via neural networks." International Conference on Machine Learning (**ICML**) 2018. PMLR 80:3888-3897.
 \triangleright <http://proceedings.mlr.press/v80/okuno18a.html>
1. Kazuki Fukui, [Akifumi Okuno](#), and Hidetoshi Shimodaira. "Image and tag retrieval by leveraging image-group links with multi-domain graph embedding." International Conference on Image Processing (**ICIP**) 2016.
 \triangleright <http://ieeexplore.ieee.org/document/7532351/>

Workshop paper (refereed)

1. [Akifumi Okuno](#) and Hidetoshi Shimodaira. "On representation power of neural network-based graph embedding and beyond." **ICML** 2018 TADGM Workshop. 8 pages + Supplement. (Okuno et al., (AISTATS2019) is based on this workshop paper)
 \triangleright <https://sites.google.com/view/tadgm/accepted-papers>

PREPRINT

1. [Akifumi Okuno](#) and Hidetoshi Shimodaira. "Extrapolation Towards Imaginary 0-Nearest Neighbour and Its Improved Convergence Rate." 31 pages. *submitted*.
 \triangleright <https://arxiv.org/abs/2002.03054>

INVITED TALKS

3. Akifumi Okuno. Bregman Hyperlink Regression and Its Expressive Power (in English, Oral), at *ACML 2019 Workshop on Statistics and Machine Learning Researchers in Japan*, Nagoya, Japan. Nov., 2019.
2. Akifumi Okuno. Graph Embedding with Shifted Inner Product Similarity and Its Improved Approximation Capability (in English, Oral), at *the Workshop on Functional Inference and Machine Intelligence*, Tokyo, Japan. Mar., 2019.
1. Akifumi Okuno. A probabilistic model for graph embedding and its properties (in Japanese, Oral), at *RIMS Workshop*, Kyoto, Japan. Nov., 2018.

Other presentations are listed in <https://okuno.co>

EDUCATION

Kyoto University

April 2017 - March 2019

Doctoral student, Graduate School of Informatics,

Supervisor: Prof. Hidetoshi SHIMODAIRA

Coursework completed **without** degree. I reserve the right to submit doctoral thesis to Kyoto University within 3 years from April, 2019.

Osaka University

April 2016 - March 2017

Doctoral student, Graduate School of Mathematical Science,

Supervisor: Prof. Hidetoshi SHIMODAIRA

Transferred to Kyoto University

Osaka University

April 2014 - March 2016

M. Eng. in Mathematical Science, Graduate School of Engineering Science

Supervisor: Prof. Hidetoshi SHIMODAIRA

Thesis: "Iteratively Reweighted-Graph Embedding"

graduated at the top of the list of the division of mathematical science

Osaka University

April 2010 - March 2014

B. Eng. in Mathematical Science, Engineering Science Department

Supervisor: Prof. Hidetoshi SHIMODAIRA

Thesis: "Robust information criterion and its application"

graduated at the top of the list of mathematical science course

LANGUAGE

Japanese Native

English Intermediate

OVERSEAS EXPERIENCE

UC Berkeley, California, USA

October 2016 - November 2016

Research visiting at Prof. Bin Yu's Lab. (as a visitor)

The stay was funded by the Center for Mathematical Modeling and Data Science, Osaka University

Ohio State University, Ohio, USA

February 2016 - May 2016

Research visitig at Prof. Mikhail Belkin's Lab. (as a visitor)

The stay was funded by the Center for Mathematical Modeling and Data Science, Osaka University

WORKING EXPERIENCE

RIKEN Center for Advanced Intelligence Project (AIP)

Feb. 2017 - (Present)

as a Part-timer: Feb. 2017 - Mar. 2017 and Apr. 2018 - Mar. 2019

as a Trainee: May 2017 - Mar. 2018

as a Technical Staff I: Apr. 2019 - (present)

working at Mathematical Statistics team (team leader: Hidetoshi SHIMODAIRA)

Japan Society for the Promotion of Science (JSPS) <i>Research Fellow (DC2)</i>	Apr. 2017 - Mar. 2019
Graduate School of Engineering Science, Osaka University <i>Σ-Research Assistant</i>	Aug. 2016 - Feb. 2017
Osaka University Library <i>Library Teaching Assistant of Statistics and Mathematics</i>	Apr. 2014 - Feb. 2017
Osaka University <i>Tutor of a Taiwanese short-term exchange student</i>	Oct. 2015 - Feb. 2016
Engineering Science Department, Osaka University <i>Teaching Assistant</i>	Apr. 2014 - Aug. 2015
Apr. 2015 - Aug. 2015: Problem Based Learning (Prof. Kei HIROSE), Oct. 2014 - Feb. 2015: Statistics B-II (Prof. Fuyuhiko TANAKA), Apr. 2014 - Aug. 2014: Complex Analysis (Prof. Fuyuhiko TANAKA).	

AWARDS

Excellent Presentation Award from IBISML2019	<i>Nov. 2019</i>
Excellent Research Award from ICT-13 (held in Kyoto U.)	<i>Feb. 2019</i>
Excellent Presentation Award from JAPAN STATISTICAL SOCIETY	<i>Mar. 2017</i>
Full Repayment Exemption of JASSO Type I scholarship for Students with Excellent Grades from JAPAN STUDENT SERVICES ORGANIZATION (JASSO)	<i>May 2016</i>
Graduate School of Engineering Science Award from OSAKA UNIVERSITY	<i>Mar. 2016</i>
Engineering Science Department Award from OSAKA UNIVERSITY	<i>Mar. 2014</i>
Kimura Award from RITSUMEIKAN ACADEMY	<i>Mar. 2010</i>

MISC.

Reviewer of AISTATS2019, ICML2019, ACML2019, AAAI2020, AISTATS2020, JJSD, Machine Learning, and Neural Networks.