

# CQeST Workshop 2023



**Monday, July 31, 2023 - Friday, August 4, 2023**

## Scientific Program

**CQeST Workshop 2023 Program**

July 31 2023 (Mon) ~ August 4 2023 (Fri)  
at Best Western Plus Hotel, Jeonju, Korea

31 July - Day 1 ] Get to Jeonju

16:00 ~ 17:00 Registration

17:00 ~ 18:00 Discussion

1 August - Day 2 ] Gravity and Black Hole

09:00 ~ 09:30 Opening(Director) & Memorial tribute to Prof. □□□

(Invited Session)

09:30 ~ 10:00 Sang-Jin Sin(Hanyang University) (□□□, □□□)

Symmetry breaking and a few exactly solvable examples in fermion correlations.

10:00 ~ 10:30 Hyun Seok Yang(GIST) (□□□, □□□□□□□)

Physical Applications of Quantum Reference Frame

10:30 ~ 11:00 Coffee Break □

11:00 ~ 11:30 Hyeong-Chan Kim(Korea National University of Transportation) (□□□, □□□□□)  
steady heat conduction in general relativity

11:30 ~ 12:00 Dong-han Yeom(Pusan National University) (□□□, □□□)

Yang-Mills instantons and the end of black hole evaporation

12:00 ~ 14:00 Lunch Break

(CQeST Session)

14:00 ~ 14:30 Mu-In Park(CQeST) (□□□, CQeST)

On No Scalar-Haired Cauchy-Horizon Theorem in Higher-Curvature Gravities

14:30 ~ 15:00 Jeongwon Ho(CQeST) (□□□, CQeST)

TBA

15:00 ~ 15:30 Sang-Heon Yi(CQeST) (□□□, CQeST)

TBA

15:30 ~ 16:00 Coffee Break □

(Contribute Session)

16:00 ~ 16:30 Jae-Hyuk Oh(Hanyang University) (□□□, □□□)

Stochastic process and holography

16:30 ~ 17:00 Miok Park(IBS-CTPU) (□□□, IBS)

Hairy black holes by spontaneous symmetry breaking

17:00 ~ 17:30 Chen-Te Ma(APCTP)

Modular Average and Weyl Anomaly in Two-Dimensional Schwarzian Theory

2 August - Day 3 ] Effective Field Theory & Cosmology

## (Invited Session)

09:30 ~ 10:00 Jaeweon Lee(Jungwon University) (□□□, □□□)

Recent progress of Ultralight dark matter

10:00 ~ 10:30 Chanyong Park(GIST) (□□□, □□□□□□□)

Holographic two-point functions in a disorder system

10:30 ~ 11:00 Coffee Break □

11:00 ~ 11:30 Keun-Young Kim(GIST) (□□□, □□□□□□□)

Quantum chaos and complexity (tentative)

11:30 ~ 12:00 Imtak Jeon(APCTP) (□□□, APCTP)

Supersymmetry and complexified spectrum on Euclidean AdS2

12:00 ~ 14:00 Lunch Break

## (CQeST Session)

14:00 ~ 14:30 Wonwoo Lee(CQeST) (□□□, CQeST)

Maxwell field in the geometry of a rotating object

14:30 ~ 15:00 Minkyoo Kim(CQeST) (□□□, CQeST)

On the shoulders of Giants

15:00 ~ 15:30 Sunggeun Lee(CQeST) (□□□, CQeST)

On energetics of black holes

15:30 ~ 16:00 Coffee Break □

## (Contribute Session)

16:00 ~ 16:30 Inyong Cho(SeoulTech University) (□□□, □□□□□□□)

Back reaction of cosmological perturbations during inflation

16:30 ~ 17:00 Aaron Poole(KyungHee University)

Accelerating black hole thermodynamics from the covariant phase space

17:00 ~ 17:30 Deniz Olgu Devecioglu(CQeST)

Solutions of charged Gauss-Bonnet black holes with scalar hairs

17:30 ~ 18:00 Photo Session

18:30 ~ Banquet

3 August - Day 4 ] Astroparticle phenomenology

## (Invited Session)

09:30 ~ 10:00 Changbom Park(Korea Institute for Advanced Study) (□□□, □□□□□)

TBA

10:00 ~ 10:30 Seong Youl Choi(Jeonbuk National University) (□□□, □□□)

Constructing the covariant vertices systematically

10:30 ~ 11:00 Coffee Break □

11:00 ~ 11:30 Koun Choi(IBS) (□□□, IBS)  
update on the search for dark matter in neutrino telescopes  
11:30 ~ 12:00 Arpan Kar(CQeST)  
WIMPs in Dilatonic Einstein Gauss-Bonnet Cosmology

12:00 ~ 14:00 Lunch Break

(CQeST Session)

14:00 ~ 14:30 Sunghyun Kang(CQeST) (□□□, CQeST)  
Halo-independent bounds on the non-relativistic effective theory of WIMP-nucleon scattering from direct detection and neutrino observations  
14:30 ~ 15:00 Yong-Hui Qi(CQeST)  
Superradiance in the Kerr-Taub-NUT spacetime  
15:00 ~ 15:30 Liliana Velasco-Sevilla(CQeST)  
Constraints on Reheating Temperature from GW and DM

15:30 ~ 16:00 Coffee Break □

(Contribute Session)

16:00 ~ 16:30 Gansukh Tumurtushaa(Jeju National University)  
Higgs Inflation with a Gauss-Bonnet Term in the Einstein Frame.  
16:30 ~ 16:50 Hyomin Kim(CQeST) (□□□, CQeST)  
White dwarves constraints on Inelastic dark matter and Left-Right symmetric models  
16:50 ~ 17:10 Hocheol Lee(CQeST) (□□□, CQeST)  
Generating Cosmological Anisotropies  
17:10 ~ 17:30 Injun Jeong(CQeST) (□□□, CQeST)  
Multi-dimensional optimization methods to analyze the null results of WIMP direct detection experiments with conservative bounds.

Thank you.