

JGRG26 Program

Mon 24

Registration 9:00—10:00

Opening 10:00-10:15

Tetsuo Arakawa (President of Osaka City University)

Invited lecture 10:15—11:15 [Chair: Tsutomu Kobayashi]

A. Mazumdar (Consortium for Fundamental Physics, UK), “A step towards ultraviolet finite gravity” (50+10)

Coffee Break 11:15—11:30

Short Poster Talk 11:30—12:15 [Chair: Nobuyuki Sakai]

No.1 —No.19 (1min)

Lunch & Poster View 12:15—13:45

Session1a 13:45—14:45 [Chair: Shinji Mukoyama]

1a1. Tsutomu Kobayashi (Rikkyo University), “Generic instabilities of non-singular cosmologies in Horndeski theory: a no-go theorem” (10+5)

1a2. Yosuke Misonoh (Waseda University), “Stability of Singularity-free Cosmological Solutions in Horava-Lifshitz Gravity” (10+5)

1a3. Soumya Jana (Indian Institute of Technology Kharagpur), **Canceled**

1a4. Sakine Nishi (Rikkyo University), “Growing tensor perturbations on super horizon scales in Generalized Galilean Genesis” (10+5)

Session1b 13:45—14:45 [Chair: Tomohiro Harada]

1b1. Katsuki Aoki (Waseda University), “Vainshtein mechanism in massive gravity nonlinear sigma models” (10+5)

1b2. Hiromu Ogawa (Rikkyo University), “Can a quintessence field affect the internal structure of neutron stars?” (10+5)

1b3. Masato Minamitsuji (Instituto Superior Tecnico, Universidade de Lisboa), “Black holes

in the generalized Proca theory” (10+5)

1b4. Rampei Kimura (Tokyo Institute of Technology), “Constraint on ghost-free bigravity from gravitational Cherenkov radiation” (10+5)

Coffee Break 14:45—15:00

Session2a 15:00—16:00 [Chair: Shinji Mukoyama]

2a1. Toyokazu Sekiguchi (IBS/CTPU), “Gravitational waves from axion string bundles” (10+5)

2a2. Yuka Matsui (Nagoya University), “Gravitational wave background from a string network with Y-junctions” (10+5)

2a3. Takashi Hiramatsu (Rikkyo University), “Colliding strings coupled to matter field” (10+5)

2a4. Keiju Murata (Keio University), “Dynamical AdS strings across horizons” (10+5)

Session2b 15:00—16:00 [Chair: Tomohiro Harada]

2b1. Daisuke Yoshida (Tokyo Institute of Technology), “Ghost Free Extensions of Nonsingular Higher Derivative Gravity” (10+5)

2b2. Frederic P. Schuller (Institute for Quantum Gravity, University of Erlangen-Nuremberg), “A new constructive approach to modified gravity” (10+5)

2b3. Shinpei Kobayashi (Tokyo Gakugei University), “Spacetime Structure of Gravitational Systems and Noncommutative Geometry” (10+5)

2b4. Jan H. Kwapisz (University of Warsaw), **Canceled**

Coffee Break & Poster View 16:00—17:00

Invited lecture 17:00—18:00 [Chair: Tatsuhiko Koike]

H. Ishihara (Osaka City University), “Nambu-Goto strings with geometrical symmetry” (50+10)

Tue 25

Invited lecture 9:30—10:30 [Chair: Hiroataka Yoshino]

Matthew W. Choptuik (University of British Columbia, Canada) “Black hole formation in

Randall-Sundrum II braneworlds" (50+10)

Short Poster Talk 10:30—11:00 [Chair: Chul-Moon Yoo]

No.20 —No.27 (1min)

Coffee Break 11:00—11:15

Invited lecture 11:15—12:15 [Chair: Hideyuki Tagoshi]

Marco Drago (Albert Einstein Institute Hannover), "LIGO Gravitational wave detections: the transient search" (50+10)

Lunch & Poster View 12:15—13:45

Session3a 13:45—14:45 [Chair: Yasusada Nambu]

3a1. Marcus C. Werner (Kyoto University, Yukawa Institute), "Deviations from Etherington reciprocity: theoretical and observational status" (10+5)

3a2. Ichihiko Hashimoto (Yukawa institute for theoretical physics) , "Modeling bispectrum in redshift space from perturbation theory" (10+5)

3a3. Yuko Urakawa (Nagoya university), "Soft theorem and conservation of the curvature perturbation" (10+5)

3a4. Tomohiro Nakama (Johns Hopkins University), "Probing short-wavelength primordial perturbations through compact dark matter halos" (10+5)

Session3b 13:45—14:45 [Chair: Tetsuya Shiromizu]

3b1. Taishi Ikeda (Nagoya University), "Spherically symmetric domain wall collapse by numerical simulation" (10+5)

3b2. Jorge Rocha (University of Barcelona), "Dynamics of thin-shell matter in confined spacetimes, critical behavior and chaos" (10+5)

3b3. Rajibul Shaikh (Indian Institute of Technology Kharagpur), "R=0 wormholes satisfying energy conditions in scalar-tensor gravity" (10+5)

3b4. Naoki Tsukamoto (Huazhong University of Science and Technology), "Retrolensing by a wormhole" (10+5)

Coffee Break 14:45—15:00

Session4a 15:00—16:00 [Chair: Jiro Soda]

4a1. Atsuhisa Ota (Tokyo Institute of Technology), “Cosmological constraints from μ E\$ cross correlations” (10+5)

4a2. Yota Watanabe (Kavli IPMU, YITP), “Is DBI as fragile as other k-essence fields?” (10+5)

4a3. Atsushi Naruko (Tokyo Institute of Technology), “Extended vector-tensor theories” (10+5)

4a4. Ippei Obata (Kyoto University), “Blue tensor spectra from axion-gauge couplings” (10+5)

Session4b 15:00—16:00 [Chair: Ken-ichi Nakao]

4b1. Luca Baiotti (Osaka University), “Numerical simulations of magnetised neutron stars” (10+5)

4b2. Haruki Uchida (Kyoto University), “Relativistic collapse of rotating supermassive stars” (10+5)

4b3. Kei Yamada (Kyoto University), “Near-horizon expansion of second-order black hole perturbations” (10+5)

4b4. Ryuichi Fujita (Instituto Superior Técnico), “Gravitational waves from a spinning particle around a Kerr black hole” (10+5)

Coffee Break & Poster View 16:00—17:00

Invited lecture 17:00—18:00 [Chair: Nobuyuki Kanda]

Stephen Fairhurst (Cardiff University), “Binary Black Hole Mergers in the first Advanced LIGO Observing Run” (50+10)

Wed 26

Invited lecture 9:30—10:30 [Chair: Hideyuki Tagoshi]

Chris Van Den Broeck (Nikhef, Netherlands), “Testing general relativity with gravitational

waves from binary black hole mergers” (50+10)

Short Poster Talk 10:30—10:45 [Chair: Hisaaki Igata]

No.28 —No.32 (1min)

Coffee Break 10:45—11:00

Session5a 11:00—12:15 [Chair: Takeshi Chiba]

5a1. Taishi Katsuragawa (Nagoya University), “Is Scalaron a Dark Matter?” (10+5)

5a2. Arata Aoki (Kobe University), “Detecting ultralight axion dark matter wind with laser interferometers” (10+5)

5a3. Ryo Kato (Kobe University), “Probing ultralight scalar dark matter with pulsar timing arrays” (10+5)

5a4. Daisuke Yoshida (Kobe University), “Radiation memory of axion-electrodynamics” (10+5)

5a5. Ryo Saito (YITP, Kyoto U), “Preferred frame effects in scalar-tensor theories” (10+5)

Session5b 11:00—12:15 [Chair: Tetsuya Shiromizu]

5b1. Kazufumi Takahashi (RESCEU, The University of Tokyo), “Relation between gauge fixing and DOFs in scalar-tensor theories” (10+5)

5b2. Masato Nozawa (Kyoto University), “Positive energy theorems in gravitational theories” (10+5)

5b3. Masashi Kimura (University of Lisbon, Instituto Superior Tecnico), “Mass Ladder Operators from Conformal Symmetry” (10+5)

5b4. Kentaro Tomoda (Kobe University) “Integrability condition for higher rank Killing-Stackel tensors” (10+5)

5b5. Kunihito Uzawa (Kwansei Gakuin University), “Dynamical angled brane” (10+5)

Lunch & Poster View 12:15—13:45

Session6a 13:45—15:00 [Chair Masahide Yamaguchi]

6a1. Shin'ichi Hirano (Rikkyo University) “Healthy extension of mimetic dark matter and its cosmology” (10+5)

6a2. Chunshan Lin (YITP, Kyoto University), “Do we have to modify gravity in the early universe?” (10+5)

6a3. Yuki Sakakihara (Kyoto University, The University of Tokyo), “Production of gravitons and cosmology in bimetric gravity” (10+5)

6a4. Shun Arai (Nagoya University), “Universality of primordial perturbations in the Lifshitz regime of gravity” (10+5)

6a5. Yuichi Takamizu (Rikkyo University), “Bubble Universes” (10+5)

Session6b 13:45—15:00 [Chair: Ken-ichi Oohara]

6b1. Atsushi Nishizawa (The University of Mississippi), “Distinguishing stellar binary black hole formation scenarios with eLISA eccentricity measurements” (10+5)

6b2. Remya Nair (Kyoto University), “Synergy between ground and space based gravitational wave detectors” (10+5)

6b3. Tatsuya Narikawa (Osaka City University), “Parameter estimation for compact binary coalescence signals with iKAGRA data - A warming-up for the bKAGRA era -” (10+5)

6b4. Takaaki Yokozawa (Osaka City University), “A new method probing characteristics of gravitational waves and neutrinos from supernovae” (10+5)

6b5. Joanna M. Dziekańska (University of Warsaw), **Canceled**

Coffee Break & Poster View 15:00—16:30

Invited lecture 16:30—17:30 [Chair: Yasufumi Kojima]

Nobuyuki Kanda (Osaka City University), “Status and Future of KAGRA” (50+10)

Banquet 18:00—20:00

Thu 27

Invited lecture 9:30—10:30 [Chair: Misao Sasaki]

Rong-Gen Cai (ITP, Chinese Academy of Sciences, China), “Action growth of AdS black

holes” (50+10)

Short Poster Talk 10:30—10:32 [Chair: Misao Sasaki]

No.33 (1min)

Coffee Break 10:32—10:45

Session7a 10:45—12:15 [Chair: Kei-ichi Maeda]

7a1. Guillem Domenech (YITP), “Consistency relation and inflaton field redefinition in the delta N formalism” (10+5)

7a2. Yuichiro Tada (Kavli IPMU), “Squeezed Bispectrum in the delta N Formalism without Gauge Artifact” (10+5)

7a3. Shi Pi (Institute for Theoretical Physics, CAS), “Modulations of the scalar power spectrum from a heavy field with a monomial potential” (10+5)

7a4. Hiroyuki Kitamoto (Kyoto University), “Stochastic approach in models with derivative interactions on de Sitter background” (10+5)

7a5. Yuki Watanabe (National Institute of Technology, Gunma College), “Post-inflationary Evolution of Cosmological Perturbations in Horndeski Scalar-Tensor Models” (10+5)

7a6. Yi-Peng WU (RESCEU, The University of Tokyo), “Inflation with teleparallelism: Can we generate primordial fluctuations by torsion?” (10+5)

Session7b 10:45—12:15 [Chair: Hideki Asada]

7b1. Masoumeh Ghasemi Nodehi (Fudan University), “Testing the Kerr Black Hole Hypothesis: Black Hole Shadow and Iron Line” (10+5)

7b2. Kotaro Moriyama (Kyoto University), “New method for black-hole spin measurement based on flux variation from an infalling gas ring” (10+5)

7b3. Toshiaki Ono (Hirosaki University), “Nonradial stability of marginal stable circular orbits in stationary axisymmetric spacetimes” (10+5)

7b4. Kota Ogasawara (Rikkyo University), “Escape probability of the super-Penrose process” (10+5)

7b5. Mitsuru Kakizaki (University of Toyama), “Probing physics behind the electroweak symmetry breaking at future gravitational wave interferometers and future collider experiments” (10+5)

7b6. Asuka Ito (Kobe University), “MHz Gravitational Waves from an Inflaton-gauge Interaction” (10+5)

Lunch & Poster View 12:15—13:45

Invited lecture 13:45—14:45 [Chair: Yuuiti Sendouda]

Tomo Takahashi (Saga University, Japan), “How can we probe inflation and the origin of density fluctuations?” (50+10)

Coffee Break & Poster View 14:45—16:15

Session8a 16:15—17:30 [Chair: Takahiro Tanaka]

8a1. Yu Furuya (Hirosaki University), “Probing pre-inflationary anisotropy with directional variations in the gravitational wave background” (10+5)

8a2. Junsei Tokuda (Kyoto University), “Statistical Nature of Infrared Effects on De Sitter Background” (10+5)

8a3. Toshifumi Noumi (Kobe University), “Unitarity constraints on EFT of inflation” (10+5)

8a4. Kenji Hotta (Hokkaido University), “Unruh Effect in Closed String Theory” (10+5)

8a5. Stefano Ansoldi (TAP - Kyoto University), “On upward tunneling” (10+5)

Session8b 16:15—17:15 [Chair: Takeshi Chiba]

8b1. Sijie Gao (Beijing Normal University), “Non-linear electrodynamics and the first law of Bardeen black holes” (10+5)

8b2. Kaushik Ghosh (Vivekananda College, University of Calcutta, India), “Entropy of a Minimally Coupled Scalar Field in the Asymptotically Flat Black Holes” (10+5)

8b3. Naritaka Oshita (RESCEU, The University of Tokyo), “Firewall paradox and decoherence inside a black hole” (10+5)

8b4. Sousuke Noda (Nagoya University), “Analogue Kerr-like geometries in a MHD flow” (10+5)

SOC meeting 17:30—18:00

Fri 28

Invited lecture 9:30—10:30 [Chair: Hideki Ishihara]

David Langlois (Laboratoire APC, France), “Higher order scalar-tensor theories beyond Horndeski” (50+10)

Coffee Break 10:30—10:45

Session9 10:45—12:00 [Chair: Hideki Ishihara]

1. Kazuhiro Yamamoto (Hiroshima University), “Quantum radiation from Unruh-De Witt detector” (10+5)
2. Antonino Flachi (Keio University), “Quantum Fields Near Black Holes” (10+5)
3. Tomohiro Harada (Rikkyo University), “Primordial black hole formation in a matter-dominated universe” (10+5)
4. Hiromi Saida (Daido Univ.), “Observing GR Effects through a Star Orbiting the Massive BH Candidate at our Galactic Center” (10+5)
5. Yasufumi Kojima (Hiroshima University), “Force-free magnetic structure in the exterior of relativistic stars” (10+5)

Presentation Awards 12:00—12:15

Closing 12:15—12:30

Kei-ichi Maeda (Waseda University)

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Poster Presentations (board size: width 113cm, height 163cm)

Short Poster Talks on Mon 24

1. Yuki Niiyama (Hirosaki University), "The generation and evolution of inflationary vector perturbations in Einstein-Weyl gravity"
2. Teruaki Suyama (Research Center for the Early Universe), "Primordial black hole scenario for the gravitational-wave event GW150914"
3. Takayuki Tatekawa (Waseda University), "Evolution of large-scale structure with relativistic perturbations: Eulerian and Lagrangian approaches"
4. Shingo Akama (Rikkyo University), "All non-singular cosmological solutions are unstable in general bi-scalar-tensor theories"
5. Taisaku Mori (Nagoya University), "A simple solution for the cosmological constant problem by a topological field theory"
6. Satoshi Tsuchida (Osaka City University), "Dark matter interaction with laser interferometric gravitational wave detector"
7. Yingli Zhang (National Astronomical Observatories, Chinese Academy of Sciences), "Screening fth forces in generalized Proca theories"
8. Keitaro Nanri (Yamaguchi University), "Gravitational Lensing Effects by Brane Black hole and Ellis Wormhole"
9. Joseph M. Fedrow (YITP, Kyoto U), "Gravitational Waves from 3D Rotating Core-Collapse Supernovae"
10. Asahi Ishihara (Hirosaki University), "Gravitational bending angle of light for finite distance and the Gauss-Bonnet theorem"
11. Yusuke Suzuki (Hirosaki University), "Gravitational bending angle of light in strong field limit and the Gauss-Bonnet theorem"
12. Tatsuya Ogawa (Osaka City University), "Spherically symmetric non-topological soliton shielding a weak charge in $SU(2)\times U(1)$ gauge theory"
13. Chulmoon Yoo (Nagoya University), "Non-spherical gravitational collapse of a collisionless particle system"
14. Emi Masaki (Kobe University), "Effects of ALP-photon Conversion on Gamma-ray Bursts Polarization"
15. Hirotaka Yoshino (Osaka City University), "Perturbative uniqueness of a static photon surface"
16. Ryosuke Urakawa (Waseda University), "Analyzing constraint propagation of Einstein equation in non-flat background"
17. Yoshiyuki Morisawa (Osaka City University), "Cohomogeneity one string in AdS spacetime"
18. Norihiro Tanahashi (Osaka University), "Black Hole Horizon is a Nest of Chaos"

19. Keisuke Izumi (Nagoya University), "Tree-Unitarity and renormalizability in Lifshitz-scaling theory"

Short Poster Talks on Tue 25

20. Takuya Maki (Japan Women's College of Physical Education), "GR-GSG Hybrid Gravity"

21. Kiyomi Hasegawa (Hirosaki University), "An inhomogeneous cosmology where the expansion is driven by the domain-dependent average density"

22. Shinya Tomizawa (Tokyo University of Technology), "Asymptotically flat black lenses"

23. Hiroyuki Nakano (Kyoto University), "Precessing, Spinning Black Hole Binary Spacetime"

24. Takashi Mishima (Nihon University), "Generation of non-solitonic cylindrically symmetric gravitational waves with mode-mixing by the harmonic mapping method"

25. Kazuki Sakai (Nagaoka University of Technology), "Analyzing rigdown gravitational waves from binary blackhole mergers with the Hilbert-Huang transform"

26. Takahisa Igata (Rikkyo university), "Self-similar motion of a Nambu-Goto string"

27. Yoshimune Tomikawa (Nagoya University)

Short Poster Talks on Wed 26

28. Ken MATSUNO (Butsuryo College of Osaka), "Particle acceleration by spherical soliton"

29. Shuichiro Yokoyama (Rikkyo University), "Refined Study of Isocurvature Fluctuations in the Curvaton"

30. Hisaaki Shinkai (Osaka Institute of Technology), "Gravitational waves from merging intermediate-mass black-holes"

31. Takashi Torii (Osaka Institute of Technology), "Singularity Avoidance in Gauss-Bonnet gravity"

32. Masaaki Takahashi (Aichi University of Education), "Structure of Magnetic fields and Efficiency of Energy Extraction in a Force-Free Black Hole Magnetosphere"

Short Poster Talks on Thu 27

33. Ryotaro Kase (Tokyo University of Science), "Absence of conical singularities in beyond-generalized Proca theories"