

## Program of GC2024 (ver. 240301)

[1st week (January 29–February 2): Inflation/PBH/dark matter]

[1/29 (Mon)] one-day workshop

10:00-10:25 coffee

10:25-10:30 Shinji Mukohyama (YITP) "Opening address"

Chair: Mukohyama

10:30-11:30 (50min+10min) David Wands (Portsmouth) "Adiabatic and non-adiabatic evolution during inflation"

11:30-11:50 (15min+ 5min) Danilo Artigas (Kyoto) "The separate-universe approach beyond slow-roll inflation"

11:50-12:10 (15min+ 5min) Taiga Miyachi (Kobe) "Stochastic tunneling in de Sitter spacetime"

12:10-13:40 lunch

Chair: Fujita

13:40-14:10 (25min+ 5min) Yuichiro Tada (Nagoya) "Cancellation of quantum corrections on the soft curvature perturbations"

14:10-14:30 (15min+ 5min) Amaury Micheli (RIKEN) "Quantumness and decoherence of cosmological perturbations"

14:30-15:00 (25min+ 5min) Alireza Talebian (IPM) "NanoGrav Signal from Ultra Slow-Roll Inflation"

15:00-15:30 coffee

Chair: Naruko

15:30-15:50 (15min+ 5min) Chen Yuan (Lisbon) "Full analysis of the scalar-induced gravitational waves for the curvature perturbation with local-type non-Gaussianities"

15:50-16:10 (15min+ 5min) Fumiya Sano (TITech) "Analytic Formulae for Inflationary Correlators with Dynamical Mass"

16:10-16:30 (15min+ 5min) Yuhang Zhu (IBS) "Cosmological Correlators Through the Looking Glass"

**[1/30 (Tue)] seminar day**

10:30-11:00 coffee

Chair: Naruko

11:00-12:00 (50min+10min) Ana Achucarro (Leiden) "Multifield inflation, an update"

12:00-14:00 lunch

Chair: Fujita

14:00-15:00 (50min+10min) Masahide Yamaguchi (IBS) "General strategy to realize inflation"

15:00-15:30 coffee

15:30-15:50 (15min+ 5min) Anupama Balasubramanian (Hyderabad) "Curvaton effect on the tensor to scalar ratio"

15:50-16:10 (15min+ 5min) Somnath Das (Hyderabad) "Effects of Higher-Order Quantum Gravitational Effects on Inflation"

## [1/31 (Wed)] one-day workshop

10:00-10:30 coffee

Chair: Emparan

10:30-11:00 (25min+ 5min) Tomohiro Harada (Rikkyo) "Revisiting compaction functions for primordial black hole formation"

11:00-11:30 (25min+ 5min) Tom Giblin (Kenyon) "(P)reheating, Nonlinear Gravity and Primordial Black Holes"

11:30-11:50 (15min+ 5min) Xinpeng Wang (Tongji) "Primordial Black Holes from  $R^2$  gravity theory with a non-minimally coupled scalar field"

11:50-12:10 (15min+ 5min) Ryodai Kawaguchi (Waseda) "Highly asymmetric probability distribution from inflation"

12:10-13:40 lunch

Chair: Naruko

13:40-14:10 (25min+ 5min) SeongChan Park (Yonsei/KIAS) "Composite Hybrid Inflation"

14:10-14:30 (15min+ 5min) Ding Ding (Fudan) "Effective description of quantum fluctuations in cosmology"

14:30-15:00 (25min+ 5min) Eugene Oks (Auburn) "Experiments on Collisions of Electrons or Protons with Hydrogen Atoms or Molecules Shed Light on the Possible Nature of Dark Matter"

15:00-15:30 coffee

Chair: Fujita

15:30-15:50 (15min+ 5min) Chon Man Sou (Tsinghua) "Decoherence of cosmological perturbations: boundary terms and the WKB wave functional"

15:50-16:10 (15min+ 5min) Zun Wang (HKUST) "Non-standard primordial clocks from induced mass in alternatives to inflation scenarios"

16:10-16:30 (15min+ 5min) Junqi Wang (HKUST) "Testing scalar decoherence by entangled initial state of cosmic inflation"

**[2/1 (Thu)] seminar day**

10:30-11:00 coffee

Chair: Naruko

11:00-12:00 (50min+10min) Roberto Emparan (Barcelona) "Tearing down spacetime with quantum disentanglement"

12:00-14:00 lunch

Chair: Park

14:00-15:00 (50min+10min) Matteo Fasiello (Madrid) "Inflating with axions and gauge fields"

15:00-15:30 coffee

15:30-15:50 (15min+ 5min) Hrishikesh Chakrabarty (Nazarbayev) "Quasi-de Sitter Expansion in Asymptotically Safe Cosmology"

**[2/2 (Fri)] one-day workshop + party**

10:00-10:30 coffee

Chair: Wands

10:30-11:30 (50min+10min) Emanuela Dimastrogiovanni (Groningen) "Gravitational wave background anisotropies as a probe of the early universe"

11:30-11:50 (15min+ 5min) Albert Escrivà (Nagoya) "Induced gravitational waves from a smooth crossover and their implications on the PBH scenario"

11:50-12:10 (15min+ 5min) Michiru Uwabo (Ochanomizu) "Formation of defects associated with both spontaneous and explicit symmetry breaking"

12:10-13:40 lunch

Chair: Fujita

13:40-14:10 (25min+ 5min) Kenji Kadota (Hangzhou) "Multi-messenger probes of dark matter surrounding a black hole"

14:10-14:40 (25min+ 5min) Andrew Thomas Eberhardt (Kavli IPMU) "Multi-field ultra-light dark matter"

14:40-15:00 (15min+ 5min) Hidetoshi Omiya (Kobe) "Relativistic evolution of the self-interacting axion condensate"

15:00-15:30 coffee

Chair: Naruko

15:30-16:00 (25min+ 5min) Archil Kobakhidze (Sydney) "Gravitational instantons, CP asymmetry and axions"

16:00-16:20 (15min+ 5min) Huiyu Zhu (HKUST) "Termination of Superradiance from a Binary Companion"

16:20-16:50 (25min+ 5min) Yingli Zhang (Tongji) "Mergers of Primordial Black Holes inside dark halos"

16:50-16:55 Shinji Mukohyama (YITP) "Closing"

18:00-20:00 party

**[2nd week (February 5–9): Tensions in cosmology]**

**[2/5 (Mon)] seminar day**

10:30-10:55 coffee

10:55-11:00 Shinji Mukohyama (YITP) “Opening address”

Chair: De Felice

11:00-12:00 (50min+10min) Nickolas Kokron (Princeton) “The  $S_8$  tension at the onset of Stage IV cosmic surveys”

12:00-14:00 lunch

Chair: Romano

14:00-14:30 (25min+ 5min) Pritha Paul (QMUL) "Relativistic Effects in Correlation Functions"

14:30-15:00 (25min+ 5min) Daniele Gregoris (JUST) "On the uniqueness of  $\Lambda$ CDM-like evolution for homogeneous and isotropic cosmology in General Relativity"

15:00-15:30 coffee

15:30-16:30 free discussion

**[2/6 (Tue)] seminar day**

10:30-11:00 coffee

Chair: De Felice

11:00-12:00 (50min+10min) Yukei Murakami (JHU) "SH0ES H0 measurement: leveraging SN Ia spectroscopic similarity"

12:00-14:00 lunch

Chair: Matsui

14:00-14:30 (25min+ 5min) Qianhang Ding (IBS) "Reconciling cosmic dipolar tensions with a gigaparsec void"

14:30-15:00 (25min+ 5min) Ranjini Mondol (IISc) "Dipole Cosmology: Copernican paradigm Beyond FLRW"

15:00-15:30 coffee

15:30-16:00 free discussion

Chair: Taruya

16:00-17:00 Special seminar (50min+10min) by Ue-Li Pen (ASIAA/CITA)  
"Gravitational Lensing of Gravitational Waves: Picard Lefschetz evanescent images to resolve the Hubble Tension"

**[2/7 (Wed)] seminar day**

10:30-11:00 coffee

Chair: Fasiello

11:00-12:00 (50min+10min) Antonio Enea Romano (Idea/Ligo) "The mirage of luminal modified gravitational-wave propagation"

12:00-14:00 lunch

Chair: Dimastrogiovanni

14:00-14:20 (15min+5min) Konstantinos Dialektopoulos (UniTBv) "Using Artificial Neural Networks to reconstruct cosmology"

14:20-14:40 (15min+5min) Zhen Zhong (Lisbon) "Hushing black holes: tails in dynamical spacetimes"

14:40-15:00 (15min+5min) Masaya Amo (YITP) "Entropy Bounds for Rotating AdS Black Holes"

15:00-15:30 coffee

15:30-16:30 free discussion



**[2/8 (Thu)] seminar day**

10:30-11:00 coffee

Chair: Durrer

11:00-12:00 (50min+10min) Chris Clarkson (QMUL) "The Cosmological Principle and the kinematic dipole"

12:00-14:00 lunch

Chair: De Felice

14:00- 15:00 (50min+10min) Osamu Seto (Hokkaido) "Sterile neutrinos in the Hubble and S8 tension"

15:00-15:30 coffee

15:30-16:00 (25min+ 5min) Shouvik Roy Choudhury (ASIAA) "Massive neutrino self-interactions and the Hubble tension"

**[2/9 (Fri)] one-day workshop + party**

10:00-10:30 coffee

Chair: Nishimichi

10:30-11:30 (50min+10min) Masahiro Takada (Kavli IPMU) "Subaru Hyper Suprime-Cam Year 3 cosmology results"

11:30-11:50 (15min+ 5min) Ken Osato (Chiba U) "The  $\sigma_8$  tension in light of the cross-correlation between HSC weak lensing and ACT thermal Sunyaev-Zel'dovich effect"

11:50-12:10 (15min+ 5min) Ryo Terasawa (IPMU) "Evaluating baryonic effects in HSC Y3 cosmic shear data with a dark matter-only model"

12:10-13:40 lunch

Chair: De Felice

13:40-14:40 (50min+10min) Julian Munoz (UT Austin) "What is JWST telling us about cosmology?"

14:40-15:00 (15min+ 5min) Jessica Santiago (LeCosPa) "The observer-dependence of the Hubble parameter"

15:00-15:30 coffee

Chair: Takada

15:30-16:30 (50min+10min) Jo Dunkley (Princeton) "Testing cosmological tensions with new CMB data"

16:30-16:50 (15min+ 5min) Dennis Linde (Parma) "Field-Level Modelling of the Large-Scale Structures"

16:50-16:55 Shinji Mukohayama (YITP) "Closing"

18:00-20:00 party

**[3rd week (February 12–16): Nishinomiya-Yukawa Symposium]**

<https://www2.yukawa.kyoto-u.ac.jp/~gc2024/symposium/index.php>

Emanuele Berti (Johns Hopkins) “Nonlinear black hole spectroscopy”

Luc Blanchet (IAP) “Gravitational Wave Tails-of-Memory and the Phase of Compact Binaries to 4.5PN order”

Rong-Gen Cai (ITP CAS) “The interior dynamics of hairy black holes”

Vitor Cardoso (CENTRA/Niels Bohr) “Black holes as engines of discovery”

Eleonora Di Valentino (Sheffield) “Unresolved Anomalies and Tensions in the Standard Cosmological Model”

Ruth Durrer (Geneva) “Rotation of the CMB polarization by foreground lensing”

Joseph Giaime (LSU/Caltech/LIGO) “Results and status of joint LIGO/Virgo/KAGRA observational runs and of the LIGO detectors”

Ruth Gregory (King's College London) “Towards a Quantum Black Hole Simulator”

Masashi Hazumi (KEK/IPMU/LiteBIRD) “Probing cosmic inflation and beyond with the LiteBIRD CMB polarization survey”

Takaaki Kajita (Tokyo/KAGRA) “KAGRA -status and prospect-”

Eugene Lim (King's College London) “Can Inflation Actually Inflate?”

Jiro Murata (Rikkyo) “Experimental Tests of Gravitational Inverse Square Law and Lorentz Invariance”

Tsvi Piran (Hebrew) “Gravitational Waves from Relativistic Jets”

Levon Pogosian (SFU) “Cosmological tests of Einstein and Euler”

Lisa Randall (Harvard) “Cool but not Supercool. Phase Transition to RS”

Mairi Sakellariadou (King's College London) “Gravitational Waves: the Theorist's Swiss knife”

Misao Sasaki (IPMU) “Primordial Black Holes from Inflation”

Masaru Shibata (AEI/YITP) “Exploring the collapsar scenario in numerical relativity”

Jean-Philippe Uzan (IAP) “Constraining a scalar fifth force in the Solar system and the cosmos”

Cumrun Vafa (Harvard) “Swamplandish Predictions for Cosmology”

**[4th week (February 19–23): Gravitational-wave astronomy/cosmology]**

**[2/19 (Mon)] one-day workshop**

10:00-10:25 coffee

10:25-10:30 Shinji Mukohyama (YITP) "Opening address"

Chair: Berti

10:30-11:00 (25min+ 5min) Josu Aurrekoetxea (Oxford) "The effect of wave dark matter on equal mass black hole mergers"

11:00-11:30 (25min+ 5min) Alberto Mangiagli (APC) "Testing cosmology with massive black hole binaries"

11:30-11:50 (15min+ 5min) Nikolaos Kouvatsos (KCL) "The angular power spectrum of gravitational-wave transient sources as a probe of the large-scale structure"

11:50-12:10 (15min+ 5min) Kimihiro Nomura (Kobe) "Imprints of cosmic magnetic fields on gravitational wave polarization"

12:10-13:40 lunch

Chair: Ioka

13:40-14:10 (25min+ 5min) Yunlong Zhang (NAOC) "Pulsar timing residuals induced by wideband ultralight dark matter"

14:10-14:40 (25min+ 5min) Reginald Christian Bernardo (APCTP) "Gravitational physics frontiers in the nanohertz regime with PTA and SKA"

14:40-15:00 (15min+ 5min) Dongdong Zhang (Kavli IPMU) "A narrow-band parameterization for the stochastic gravitational wave background"

15:00-15:30 coffee

Chair: Taruya

15:30-15:50 (15min+ 5min) Qiuyue Liang (Kavli IPMU) "Constraint modified gravity from Stochastic gravitational wave background"

15:50-16:10 (15min+ 5min) Ricardo Waibel (Heidelberg) "Non-Linear Dynamics Simulation for LISA Satellites"

16:10-16:30 (15min+ 5min) Akira Taniguchi (Kyushu) "Circular polarization of gravitational waves passing through an axion domain wall"

16:30-16:50 (15min+ 5min) Thomas Spieksma (Niels Bohr) "Superradiance; axionic couplings and plasma effects"

**[2/20 (Tue)] seminar day**

10:30-11:00 coffee

Chair: Tanaka

11:00-12:00 (50min+10min) Niayesh Afshordi (Perimeter) "Precision Quantum Cosmology: Past, Present, and Future"

12:00-14:00 lunch

Chair: Uzan

14:00- 15:00 (50min+10min) Vincent Vennin (ÉNS Paris) "Clustering of primordial black holes from quantum diffusion during inflation"

15:00-15:30 coffee

Chair: Takahashi

15:30-16:00 (25min+ 5min) Shi Pi (ITP) "Nonlinearities of the curvature perturbation"

16:00-16:30 (25min+ 5min) Valentina Danieli (SISSA) "Anharmonic Effects on the Squeezing of Axion Perturbations"

16:30-16:50 (15min+ 5min) Tatsuya Narikawa (ICRR) "Multipole tidal effects in the gravitational-wave phase of compact binary coalescences"

**[2/21 (Wed)] one-day workshop + party**

10:00-10:30 coffee

Chair: Ioka

10:30-11:00 (25min+ 5min) Kenta Kiuchi (AEI) "A large-scale dynamo and its application to electromagnetic signals in binary neutron star mergers"

11:00-11:30 (25min+ 5min) Kwan Yeung Ng (Johns Hopkins) "Single-event likelihood of star cluster properties with LIGO-Virgo-Kagra binary black hole observations"

11:30-11:50 (15min+ 5min) Conor Dyson (Niels Bohr) "Relativistic Aerodynamics of Spinning Black Holes"

11:50-12:10 (15min+ 5min) Pedro Rossetto (Melbourne) "Magnetically Confined Mountains on Neutron Stars in General Relativity"

12:10-13:40 lunch

Chair: Taruya

13:40-14:10 (25min+ 5min) Federico Urban (CEICO) "Shimmering gravitons in the gamma-ray sky"

14:10-14:40 (25min+ 5min) Alberto Roper Pol (Geneva) "LISA and  $\gamma$ -ray telescopes as multi-messenger probes of a first-order cosmological phase transition"

14:40-15:00 (15min+ 5min) Pankaj Saha (KEK) "Gravitational Wave Symphony from Oscillating Spectator Scalar Fields"

15:00-15:30 coffee

Chair: Blanchet

15:30-15:50 (15min+ 5min) Mostafizur Rahman (Kyoto) "Probing astrophysical environment with eccentric extreme mass-ratio inspirals"

15:50-16:10 (15min+ 5min) David Pereñiguez (Niels Bohr) "Superradiant Instability of Magnetic Black Holes"

16:10-16:30 (15min+ 5min) Stefano Zazzera (QMUL) "Cross-correlations with GWs to constrain BBH population properties"

16:30-16:50 (15min+ 5min) Veronica Vazquez-Aceves (KIAA) "SgrA\* spin and mass estimates through the detection of an extremely large mass-ratio inspiral"

18:00-20:00 party

**[2/22 (Thu)] seminar day**

10:30-11:00 coffee

Chair: Aoki

11:00-12:00 (50min+10min) Shinji Tsujikawa (Waseda) "Gravitational-wave constraints on scalar-tensor gravity from black-hole and neutron star binaries"

12:00-14:00 lunch

Chair: Ioka

14:00- 14:30 (25min+ 5min) Larissa Santos (Yangzhou) "Testing synchrotron models and frequency resolution in BINGO 21 cm simulated maps using GNILC"

14:30- 15:00 (25min+ 5min) Camila Paiva Novaes (INPE) "Cosmological constraints from low redshift 21cm intensity mapping with machine learning"

15:00-15:30 coffee

Chair: Afshordi

15:30-16:00 (25min+ 5min) Jury Ivan Radkovski (Perimeter) "Scattering Amplitudes in high-energy limit of projectable Horava Gravity"

16:00-16:30 (25min+ 5min) Julio Arrechea (IFPU) "The vacuum strikes back: Black stars"

16:30-16:50 (15min+ 5min) Sung-Won Kim (Ewha Womans U) "Gravitational Waves Generated by Wormholes"

## [2/23 (Fri)] one-day workshop

10:00-10:30 coffee

Chair: Taruya

10:30-11:00 (25min+ 5min) Atsushi Nishizawa (Hiroshima) "Observational constraints on axion dark matter from gravitational wave propagation"

11:00-11:30 (25min+ 5min) Adrian Ka-Wai Chung (UIUC) "METRICS for black holes"

11:30-11:50 (15min+ 5min) Han-Gil Choi (IBS) "Wave nature of gravitational wave lensing and its applications"

11:50-12:10 (15min+ 5min) Torben Frost (KIAA) "Gravitational Lensing of High-Frequency Gravitational Waves by Supermassive Black Holes in the Presence and Absence of the Cosmological Constant"

12:10-13:40 lunch

Chair: Piran

13:40-14:10 (25min+ 5min) Kei-ichi Maeda (Waseda) "Chaotic vZLK oscillations of a binary system around SMBH and gravitational waves"

14:10-14:40 (25min+ 5min) Andrea Cristofoli (Edinburgh) "General Relativity from Scattering Amplitudes"

14:40-15:00 (15min+ 5min) Karan Fernandes (NTNU) "Double graviton dressing and gravitational wave observables"

15:00-15:30 coffee

Chair: Vennin

15:30-16:00 (25min+ 5min) Gabriela Sato-Polito (IAS) "Where are the supermassive black holes measured by PTAs"

16:00-16:20 (15min+ 5min) Valentin Boyanov (Lisbon) "Pseudospectrum of black holes and horizonless black hole mimickers"

16:20-16:40 (15min+ 5min) Sida Lu (HKUST) "Gravitational Waves from More Attractive Dark Binaries"

16:40-16:45 Shinji Mukohayama (YITP) "Closing"



**[5th week (February 26–March 1): Dark energy and gravity beyond general relativity]**

**[2/26 (Mon)] one-day workshop**

10:00-10:25 coffee

10:25-10:30 Shinji Mukohyama (YITP) “Opening address”

Chair: Takahashi

10:30-11:30 (50min+10min) Anne-Christine Davis (Cambridge) “Modified Gravity in Cosmology and the Laboratory”

11:30-11:50 (15min+ 5min) Kota Numajiri (Nagoya) "Relation of observables and the internal physics of neutron stars under  $F(R)$  gravity"

11:50-12:10 (15min+ 5min) Carlos Pastor Marcos (Heidelberg) "Black Hole and Neutron Star solutions in  $f(Q)$  gravity"

12:10-13:40 lunch

Chair: Yunes

13:40-14:40 (50min+10min) Thomas Sotiriou (Nottingham) “Measuring scalar charge with EMRIs”

14:40-15:00 (15min+ 5min) Kotaro Mizui (Waseda) "Vainshtein screening of time and spatial scalar-field derivatives"

15:00-15:30 coffee

Chair: Aoki

15:30-16:00 (25min+ 5min) Vicharit Yingcharoenrat (Kavli IPMU) "EFT of Black Hole Perturbations with Timelike Scalar Profile: Recent Progress"

16:00-16:20 (15min+ 5min) Lewis Croney (KCL) "Slowly-rolling scalars around rotating black holes"

16:20-16:40 (15min+ 5min) Sergi Sirera Lahoz (Portsmouth) "Testing the speed of gravity with black hole ringdown"

16:40-17:00 break

17:00-17:30 (25min+ 5min) Masashi Kimura (Daiichi Inst. Tech.) "Perturbative quasinormal mode frequencies"

17:30-17:50 (15min+ 5min) Jiale Zhang (Ochanomizu) "Parametrized Black Hole Quasinormal Ringdown Formalism for Higher Overtones"

17:50-18:10 (15min+ 5min) Jin Saito (Rikkyo) "Post-Newtonian approximations in the

U-DHOST theory"

**[2/27 (Tue)] seminar day**

10:30-11:00 coffee

Chair: Afshordi

11:00-12:00 (50min+10min) Mordehai Milgrom (Weizmann Institute) "The MOND-cosmology nexus"

12:00-14:00 lunch

Chair: Aoki

14:00- 14:30 (25min+ 5min) Masato Minamitsuji (Lisbon) "Black hole thermodynamics in Horndeski theories"

14:30- 15:00 (25min+ 5min) Justin Feng (LeCosPA) "Singularity at the demise of a black hole"

15:00-15:30 coffee

15:30-16:00 (25min+ 5min) Sinya Aoki (YITP) "A conserved charge in general relativity"

16:00-16:30 (25min+ 5min) Chen-Te Ma (Iowa State U) "Modular Average and Weyl Anomaly in Two-Dimensional Schwarzian Theory"

**[2/28 (Wed)] one-day workshop**

10:00-10:30 coffee

Chair: Sotiriou

10:30-11:30 (50min+10min) Enrico Barausse (SISSA) "Gravitational wave generation in effective field theories of dark energy"

11:30-11:50 (15min+ 5min) Daiki Watarai (RESCEU) "Physically consistent gravitational waveform for capturing beyond general relativity effects in the compact object merger phase"

11:50-12:10 (15min+ 5min) Che-Yu Chen (RIKEN) "Resonant orbits and chaos of rotating black holes beyond circularity"

12:10-13:40 lunch

Chair: Barausse

13:40-14:10 (25min+ 5min) Dina Traykova (AEI) "Scalar wave emission in theories with kinetic screening"

14:10-14:40 (25min+ 5min) Hao-Jui Kuan (AEI) "Binary neutron star mergers in massive scalar-tensor theory"

14:40-15:00 (15min+ 5min) Tsz Lok Lam (AEI) "Binary neutron star mergers in massive scalar-tensor theory: fate of post-merger remnants"

15:00-15:30 coffee

Chair: Oshita

15:30-15:50 (15min+ 5min) Shiqian Hu (KCL) "Seeded vacuum decay with Gauss-Bonnet"

15:50-16:10 (15min+ 5min) Lu Yin (APCTP) "Is Cosmic Birefringence model-dependent?"

16:10-16:30 break

16:30-17:00 (25min+ 5min) Jibril Ben Achour (ENS Lyon/Munich) "Exploring non-perturbative gravitational waves in Horndeski gravity"

17:00-17:30 (25min+ 5min) Wei-Chen Lin (PNU) "Spacetime surgery for black hole"

17:30-17:50 (15min+ 5min) Sebastian Murk (OIST) "Kinematic and thermodynamic properties of dynamical regular black holes"

**[2/29 (Thu)] seminar day**

10:30-11:00 coffee

Chair: Davis

11:00-12:00 (50min+10min) Andrew Tolley (Imperial) "Vainshtein Screening, Galileons and Massive Gravity"

12:00-14:00 lunch

Chair: Aoki

14:00-14:30 (25min+ 5min) Junsei Tokuda (IBS) "Gravitational positivity bounds from finite energy sum rules"

14:30-15:00 (25min+ 5min) Kazuharu Bamba (Fukushima) "Holographic dark energy for inflationary cosmology and the trans-Planckian censorship conjecture"

15:00-15:30 coffee

15:30-16:00 (25min+ 5min) Taishi Katuragawa (CCNU) "F(R) gravity and chameleon mechanism in early Universe"

16:00-16:30 (25min+ 5min) Anamaria Hell (Kavli IPMU) "The two faces of R<sup>2</sup> gravity"

**[3/1 (Fri)] one-day workshop + party**

10:00-10:30 coffee

Chair: Mukohyama

10:30-11:30 (50min+10min) Nico Yunes (UIUC) "Parity when gravity waves"

11:30-12:00 (25min+ 5min) Filipe Mena (Lisbon) "Mathematical problems of generalised theories of gravity"

12:00-14:00 lunch

Chair: Takahashi

14:00-14:30 (25min+ 5min) Maria Mylova (Kavli IPMU) "Effective Field Theory of the Cuscuton"

14:30-15:00 (25min+ 5min) Zhibang Yao (Rikkyo) "Interacting massless gravitons from extended minimal theory of bigravity"

15:00-15:30 coffee

Chair: Yingcharoenrat

15:30-15:50 (15min+ 5min) Ryuya Kudo (Hirosaki) "Photon region in stationary cylindrically symmetric spacetimes"

15:50-16:10 (15min+ 5min) Mahmoud Ahmed Ali (Tokyo) "Irreversible relativistic effects and spacetime curvature"

16:10-16:30 (15min+ 5min) Simran Arora (Birla Inst. Tech. Sci.) "On the impact of  $f(Q)$  gravity on the Large Scale Structure"

16:30-16:35 Shinji Mukohyama (YITP) "Closing"

18:00-20:00 party