Hanse Kim

hkim2389@wisc.edu ∘ https://github.com/hansekimdy

Education

University of Wisconsin-Madison — Autumn 2025 - Current
PhD Program, Physics — *Madison, WI, US*

Gwangju Institute of Science and Technology — Spring 2019 - Spring 2025
BSc, Physics and Photonic Sciences Major, Mathematics Minor — *Gwangju, South Korea*

Publications (Published)

Kim, Hanse, Jitendra Pal, and Chanyong Park. "Holographic description for correlation functions." Physical Review D 109.12 (2024): 126019.

Park, Chanyong, **Hanse Kim**, and Kyungchan Cho. "Time evolution of two-point function in expanding universes." Mod.Phys.Lett.A 41 (2026) 04n05, 2550233.

Publications (Preprints)

Hyun-Sik Jeong, **Hanse Kim**, Keun-Young Kim, Gaya Yun, Hyeonwoo Yu, Kwan Yun "AdS/Deep-Learning made easy II: neural network-based approaches to holography and inverse problems." arXiv preprint arXiv:2511.22522 (2025).

Research Experience

String Landscape Statistics — September 2025 – Current
UW-Madison — *Advisor : Jakob Moritz*

- Developing framework for calculating lower bounds of vacua density for Type IIb theories compactified on Calabi-Yau threefolds

Inverse Spectral Problems via Neural Networks — August 2024 – December 2025
GIST, Undergraduate Researcher — *Advisor : Keun-Yeong Kim*

- Develop neural network models for solving inverse Schrödinger spectral problems
- Physically informed neural network methods

First-last Passage Correspondences — September 2023 – December 2023
GIST, Undergraduate Researcher — *Advisor : Chiok Hwang*

- Investigate first-last passage in diffusion problems
- Parallel programming and GPU acceleration with PyTorch

Holographic Correlation Functions — March 2023 - December 2023
GIST, Undergraduate Researcher — *Advisor : Chanyong Park*

- Calculate holographic correlation functions using AdS/CFT with Mathematica

Teaching Experience

Physics 208 : General Physics II — *UW-Madison*, *TA*, Spring 2026

Physics 202 : General Physics II — *UW-Madison*, *TA*, Autumn 2025

Introduction to Topology TA — *GIST*, *TA*, Spring 2025

Complex Analysis TA — *GIST*, *TA*, Autumn 2023

Calculus TA — *GIST*, *TA*, Spring 2023