# Sangwoo Shin

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## EDUCATION

| | | |
|---|---|---|
| 03/2015~ 08/2022 | **Sungkyunkwan University** <br> **B.S in Mathematics** *(Summa Cum Laude)* <br> Selected courses: Probability Theory(A+), Advanced Linear Algebra(A+), Real analysis(A+), <br> Algebraic Topology(A+), Differential Geometry(A+) | Suwon, South Korea |
| 08/2022 ~ 08/2024 | **Sungkyunkwan University** <br> **M.S in Computer Science and Engineering** <br> Advisor: Honguk Woo | Suwon, South Korea |

## PUBLICATIONS

**I changed my name from Sangwoo Cho to Sangwoo Shin.**

*: Equal Contribution

1. Semantic Skill Grounding for Embodied Instruction-Following in Cross-Domain Environments
   **Sangwoo Shin\***, SeungHyun Kim\*, Youngsoo Jang, Moontae Lee, Honguk Woo
   Association for Computational Linguistics (ACL) Findings, 2024

2. *SemTra: A Semantic Skill Translator for Cross-domain Zero-shot Policy Adaptation*
   **Sangwoo Shin**, Minjong Yoo, Jeongwoo Lee, Honguk Woo
   *AAAI Conference on Artificial Intelligence (AAAI), 2024*

3. One-shot Imitation in a Non-Stationary Environment via Multi-Modal Skill
   **Sangwoo Shin**, Daehee Lee, Minjong Yoo, Woo Kyung Kim, Honguk Woo
   *International Conference on Machine Learning (ICML), 2023*

4. Skills Regularized Task Decomposition for Multi-task Offline Reinforcement Learning
   Minjong Yoo, **Sangwoo Cho**, Honguk Woo
   *Neural Information Processing Systems (NeurIPS), 2022 (Oral Presentation)*

5. An Efficient Combinatorial Optimization Model Using Learning-to-Rank Distillation
   Hyunsung Lee\*, **Sangwoo Cho\***, Honguk Woo
   *AAAI Conference on Artificial Intelligence (AAAI), 2022 (Oral Presentation)*

6. Differentiable Ranking Metric Using Relaxed Sorting for Top-K Recommendation
   Hyunsung Lee, **Sangwoo Cho**, Yeongjae Jang, Jaekwang Kim, Honguk Woo
   *IEEE Access, 2021*

7. A Global DAG Task Scheduler Using Deep Reinforcement Learning and Graph Convolution Network
   Hyunsung Lee, **Sangwoo Cho**, Yeongjae Jang, Jinkyu Lee , Honguk Woo
   *IEEE Access, 2021*

## WORK EXPERIENCES

1. LG AI Research
   Advisor: Moontae Lee                                                    Oct. 2023 ~ Current
   - Controllable LLMs with Multi-Objective RLHF

## RESEARCH EXPERIENCES

1. Undergraduate Research Students                                          Aug. 2020 ~ Dec.2020
   Understanding of Algebraic Geometry | Advisor: Sukmoon Huh
   Topics: Zariski topology, Tensor, Riemann mapping theorem, etc.
2. Undergraduate Research Students
   Partial Differential Equations and Artificial Intelligence | Advisor: Seok-Bae Yun    Dec.2020 ~ Mar.2021
   Topics: Cybenko's universal approximation theorem, etc.

## TEACHING

1. Private Tutoring                                                        Jan. 2020 ~ June. 2020
   Linear Algebra (Textbook: Linear Algebra Done Right – Sheldon Axler)
   Topics: Nil-potent, Jordan canonical form, Diagonalization, Similarity of linear operators, etc.

## SCHOLARSHIPS

| 2022 ~ 2023 | Full-Funded Scholarship |
| 2021 | Han-Gill Scholarship |
| 2019 Fall | National Academic Excellence Scholarship |