

JGRG31 Program

This program is based on Japanese standard time (JST) = GMT+9.

	24 (Mon)	25 (Tue)	26 (Wed)	27 (Thu)	28 (Fri)
9:00		Short talks (9:00–10:45)	Invited talk: Luis Lehner	Invited talk: Mairi Sakellariadou	Short talks (9:00–10:45)
10:00	Opening remarks		Short talks (9:45–10:30)	Short talks (9:45–10:45)	
	Invited talk: Takahiro Sawada				
11:00			Short talks (10:50–11:05)		
	Short talks (11:10–12:25)	Short talks (11:05–12:35)	Poster flash talks (11:35–12:35)	Short talks (11:05–12:35)	Short talks (11:05–12:05)
12:00					Award & Closing
13:00					
14:00	Short talks (13:40–15:25)	Short talks (13:40–14:55)	Poster presentations (13:40–15:10)	Short talks (13:40–15:25)	
15:00					
		Short talks (15:15–16:45)	Short talks (15:25–16:40)	Short talks (15:45–17:00)	
16:00	Short talks (15:45–17:15)				
17:00		Invited talk: Haixing Miao	Invited talk: Emanuela Dimastrogiovanni	Invited talk: Robert Mann	
	Invited talk: Karim Noui	Invited talk: Paolo Pani	Invited talk: Edward Porter	Invited talk: Aron Wall	
18:00					
				SOC meeting	

Asterisk (*) is fixed to candidates for the award (non-tenure).
[o] is fixed to online speakers.

Oct 24th (Mon)

Morning session 1 (Chair: Kenta Hotokezaka)

10:00 – 10:10 Yasushi Suto (Director of RESCEU, U. of Tokyo)

Opening remarks

10:10 – 10:55 I01[o] Takahiro Sawada (Osaka Metropolitan U.)

KAGRA: Status and Prospects

Morning session 2 (Chair: Atsushi Nishizawa)

11:10 – 11:25 C01 Shi Pi (Institute of Theoretical Physics, Chinese Academy of Sciences)

Starobinsky's linear potential model revisited

11:25 – 11:40 C02* Hiroaki Tahara (Rikkyo U.)

Distance dependence of auto-pulsar correlations in pulsar timing arrays

11:40 – 11:55 C03*[o] Takahiro Yamamoto (Nagoya U.)

Deep learning for intermittent gravitational wave signals

11:55 – 12:10 C04*[o] Reginald Christian Bernardo (Institute of Physics, Academia Sinica)

Stochastic gravitational wave background phenomenology beyond Einstein

12:10 – 12:25 C05[o] Masaki Yamada (Tohoku U.)

Cosmic strings and gravitational waves from pure Yang-Mills theory

Afternoon session 1 (Chair: Chul-Moon Yoo)

13:40 – 13:55 C06* Minxi He (KEK)

Temperature Profile around a Primordial Black Hole

13:55 – 14:10 C07* Yo Toda (Hokkaido U.)

Varying electron mass solution to the Hubble tension and Big Bang Nucleosynthesis

14:10 – 14:25 C08* Daiki Saito (Nagoya U.)

Spins of primordial black holes with soft EoS parameter

14:25 – 14:40 C09[o] Ying-li Zhang (Tongji U.)

From the merger rate of Primordial Black Hole Binaries to the Power Spectrum of primordial curvature perturbation

14:40 – 14:55 C10*[o] Koichiro Uehara (Nagoya U.)

Numerical simulation of type II primordial black hole formation

14:55 – 15:10 C11*[o] Yasutaka Koga (Nagoya U.)

Effective inspiral spin distribution of primordial black hole binaries

15:10 – 15:25 C12*[o] Kentaro Kasai (U. of Tokyo)

Primordial black holes from Affleck-Dine mechanism

Afternoon session 2 (Chair: Tsutomu Kobayashi)

15:45 – 16:00 C13* Kazufumi Takahashi (YITP, Kyoto U.)

Generalized disformal Horndeski theories: cosmological perturbations and consistent matter coupling

16:00 – 16:15 C14* Tomohiro Fujita (Waseda U.)

UV divergence in DHOST and its renormalization by EFT of LSS

16:15 – 16:30 C15*[o] Kota Numajiri (Nagoya U.)

Revisiting TOV Problems in F(R) Gravity

16:30 – 16:45 C16*[o] Yu-Qi Dong (Lanzhou U.)

Polarizations of gravitational waves in Palatini-Horndeski theory

16:45 – 17:00 C17*[o] Shin'ichi Hirano (Tokyo Institute of Technology)

Scalar Gauss-Bonnet and dynamical Chern-Simons black holes in EFT extension of GR

17:00 – 17:15 C18*[o] Yusuke Manita (Kyoto U.)

Spin-2 dark matter from Bianchi type-I Universe in ghost-free bigravity

Afternoon session 3 (Chair: Shinji Mukohyama)

17:30 – 18:15 I02[o] Karim Noui (IJCLab, Paris Saclay University)

TBA

Oct 25th (Tue)

Morning session 1 (Chair: Shuichiro Yokoyama)

9:00	–	9:15	C19*	Yuichiro Tada (Nagoya U.)
				Hybrid metric–Palatini Higgs inflation
9:15	–	9:30	C20*	Ann Nakato (Kobe U.)
				Anisotropic warm inflation
9:30	–	9:45	C21*	Tomoaki Murata (Rikkyo U.)
				SU(N)–natural inflation in axisymmetric background
9:45	–	10:00	C22*	Jason Kristiano (RESCEU, U. of Tokyo)
				One-loop perturbativity bound in single-field inflation
10:00	–	10:15	C23*	Tatsuki Kodama (Saga U.)
				Multi-field inflation with non-minimal coupling in the metric/Palatini formalism
10:15	–	10:30	C24*[o]	Ippei Obata (Kavli IPMU)
				Inflation with two-form field: the production of primordial black holes and gravitational waves
10:30	–	10:45	C25[o]	Ryo Namba (RIKEN, iTHEMS)
				Resummed formulation of particle production as gravitational wave source

Morning session 2 (Chair: Teruaki Suyama)

11:05	–	11:20	C26*	Ricardo Cesar Giorgetti Landim (Technical U. of Munich)
				New constraints on (holographic) interacting dark energy
11:20	–	11:35	C27*	Michiru Niiho (Ochanomizu U.)
				Neutrino lines from MeV dark matter annihilation and decay in JUNO
11:35	–	11:50	C28*[o]	Siyi Zhou (Kobe U.)
				Superheavy Dark Matter Production from Symmetry Restoration First-Order Phase Transition During Inflation
11:50	–	12:05	C29*[o]	Ren Tsuda (Chuo U.)
				A Proposal for Simple Model of Acoustic Black Hole
12:05	–	12:20	C30*	Daisuke Miki (Kyushu U.)
				Generating quantum entanglement between macroscopic objects with continuous measurement and feedback control
12:20	–	12:35	C31*	Youka Kaku (Nagoya U.)
				Quantum gravity witness of harmonics oscillator system using Leggett–Garg inequality

Afternoon session 1 (Chair: Hayato Motohashi)

13:40	–	13:55	C32*	Hidetoshi Omiya (Kyoto U.)
				Gravitational waves from the self-interacting axion cloud
13:55	–	14:10	C33*	Takuya Takahashi (Kyoto U.)
				Can we detect the signature of axion clouds in extreme mass ratio inspirals?
14:10	–	14:25	C34*	Kimihiro Nomura (Kobe U.)
				Axion emission from photon spheres of black holes due to photon–axion conversion
14:25	–	14:40	C35*	Kohei Fujikura (Kobe U.)
				Microlensing constraints on axion stars including finite lens and source size effects
14:40	–	14:55	C36*	Siyao Li (Tokyo Institute of Technology)
				Interaction between cosmic strings with point sources approximation

Afternoon session 2 (Chair: Naoki Seto)

15:15	–	15:30	C37	Hayato Motohashi (Kogakuin U.)
				Quasinormal modes of Schwarzschild black holes on the real axis
15:30	–	15:45	C38*	Paul Martens (YITP, Kyoto U.)
				Stability of the Fundamental Quasinormal Mode in Time-Domain Observations
15:45	–	16:00	C39*[o]	Norichika Sago (Kobe U. / Osaka Metropolitan U.)
				Observation of quasi-normal mode overtones in ringdown gravitational waves
16:00	–	16:15	C40*[o]	Nami Uchikata (ICRR, U. of Tokyo)
				Searching for gravitational wave echo signals from binary black hole mergers
16:15	–	16:30	C41*[o]	Tatsuya Narikawa (ICRR, U. of Tokyo)
				Follow-up analyses of the binary-neutron-star signals GW170817 and GW190425 by using post-Newtonian waveform models
16:30	–	16:45	C42*[o]	Ryoto Inui (Nagoya U.)
				Induced stochastic gravitational waves associated with primordial black holes as dark matter in the exponential-tailed case

Afternoon session 3 (Chair: Hirotaka Yoshino)

17:00	–	17:45	I03[o]	Haixing Miao (Tsinghua U.)
				Probing the nature of gravity via quantum correlation of light
17:45	–	18:30	I04[o]	Paolo Pani (Sapienza U. of Rome)
				Exotic compact objects: what we have learned so far

Oct 26th (Wed)

Morning session 1 (Chair: Takahiro Tanaka)

9:00	-	9:45	I05[o]	Luis Lehner (Perimeter Institute)
				Gravitational waves, contrasting the 'standards' (BHs/NSs in GR) with 'beyond standard' scenarios (ECOs and/or extensions to GR)
9:45	-	10:00	C43*	Naritaka Oshita (RIKEN, iTHEMS)
				Thermal ringdown and the excitation of Kerr overtones
10:00	-	10:15	C44*	Kazushige Ueda (Kyushu U.)
				Conversion of squeezed gravitons into photons during inflation
10:15	-	10:30	C45*	Yuki Sugiyama (Kyushu U.)
				Consistency between causality and complementarity guaranteed by Robertson inequality in quantum field theory

Morning session 2 (Chair: Kohei Kamada)

10:50	-	11:05	C46	Yoshiyuki Watabiki (Tokyo Institute of Technology)
				Accelerating Expansion of the Universe by Porcupinefish-like spacetime
11:05	-	11:20	C47*	Yuki Hashimoto (Fukushima U.)
				Non-singular bouncing universe under the null energy condition
11:20	-	11:35	C48*[o]	Hiroki Matsui (YITP, Kyoto U.)
				DeWitt boundary condition is consistent in Hořava-Lifshitz quantum gravity
11:35	-	12:35		Poster flash talks

Afternoon session 1 (Chair: Kohei Kamada)

13:40	-	15:10		Poster presentations
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Afternoon session 2 (Chair: Ryo Saito)

15:25	-	15:40	C49*	Fumio Uchida (RESCEU, U. Tokyo)
				The magneto-hydrodynamic evolution of the cosmological magnetic fields
15:40	-	15:55	C50*	Sravan Kumar (Tokyo Institute of Technology)
				Hemispherical asymmetry of primordial power spectra
15:55	-	16:10	C51*	Morifumi Mizuno (Tokyo Institute of Technology)
				Weak lensing of gravitational waves in wave optics: Beyond Born approximation
16:10	-	16:25	C52*	Fumihiro Naokawa (RESCEU, U. Tokyo)
				Gravitationally Lensed Cosmic Birefringence
16:25	-	16:40	C53*[o]	Shao-Jiang Wang (Institute of Theoretical Physics, Chinese Academy of Sciences)
				Hubble tension and local environment of SNe Ia host galaxies

Afternoon session 3 (Chair: Jun'ichi Yokoyama)

17:00	-	17:45	I06[o]	Emanuela Dimastrogiovanni (U. of Groningen)
				Testing the early universe with small-scale anisotropies
17:45	-	18:30	I07[o]	Edward Porter (APC, Observatoire de Paris)
				The status of Einstein Telescope

Oct 27th (Thu)

Morning session 1 (Chair: Masahide Yamaguchi)

9:00 – 9:45	I08	Mairi Sakellariadou (King's College London)	Hunting for the gravitational-wave background: Detection methods and implications for astrophysics, high energy physics, and the early Universe
9:45 – 10:00	C54*	Lorenzo Valbusa Dall'Armi (Università degli Studi di Padova)	Cosmology with cross-correlation of Gravitational Waves
10:00 – 10:15	C55*	Zhen-Yuan Wu (Yamaguchi U.)	Angular correlations of the inflationary stochastic gravitational-wave background
10:15 – 10:30	C56*	Jun'ya Kume (RESCEU, U. Tokyo)	Multi-messenger constraints on the Abelian-Higgs cosmic string model
10:30 – 10:45	C57*	Mostafizur Rahman (Indian Institute of Technology, Gandhinagar)	Prospects for determining the nature of the secondaries of extreme mass-ratio inspirals using the spin-induced quadrupole deformation

Morning session 2 (Chair: Shinji Tsujikawa)

11:05 – 11:20	C58	Keisuke Nakashi (Kochi KOSEN)	Time evolution and quasinormal modes of odd parity perturbations of stealth black holes in DHOST theory
11:20 – 11:35	C59*	Katsuki Aoki (YITP, Kyoto U.)	Effective field theory of vector-tensor theories
11:35 – 11:50	C60*	Yuichi Miyashita (Tokyo Institute of Technology)	Gravitational field of scalar lumps in higher-derivative gravity
11:50 – 12:05	C61*	Sebastian Bahamonde (Tokyo Institute of Technology)	New black hole solutions with a dynamical traceless nonmetricity tensor in Metric-Affine Gravity
12:05 – 12:20	C62*[o]	Tact Ikeda (Rikkyo U.)	Vector-tensor theories in the metric-affine formalism
12:20 – 12:35	C63*[o]	Hsu-Wen Chiang (LeCosPA)	Long-lived quasinormal modes of a black hole with matter inflow

Afternoon session 1 (Chair: Tomohiro Harada)

13:40 – 13:55	C64*	Kota Ogasawara (Kyoto U.)	Photon escape probability and near-horizon extremal Kerr geometry
13:55 – 14:10	C65*	Diego Soligon (Nagoya U.)	Maximum size of black holes in the accelerating universe
14:10 – 14:25	C66*	Ryotaku Suzuki (Toyota Technological Institute)	Rotating black holes at large D in Einstein-Gauss-Bonnet theory
14:25 – 14:40	C67*[o]	Che-Yu Chen (Institute of Physics, Academia Sinica)	Geometric-optics correspondence of deformed black holes
14:40 – 14:55	C68*[o]	Takuya Katagiri (Tohoku University)	Vanishing Love of Black Holes in General Relativity: From Spacetime Conformal Symmetry in a Two-dimensional Reduced Geometry
14:55 – 15:10	C69*[o]	Audrey Trova (ZARM, U. of Bremen)	Quasi-periodic oscillations of a particle in the background of a deformed compact object
15:10 – 15:25	C70*[o]	Shkoufe Faraji (ZARM, U. of Bremen)	Magnetized tori configurations and epicyclic oscillations near an accelerated black hole

Afternoon session 2 (Chair: Keisuke Izumi)

15:45 – 16:00	C71	Keiju Murata (Nihon U.)	Creating stars orbiting in AdS
16:00 – 16:15	C72*	Kunihito Uzawa (Kwansei Gakuin U.)	De-singularizing the extremal GMGHS black hole via higher derivatives corrections
16:15 – 16:30	C73*	Ratchaphat Nakarachinda (Naresuan U.)	Holographic dark energy from the anti-de Sitter black hole
16:30 – 16:45	C74*	Norihiro Tanahashi (Chuo U.)	Brane Dynamics of Holographic BCFTs
16:45 – 17:00	C75*[o]	Naoki Ogawa (YITP, Kyoto U.)	Wedge Holography in Flat Space and Celestial Holography

Afternoon session 3 (Chair: Akihiro Ishibashi [o])

17:15 – 18:00	I09[o]	Robert Mann (U. of Waterloo)	Signatures of Quantum Superpositions of Black Holes
18:00 – 18:45	I10[o]	Aron Wall (U. of Cambridge)	Cauchy slice holography

19:00 – 19:30 SOC meeting

Oct 28th (Fri)

Morning session 1 (Chair: Keiju Murata)

9:00	-	9:15	C76*[o]	Torben Frost (ZARM, U. of Bremen)
				Gravitational Lensing in the NUT Metric
9:15	-	9:30	C77*[o]	Ryuya Kudo (Hirosaki U.)
				Photon cylinder in a static cylindrically symmetric spacetime
9:30	-	9:45	C78*	Masaya Amo (YITP, Kyoto U.)
				Generalization of the photon sphere referring to null infinity
9:45	-	10:00	C79*	Kangjae Lee (Nagoya U.)
				Four types of attractive gravity probe surfaces
10:00	-	10:15	C80*[o]	Keita Takizawa (Hirosaki U.)
				Gravitational lens on the optical constant-curvature background
10:15	-	10:30	C81*[o]	Kun Hu (Central China Normal U.)
				ADM formulation and Hamiltonian analysis of $f(Q)$ gravity
10:30	-	10:45	C82*[o]	Kyosuke Tomonari (Tokyo Institute of Technology)
				On boundary conditions for constraint systems

Morning session 2 (Chair: Yousuke Itoh)

11:05	-	11:20	C83	Sinya Aoki (YITP, Kyoto U.)
				Colliding gravitational waves and singularities
11:20	-	11:35	C84	Tomohiro Harada (Rikkyo U.)
				Periapsis shift of a quasi-circular orbit in a general, static and spherically symmetric spacetime
11:35	-	11:50	C85	Jose Senovilla (U. of the Basque Country / YITP, Kyoto U.)
				Ultra-massive spacetimes
11:50	-	12:05	C86	Paolo Gondolo (U. of Utah, Tokyo Institute of Technology, Kavli IPMU)
				Surface stress tensor and junction conditions on a rotating null horizon
12:05	-	12:25		Kenta Hotokezaka
				Award
12:25	-	12:35		Jun'ichi Yokoyama
				Closing

Posters

P01*	Kouji Nakamura (NAOJ) Gauge-invariant perturbation theory on the Schwarzschild background spacetime including $l=0,1$ modes --- Realization of exact solutions ---
P02	Keisuke Izumi (Nagoya U., KMI & Dept. of Math.) Generalization of Riemannian Penrose inequality in weak gravity region
P03*	Hiroki Asami (Nagoya U.) The Einstein-Vlasov system with a $R \times SU(2) \times U(1)$ symmetry
P04	Yuki Watanabe (NIT, Gunma College) Gravitational Wave from Axion-SU(2) Gauge Fields in Kinetically Driven Inflation
P05	Takashi Mishima (Nihon U.) Mode conversion phenomena of the Einstein-Maxwell system in the cylindrically symmetric spacetime by full nonlinearity
P06	Chulmoon Yoo (Nagoya U.) Threshold of Primordial Black Hole Formation against Velocity Dispersion in Matter-Dominated Era
P07*	Hideo Furugori (Nagoya U.) Soft Graviton Theory and Infrared Triangle
P08	Kazuharu Bamba (Fukushima U.) Generation of helical magnetic fields and baryogenesis from the coupling of electromagnetic fields with a higher curvature term in inflationary cosmology
P09*	Masahiko Taniguchi (Hiroshima U.) Cartan F(R) gravity and Inflation
P10*	Jin Saito (Rikkyo U.) Black hole perturbations in modified gravity with two tensorial degrees of freedom
P11	CANCELED
P12[o]	Hideki Asada (Hiroshima U.) Time-domain reconstruction of pulsar GW polarizations
P13[o]	Takayuki Tatekawa (NIT, Kochi college) High-Precision Simulations for Collisional Self-Gravitating Systems Incorporating Relativistic Effects
P14*[o]	Ken Matsuno (Osaka Metropolitan U.) Hawking radiation of scalar particles from four-dimensional Einstein-Gauss-Bonnet black holes based on a generalized uncertainty principle
P15*[o]	Keisuke Taira (Fukushima U.) Cosmological evolution of gravitational leptogenesis with right-handed neutrinos
P16*[o]	Yuta Murakoshi (Fukushima U.) Spectrum of gravitational waves due to the axion-gravity Chern-Simons coupling
P17*[o]	Kotaro Fujisawa (U. of Tokyo) General relativistic rotating stars with arbitrary differential rotation
P18[o]	Hideki Maeda (Hokkai-Gakuen U.) Criteria for energy conditions
P19[o]	Taishi Katsuragawa (Central China Normal U.) Hunting dark energy with pressure-dependent photon-photon scattering
P20[o]	Umpei Miyamoto (Akita Prefectural U.) Determining parameters of a black-hole accretion-disk system by observing the shadow
P21[o]	Kensuke Homma (Hiroshima U.) Perspectives of a stimulated GHz-photon collider for probing gravitationally weak coupling scalar fields
P22[o]	Yoshio Kamiya (U. of Tokyo) Testing the equivalence principle using a gravitationally bound quantum system: with a short report of technological developments
P23*[o]	Ryo Kitaku (Nagoya U.) Turbulence of Nambu-Goto string on AdS spacetime :Non linear perturbation analysis and Numerical simulation
P24*[o]	Kei-ichiro Kubota (YITP, Kyoto U.) Propagation of scalar and tensor gravitational waves in Horndeski theory