

CONTACT INFORMATION

Graduate School of Data Science
 Seoul National University
 1 Gwanak-ro, Gwanak-gu, Seoul, South Korea, 08826

th.hwang@snu.ac.kr
<https://taehyunable.com>

RESEARCH INTERESTS

Sequential decision making, Statistical machine learning, Optimization for machine learning

EDUCATION

Seoul National University	Mar. 2020 - Present
Ph.D Candidate in Data Science	
Advisor: Min-hwan Oh	
Sungkyunkwan University	Sept. 2016 - Aug. 2018
M.S in Mathematics	
Advisor: Yongdo Lim / Co-advisor: Rhee Man Kil	
Thesis: Combination of Gaussian Kernel Function Networks for Traffic Flow Prediction	
Kyungpook National University	Mar. 2010 - Aug. 2016
B.S in Mathematics (Graduated with the highest honor)	
Minor: Business Administration	

EXPERIENCE

- **The Research Institute of Basic Science, Sungkyunkwan University**
 Research Assistant Sept. 2018 - Feb. 2020

PUBLICATIONS (* denotes equal contribution)

- [6] **Lasso Bandit with Compatibility Condition on Optimal Arm**
 Harin Lee*, **Taehyun Hwang***, and Min-hwan Oh
 Preprint (*Under Review*)
- [5] **Randomized Exploration for Reinforcement Learning with Multinomial Logistic Function Approximation**
 Wooseong Cho*, **Taehyun Hwang***, Joongkyu Lee, and Min-hwan Oh
 Preprint (*Under Review*)
 • Outstanding Paper Award, Korean Artificial Intelligence Association 2023 Summer Conference
- [4] **Model-based Reinforcement Learning with Multinomial Logistic Function Approximation.**
Taehyun Hwang and Min-hwan Oh
Proceedings of the 37th AAAI Conference on Artificial Intelligence (AAAI), 2023.
 • Oral presentation in main technical session
- [3] **Combinatorial Neural Bandits.**
Taehyun Hwang*, Kyuwook Chai*, and Min-hwan Oh
International Conference on Machine Learning (ICML), 2023
 • Outstanding Paper Award, Korean Artificial Intelligence Association 2022 Summer Conference
- [2] **Deep Learning Aided Evaluation for Electromechanical Properties of Complexly Structured Polymer Nanocomposites.**
 Kyungmin Baek, **Taehyun Hwang**, Wonseok Lee, Hayoung Chung, and Maenghyo Cho
Composites Science and Technology, 109661, 2022.
- [1] **Estimation of Jamming Parameters based on Gaussian Kernel Function Networks.**
Taehyun Hwang, Rhee Man Kil, Hyun Ku Lee, Jung Ho Kim, Jae Heon Ko, Jeil Jo, and Junghoon Lee
Journal of the Korea Institute of Military Science and Technology 23 (1), 1-10, 2020.

INDUSTRIAL PROJECTS

- Development of Analysis Model to Explore Test Process Equipment Combination and Improve Flexible Test Performance.
Director: Prof. Min-hwan Oh
Funded by *SK hynix*
Mar. - Sep. 2022
- A Study on the Algorithms for Estimating the Parameters of Autonomous Jamming Technique.
Director: Prof. Rhee Man Kil
Funded by *Agency for Defense Development* and *LIG Nex1*
Apr. - Dec. 2018
- An Industrial Problem Solving Project Using Mathematical Data Analysis.
Director: Prof. Yongdo Lim
Funded by *National Institute for Mathematical Sciences*
May. - Sept. 2017

TALKS

“Neural Contextual Bandits from Single Action to Combinatorial Actions”

- SK Telecom Market Top AI Course, SK Telecom Tower
July 2023

“Model-based Reinforcement Learning with Multinomial Logistic Function Approximation”

- Conference of Korea Software Congress (KSC), Busan
Dec. 2023
- Conference of Korea Data Mining Society (KDMS), Gangneung-Wonju National University
June 2023
- AAAI 2023, Washington D.C.
Feb. 2023
- KAIA & NAVER Joint Conference, NAVER 1784 (Seungnam)
Nov. 2022
- INFORMS 2022 Annual meeting, Indianapolis
Oct. 2022

“Combinatorial Neural Bandits”

- Advanced neuroimaging and AI 2024, Seoul National University
June 2024
- AI Seoul 2024, Seoul City Hall
Feb. 2024
- Conference of Korean Statistical Society (KSS), Sungshin Women’s University
Dec. 2023
- AIIS Retreat 2023, Seoul National University
Nov. 2023
- Conference of Korea Data Mining Society (KDMS), Busan
Aug. 2022
- Conference of Korean Artificial Intelligence Association (KAIA), Jeju
Aug. 2022
- INFORMS 2021 Annual meeting, Anaheim (Virtual)
Oct. 2021

“A Gaussian Kernel Function Network for Traffic Flow Prediction”

- Korean Mathematical Society (KMS) 2019 Annual meeting, Hongik University
Oct. 2019

“Mathematics and Machine learning”

- Special lecture for undergraduate students, Kongju National University
Sept. 2019

SCHOLARSHIPS AND AWARDS

- **YOULCHON AI Star Scholarship**, Youlchon Foundation
Aug. 2023
- **Outstanding Paper Award**, Korean Artificial Intelligence Association
July 2023
- **AAAI Student Scholarship**, AAAI
Feb. 2023
- **Outstanding Paper Award**, Korean Artificial Intelligence Association
Aug. 2022

TEACHING EXPERIENCE

- **Teaching Assistant** at Seoul National University
Data Science & Reinforcement Learning, Foundation of Data Science, Math for Data Science
- **Teaching Assistant** at Sungkyunkwan University
Calculus I/II, Linear Algebra, Discrete Mathematics, Topics in Algebra (Lie Algebra)

- **Conference Reviewer**

ICML: 2024, 2023

NeurIPS: 2024, 2023, 2022

ICLR: 2024