

CERN-Korea Theory Collaboration



32th CKC Meeting, 22 Apr (Mon) 2024

URS WIEDEMANN (CERN DEPARTMENT OF THEORETICAL PHYSICS), HYUNG DO KIM (KPS, SEOUL NATIONAL UNIVERSITY)

Main activities

- CERN Fellow : Hire one new fellow every year (2-year position changed to **3 year** starting from this year announcement)
 - Visiting Graduate Student: 1 or 2 students for 3~9 months
 - CERN TH Institute : 1 or 2 times per year
 - **CERN-Korea Summer Student Program (new)**
-

Present Team

C: Cosmo, H: Hadron, P: Particle, S: String

Hyung Do Kim	SNU	Steering/Chair	P
Nakwoo Kim	Kyung Hee	Steering	S
Ki-Young Choi	SKKU	Steering	C
Seung J. Lee	Korea	Steering	P
Seok Kim	SNU	Steering	S
Seongtae Cho	Kangwon	Steering	H
Minho Son	KAIST	Steering/Ex-officio	P
Deog Ki Hong	PNU		P
Jinn Ouk Gong	Ewha Women's		C
Sangmin Lee	SNU		S
Hyun Min Lee	Chung-Ang		P
Myeonghun Park	Seoul Tech		P
Seong Chan Park	Yonsei		P
Seung-Joo Lee	IBS (CTPU)		S
Hang Bae Kim	Hanyang		C
Seong Youl Choi	Chonbuk		P
Sungjay Lee	KIAS		S
Chunglee Kim	Ewha Women's		C
Jongchul Park	Chungnam National Univ.		C/P
Jaewon Song	KAIST		S
Sunghoon Jung	SNU		C/P

Annual Budget (2024)

1 CHF = 1490 KRW

530 M KRW ~ 356 k CHF

Program	Budget
CERN Fellows	320 M KRW
Graduate Students	60 M KRW
CERN CKC Workshop	100 M KRW
Summer School	0 KRW
Other activities/Overhead	20/30 M KRW
Total	530 M KRW

Annual Budget (2024')

1 CHF = 1490 KRW

530 M KRW ~ 356 k CHF

Program	Budget
CERN Fellows	320 M KRW
Graduate Students	30 M KRW
CERN CKC Workshop	70 M KRW
Summer School	60 M KRW
Other activities/Overhead	20/30 M KRW
Total	530 M KRW

CERN fellows alumni

Name	Period	Position	Current Position
Hyun Min Lee	2010. 1 ~ 2012. 5	Fellow	Chung-Ang (Faculty)
Chul Kim	2010. 2 ~ 2011. 1	Fellow	Seoultech (Faculty)
Jin Ouk Gong	2010.10 ~ 2012. 9	Fellow	Ewha Womans U (Faculty)
Myeonghun Park	2011.10 ~ 2013. 9	Fellow	Seoultech (Faculty)
Chan Beom Park	2012.10 ~ 2014. 9	Fellow	Chonnam Nat'l U (Faculty)
Ian-Woo Kim	2013. 9 ~ 2015. 8	Fellow	UpHere, Inc. (Founder)
Hye-Sung Lee	2014. 8 ~ 2015. 7	Fellow	KAIST (Faculty)
Ji-Haeng Huh	2015.10~ 2017. 9	Fellow	-
Hee Seok Chung	2016.04 ~ 2017. 8	Fellow	Humbolt Fellow (Munich)
Doojin Kim	2016.09 ~ 2018. 8	Fellow	Arizona U (Postdoc)
Seung-Joo Lee	2017.09 ~ 2020. 4	Fellow	IBS (Faculty)
Yu-Seon Jeong	2018.09 ~ 2020. 9	Fellow	Chung-Ang U (Researcher)
Sohyun Park	2019.09 ~ 2022. 8	Fellow	-
Jinsu Kim	2020.09 ~ 2022. 8	Fellow	Tongji U (Faculty)
Gongjun Choi	2021.09 ~ 2023. 8	Fellow	Minnesota U (Postdoc)
Saebyeok Jeong	2022.09 ~ 2025.08	Fellow	CERN
Jihwan Oh	2023.09 ~ 2025.08	Fellow	CERN
Sung Mook Lee	2024.09 ~ 2027.08	Fellow	KAIST

Visiting students alumni

Name	Period	Current Position
Jihun Kim	2010. 9 ~ 2011. 2	UpHere, Inc. (Researcher)
Doyoun Kim	2010. 9 ~ 2011. 2	IBS-CTPU (Research fellow)
Kwangwoo Kim	2011. 9 ~ 2012. 2	Jlab (Senior researcher)
Imtak Jeon	2011. 9 ~ 2012. 2	APCTP (Junior Leader)
Sung Hak Im	2012.10 ~ 2013. 2	KEK (Research fellow)
Do Young Mo	2014. 2 ~ 2014. 8	UpHere, Inc. (Researcher)
Dong Woo Kang	2015. 4 ~ 2015.10	KIAS (Postdoc)
Dongwook Ghim	2017.04 ~ 2017.09	KIAS (Postdoc)
Youngbin Yun	2017.04 ~ 2017.09	FN pricing (Employee)
Hyunjoo Kim	2018.03 ~ 2017.08	APCTP (Postdoc)

Visiting students alumni

Name	Period	Current Position
Se-Jin Kim	2019. 2 ~ 2019. 8	GIST (Postdoc)
Yein Lee	2019. 2 ~ 2019. 8	Kyung Hee U. (Student)
Soo-Min Choi	2020. 2 ~ 2020. 5	Munich Tech. U. (Postdoc)
Yongsoo Cho	2021. 6 ~ 2021. 11	Weizmann Institute (Postdoc)
Ui Min	2021. 6 ~ 2021. 11	KAIST (Student)
Sung Mook Lee	2022. 7 ~ 2023. 3	Yonsei U. (Student)
Adriana Menkara	2023. 7 ~ 2023. 12	Joong Ang U. (Student)
Dong Yeon Cheong	2023. 7 ~ 2023. 12	Yonsei U. (Student)
Jiheon Lee	2024. 8 ~ 2025. 1	KAIST (Student)

Activities

- 2 CERN Fellows
 - Saebyeok Jeong (22'~25')
 - Jihwan Oh (23'~25')
- We host CERN Theory Institute
 - Theory Institute : Crossroads between Theory and Phenomenology, 2024. 6. 10 ~ 6. 28, CERN
- Outreach Program for undergraduate students
 - 10 students attend the summer camp/school for two weeks (CERN workshop in the morning and activities in the afternoon including lectures and visiting sites), 2024. 7. 1 ~ 7. 12



Publication ('23.03 ~ '24.02)

- 7 in total
(5 by Fellows,
2 by visiting
graduate
students)

	Title	Journal	ISSN	yyyy dd	role
1	Dynamically induced Topological Inflation	Physical Review D	2470- 0010	202302	First(Choi)
2	Primordial black holes and	Physical Review D	2470- 0010	202302	Cor(Kim)
3	Axion quality problem and nonminimal	Physical Review D	2470- 0010	202307	First(DYJeong, SMLee)
4	Ultraviolet sensitivity in Higgs-Starobinsky	JCAP	1475- 7516	202308	First(SMLee)
5	The medium-modified g to $c\bar{c}$ splitting	JHEP	1126- 6708	202301	(Park)
6	Z ₂ -odd Polonyi field in twin Higgs model	JHEP	1126- 6708	202307	First(Choi)
7	Implications of protecting the QCD	JHEP	1126- 6708	202309	First(Choi)

CERN-Korean summer student program



26 Jun 2023, 08:00 → 8 Jul 2023, 10:00 Europe/Zurich

4/2-011 - TH common room (CERN)

Hyung Do Kim (Seoul National University (KR))

Description 15 Korean undergraduate students are selected to attend two weeks summer student program at CERN in June and July. They attend CERN summer student workshop in the morning and participate in the activities in the afternoon (visiting the experimental sites and attending special lectures or discussion session). Prof. Hyung Do Kim (Seoul National University) and Prof. Hang Bae Kim (Hanyang University, Seoul, Korea) are two supervisors for the students.

Participants

D	Do Young Kim	H	Hang Bae Kim	H	Hanyi Jang	K	KIBOK JEONG	S	Seongmin Kim	S	Seunghoon Bae
S	SEUNGWON JUNG	Y	Yonguk Cho	Y	Yoojin Lee	Y	Yuna Lee	+4			

MONDAY, 26 JUNE



17:00 → 18:00 **Arrival: Orientation**



Orientation

Convener: Hyung Do Kim (Seoul National University (KR))

TUESDAY, 27 JUNE



09:00 → 13:00 **CERN summer student workshop**



14:00 → 17:00 **student activity: CMS site visit**



visiting experimental

Convener: Hyung Do Kim (Seoul National University (KR))

WEDNESDAY, 28 JUNE



Crossroads between Theory and Phenomenology

Jun 10 – 28, 2024
CERN
Europe/Zurich timezone



Overview

[Application form](#)

[Participant List](#)

[Code of Conduct](#)

[Practical information](#)

- [Directions to and inside CERN](#)
- [Wi-fi Connection](#)
- [Health insurance, VISA](#)
- [Child Care](#)
- [CERN map](#)
- [Accommodation](#)

TH workshop secretariat

 thworkshops.secretariat...

A three-week CERN-CKC TH Institute on BSM physics with a light schedule intended to maximally facilitate scientific interaction and collaboration.

The BSM programme will broadly, but not strictly, be thematically organised by topic; the first week linking to cosmology, the second to model building and high energy, and the final week focussing on the interface with formal phenomenology.



Starts Jun 10, 2024, 9:00 AM
Ends Jun 28, 2024, 7:00 PM
Europe/Zurich



CERN
4/3-006 - TH Conference Room
[Go to map](#)



[Gian Giudice](#)
[Gilly Elor](#)
[Hyung Do Kim](#)
[Matthew Philip Mccullough](#)
[Minho SON](#)
[Sungwoo Hong](#)
[Tim Cohen](#)



Registration

Registration for this event is currently open.

[Register now >](#)

CERN-Korean summer student program

Jul 1 – 13, 2024
CERN
Europe/Zurich timezone



Overview

Registration

Participant List

Photo

10 Korean undergraduate students are selected to attend two weeks summer student program at CERN in July. They attend CERN summer student workshop in the morning and participate in the activities in the afternoon (visiting the experimental sites and attending special lectures or discussion session).

Prof. Hyung Do Kim (Seoul National University) and Junghwan Goh (Kyung Hee University, CMS experiment), Beomkyu Kim (Sungkyunkwan University, ALICE experiment) and Kang Young Lee (Gyeongsang National University, SND@LHC experiment) are four supervisors for the students.



Starts Jul 1, 2024, 8:00 AM
Ends Jul 13, 2024, 10:00 AM
Europe/Zurich



CERN



[Hyung Do Kim](#)



Registration

Registration for this event is currently open.

[Register now >](#)