Hoang NT

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Profile

By day, I develop news ranking algorithms to filter misleading information on the internet. By early morning and holidays, I work on my personal goal of developing mathematical foundations for understanding large scale machine learning methods in graph-structured data. My native name is Nguyen Thai Hoang, I publish under an abbreviated name "Hoang NT".

Updated 2022-1-1

Education

2015 – 2017	**Tokyo Institute of Technology**, *School of Computing*, M.Eng. Degree, Computer Science, IGP-A Program. GPA: 3.0 / 3.0 (Japanese system for MEXT scholars) – Ranked 1st.	Tokyo, Japan.
2009 – 2014	**Hanoi University of Science and Technology**, *School of Telecommunication*, B.Eng. Degree, Computer Engineering. GPA: 3.21 / 4.00 (major: 3.56 / 4.00) – Top 5%.	Hanoi, Vietnam.

Work Experience

Nov 2021 – Present	**Machine Learning Engineer**, *SmartNews, Inc.*, Design algorithms for news ranking in realtime.	Tokyo, Japan.
Jan 2020 – Oct 2021	**Researcher**, *RIKEN Center for Advanced Intelligence Project*, Research on kernel analysis with a focus on tangent kernels.	Tokyo, Japan.
Jan 2019 – Oct 2020	**Researcher**, *RIKEN Center for Advanced Intelligence Project*, Research on graph embedding theory from graph signal processing and graph homomorphism perspectives.	Tokyo, Japan.
Oct 2018 – May 2021	**Research Assistant**, *School of Computing, Tokyo Institute of Technology*, Research on graph neural networks with applications to weakly supervised learning.	Tokyo, Japan.
2016 – 2017	**Research Assistant**, *School of Computing, Tokyo Institute of Technology*, Research on the neural network compression technology for the CREST-Deep project funded by JST.	Tokyo, Japan.

Publications (refereed)

Conference
- **AAAI 2022** *Leaping Through Time with Gradient-based Adaptation for Recommendation*, Nuttapong Chairatanakul, Hoang NT, Xin Liu, and Tsuyoshi Murata, 36th AAAI Conference on Artificial Intelligence (AAAI), Online 2022.
CoRR abs/2112.05914, Dec 2021

- **NeurIPS 2021** *Learning on Random Balls is Sufficient for Estimating (Some) Graph Parameters*, Takanori Maehara and Hoang NT, 35th Conference on Neural Information Processing Systems (NeurIPS), Online 2021.
CoRR abs/2111.03317, Nov 2021

- **ICML 2020** *Graph Homomorphism Convolution*, Hoang NT and Takanori Maehara, 37th International Conference on Machine Learning (ICML), Online 2020.
CoRR abs/2005.01214, June 2020

- **ICPR 2020** *Revisiting Graph Neural Networks: Graph Filtering Perspective*, Hoang NT, Takanori Maehara, and Tsuyoshi Murata, 25th International Conference on Pattern Recognition, Online 2021.

Workshop	• **ICLR-LLD 2019** *Learning Graph Neural Networks with Noisy Labels*, Hoang NT, Choong Jun Jin, and Tsuyoshi Murata, ICLR 2019 Limited Labeled Data Workshop. CoRR abs/1905.01591
	• **IJCAI-ReLiG 2017** *Motif-Aware Graph Embedding*, Hoang NT and Tsuyoshi Murata, IJCAI 2017 ReLiG Workshop.
Preprint	• *Adaptive Stacked Graph Filter*, Hoang NT, Takanori Maehara, and Tsuyoshi Murata. CoRR abs/2011.10988, Nov 2020
	• *A Simple Proof of the Universality of Invariant/Equivariant Graph Neural Networks*, Takanori Maehara and Hoang NT. CoRR abs/1910.03802, Oct 2019
	• *Revisiting Graph Neural Networks: All We Have is Low-Pass Filters*, Hoang NT and Takanori Maehara. CoRR abs/1905.09550, May 2019

Awards and Scholarships

2015 – 2017	**Japanese Government (MEXT) Scholarship**. University Recommendation. Covering living expenses and tuition fees.

Programming Languages and Frameworks

Framework	**PyG, PyTorch, Scikit-Learn, TensorFlow**
Programming	**Python**

Other Activities

Dec 2021	**NeurIPS Meetup 2021** Online. Organizer for NeurIPS Japan Meetup. Website: https://neuripsmeetup.jp/2021/
Dec 2020	**NeurIPS Meetup 2020** Online. Organizer for NeurIPS Japan Meetup. Website: https://neuripsmeetup.jp/2020/
Jul 2020	**ICML 2020** Online. Virtual volunteer for the conference.
Sep 2019	**TU Berlin & RIKEN AIP Joint Workshop** at TU Berlin. Poster presentation: Frequency analysis for GNN
Aug 2019	**CREST-Deep Workshop** at Lectore Hayama. Presentation title: Learning Graph Neural Networks with Noisy Labels
Jun 2019	**PLMW@PLDI'19** at Phoenix, Arizona, USA. Programming Languages Mentoring Workshop at PLDI'19 (travel grant by ACM)

Languages

English	**Fluent**
Japanese	**Basic**
Vietnamese	**Native**