

# TAEHWAN OH

---

✉ [hadron@khu.ac.kr](mailto:hadron@khu.ac.kr)

👤 [hep-thoh.khu.ac.kr](mailto:hep-thoh.khu.ac.kr)

26, Kyungheedaero-ro,  
Dongdaemun-gu,  
Seoul, 02447,  
Republic of Korea

## EDUCATION

Mar. 2018 - Aug. 2024 (Expected)	Kyung Hee University <i>Ph.D. in Physics, Advisor: Euihun Joung</i>
Mar. 2012 - Aug. 2015.	Sejong University <i>B.S. in Chemistry</i>

---

## RESEARCH INTERESTS

Worldline theory, Scattering Amplitude, Orbit method, Representation theory  
Asymptotic symmetry, Conformal bootstrap, Generalised symmetry

## PUBLICATIONS

Thomas Basile, Euihun Joung, and **TaeHwan Oh**

“Manifestly Covariant Worldline Actions from Coadjoint Orbits. Part I:  
Generalities and Vectorial Descriptions”

(Accepted to *Journal of High Energy Physics*)

[arXiv: 2307.13644]

### **TaeHwan Oh**

“Ab Initio Construction of Poincaré and AdS Particle”

(Submitted to *Physics Letters B*)

[arXiv: 2311.08712]

## TALKS

- Review on Chap. 3 & 4, “Constrained Hamiltonian Systems”  
*Post Frontiers on Theoretical Physics (Tutorial Session), APCTP*  
Pohang, Korea, Jul. 18-19, 2023
- Various Particles from Coadjoint Orbits  
*Gravity Beyond Riemannian Paradigm, CQUeST & APCTP*  
Jeju, Korea, Jun. 20, 2023
- A Systematic Way to Construct Spinning Particle Actions  
*Journal Club, Kookmin University*  
Seoul, Korea, Jun. 09, 2023

- How to Formulate Worldline Action Wisely?  
*2023 KPS Spring Meeting, KPS*  
Daejeon, Korea, Apr. 20, 2023
- RECIPES for Worldline Particles  
*Mini-Workshop: Higher-Spin Gravity and its Applications, APCTP*  
Pohang, Korea, Oct. 15, 2022
- Worldline Particle from Dual Pairs (**Lectures**)  
*Junior Research Talks 22-Summer, APCTP*  
Yeosu, Korea, Aug. 22 - Aug. 24, 2022
- Brief Idea about Particle Worldline Action  
*Journal Club, University of Mons*  
Mons, Belgium, May 09, 2022
- From Quantum Complexity to Geometric Action  
*Journal Club, Kyung Hee University*  
Seoul, Korea, Mar. 17, 2022

## POSTER

- Construction of Covariant Worldline Action from Coadjoint Orbit  
*The 17th Kavli Asian Winter School on Strings, Particles, and Cosmology*  
*The Kavli Foundation*  
Daejeon, Korea, Jan. 1-Jan. 18, 2023
- Particle Action from Dual Pair Correspondence  
*Strings, Cosmology, and Gravity Student Conference 2022*  
*Amsterdam University, Amsterdam, Netherland, May. 12, 2022*

## SELECTED SCHOOLS

- The 17th Kavli Asian Winter School on Strings, Particles, and Cosmology  
Seoul, Korea, Sep. 02 - Sep. 13, 2019
- 2020 Solvay Doctoral School  
Brussels-Geneva-Amsterdam, Oct. - Dec., 2020
- 2019 Saalburg Summer School  
Heigenbrücken, Germany, Sep. 02 - Sep. 13, 2019
- Summer Institute for Theoretical Physics 2019  
Seoul, Korea, Jul. 8 - Jul. 30, 2019
- 2019 Kavli Asian Winter School  
Seoul, Korea, Jan. 07 - Jan. 17, 2019
- 2018 KIAS-SNU Physics Winter Camp  
Seoul, Korea, Dec. 26, 2018 - Jan. 04, 2019

## OTHER ACADEMIC EXPERIENCE

- Theoretical Physics Branch, Academic Society of Kyung Hee University  
Seoul, Korea (2020-2023)
- *Junior Research Talks\** 2022-Summer, APCTP, Yeosu, Korea,  
Aug.22-26, 2022 ([Organiser](#))
- *Junior Research Talks\** 2021-Summer, APCTP, Pohang, Korea  
Aug.17-20 ([Organiser](#))
- *Junior Research Talks\**, Kyung Hee University, Seoul, Korea  
Jan. 2020-Nov. 2022 ([Organiser](#))

*\*JRT is a student conference of Korea. It was held four times a year from 2020 to 2022.*

## TEACHING ASSISTANT EXPERIENCE

- Mathematical Physics II (Tutorials)  
*Sep.-Dec. 2020*
- General Physics Experiment I  
*Mar.-Jun. 2020*
- Mathematical Physics II (Tutorials)  
*Sep.-Dec. 2019*
- Electromagnetism Experiment  
*Mar.-Jun. 2018*
- General Physics Experiment I  
*Mar.-Jun. 2018*

## SOFTWARE SKILL

- Mathematica, Fortran, Python