Reginald Christian Bernardo, Ph.D.

https://reggiebernardo.github.io
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Research Interests

Gravitational Waves, Gravity, Cosmology, Machine Learning, Data Analysis, Dark Energy

Highlights

Software	**PTAfast**: PTA correlations from stochastic gravitational wave background, https://github.com/reggiebernardo/PTAfast.
	cosmo-learn: code for learning cosmology using different methods and mock data, https://github.com/reggiebernardo/cosmo_learn.
Papers	**R. C. Bernardo** and K.-W. Ng, *Testing gravity with cosmic variance-limited pulsar timing array correlations*, *Phys. Rev. D* **109** (2024) L101502 [2306.13593].
	R. C. Bernardo, G.-C. Liu and K.-W. Ng, *Correlations for an anisotropic polarized stochastic gravitational wave background in pulsar timing arrays*, *JCAP* **04** (2024) 034 [2312.03383].
Review	**R. C. Bernardo** and K.-W. Ng, *Charting the nanohertz gravitational wave sky with pulsar timing arrays*, *Int. J. Mod. Phys. D* **34** (2025) 2540013 [2409.07955].

Employment History

Jul. 2026–pres.	**Senior Scientist**, Max Planck Institute for Gravitational Physics (Albert Einstein Institute), D-30167 Hannover, Germany
May 2025–Jul. 2026	**Postdoc/Junior Scientist**, Max Planck Institute for Gravitational Physics (Albert Einstein Institute), D-30167 Hannover, Germany
Mar. 2025–May 2025	**Visiting Scientist**, Institute of Physics, Academia Sinica, Taipei 11529, Taiwan
Nov. 2023–Mar. 2025	**Postdoctoral Fellow**, Asia Pacific Center for Theoretical Physics, Pohang 37673, Republic of Korea
Oct. 2021–Oct. 2023	**Postdoctoral Fellow**, Institute of Physics, Academia Sinica, Taipei 11529, Taiwan
Feb. 2021–Aug. 2021	**Assistant Professor**, National Institute of Physics, University of the Philippines Diliman, Quezon City 1101, Philippines
Aug. 2015–Jul. 2020	**Instructor**, National Institute of Physics, University of the Philippines Diliman, Quezon City 1101, Philippines

Education

Aug. 2017–Jul. 2020	**Ph.D. Physics, University of the Philippines Diliman (UPD)** *Most Outstanding Ph.D. (Supervisor: Ian Vega)* Thesis: *Compact objects, cosmologies, and gravitational perturbations in scalar-tensor theories of gravity*
Aug. 2015–Jun. 2017	**M.Sc. Physics, University of the Philippines Diliman** *Most Outstanding M.Sc.* Thesis: *Some consequences of the generalized uncertainty principle: energy levels, thin-layer quantization, and quantum dynamics*

Education

Jun. 2010–Jun. 2015 **B.Sc. Physics, University of the Philippines Diliman**
Magna Cum Laude, Best Thesis
Thesis: *Bound states, quantum scattering, and dynamics in one-dimensional systems with minimal length*

Teaching

Lecturer Thermodynamics, Relativity, and Quantum Mechanics for Engineering and Physics Majors

Lab Elementary Mechanics, Thermodynamics, and Modern Physics for Engineering and Science Majors

Grader Mechanics, Electromagnetism, Quantum Theory, Statistical Mechanics, Solid State Physics, and General Gelativity for Undergraduate and Graduate Physics Students

Admin

SOC [AGWAM-2026] Asian Gravitational Wave Astronomy Meeting 2026 School and Workshop, 5-11 July 2026, Chiang Mai, Thailand, hosted by National Astronomical Research Institute of Thailand (NARIT) (supported by NARIT, National University of Singapore, APCTP)

[APCTP-GW2025] APCTP Workshop on Gravitational Waves 2025, 20-25 April 2025, Taipei, Taiwan, hosted by Academia Sinica (supported by APCTP, Academia Sinica, NCTS)

[CoMaDS 2025] International Workshop on Computational and Mathematical Methods in Data Science 2025, 3-5 April 2025, Boracay Tropics Resort Hotel, Aklan, Philippines, hosted by the College of Science, University of the Philippines Diliman (supported by UP OIL and UP Diliman OVCRD)

Organizer HEP Seminar, Aug. 2022–Jan. 2023, Institute of Physics, Academia Sinica

HEP Journal Club, Feb.–Jul. 2022, Institute of Physics, Academia Sinica

Head Wellness Committee, A.Y. 2019–2020, National Institute of Physics, UPD

Modern Physics Course Group, A.Y. 2018–2019, National Institute of Physics, UPD

Elementary Mechanics Lab Course Group, A.Y. 2017–2018, National Institute of Physics, UPD

Miscellaneous

Community Involvement

Referee Phys. Rev. Lett., Phys. Rev. D, J. Cosmol. Astropart. Phys., Class. Quantum Gravity, Phys. Dark Universe, Eur. Phys. J. C, Astron. Comput., Mon. Not. R. Astron. Soc., Astrophys. J., Mod. Phys. Lett. A, Chinese J. Phys., Sci. Rep., Gen. Relativ. Gravit., J. Korean Phys. Soc., Proceedings of the Samahang Pisika ng Pilipinas, Philippine Journal of Science

Editor Proceedings of the Physics Society of the Philippines

Member CosmoVerse COST Action—Data Analysis and Fundamental Physics Working Groups

Square Kilometer Array Observatory—Pulsars and Cosmology Science Working Groups

Miscellaneous

Awards and Achievements

2020	**Most Outstanding Ph.D. Graduate**, College of Science, UPD
	Edgardo Gomez Award for Outstanding Ph.D. Graduate, College of Science, UPD
	Excellence in Graduate Studies, College of Science, UPD
2017	**Most Outstanding M.S. Graduate**, College of Science, UPD
2016	**Gawad Direktor bilang Natatanging Guro sa Laboratorio**, National Institute of Physics, UPD
2015	**Leticia Shahani Award for Best Undergraduate Thesis**, College of Science, UPD
	Magna Cum Laude, College of Science, UPD
2012 – 2015	**Jose Maria Feliciano Undergraduate Scholar**, College of Science, UPD
2010 – 2015	**College and University Scholar**, College of Science, UPD

Skills

Languages	English, Filipino
Coding	Command Line, Python, Mathematica, LaTeX
Misc.	Academic research, teaching, training, consultation, LaTeX typesetting and publishing

Workshops & Invited Talks

2026

- **TBA**
  INVITED TALK · *Institute of Theoretical Physics, Leibniz University Hannover*, Germany · 26 Oct.
- **TBA**
  INVITED ONLINE SEMINAR · *Department of Physics, Swansea University*, United Kingdom · 28 Oct.
- **Gravitational wave science with CHRONOS**
  INVITED ONLINE TALK · *CHRONOS International Workshop, National Central University*, Taiwan · 10 Sep.
- **Random walks in the nanohertz gravitational wave sky**
  INVITED ONLINE TALK · *2026 Henan Academy of Sciences 1st International Workshop on Gravity, Cosmology and Mathematical Physics*, Henan, China · 12 May
- **Stochastic problems in pulsar timing**
  INVITED SEMINAR · *Max Planck Institute for Gravitational Physics (Albert Einstein Institute)*, Hannover, Germany · 20 Jan.

2025

- **Correlated processes, a Gaussian gravitational wave background signal, and pulsar timing arrays**
  INVITED SEMINAR · *Department of Physics, University of Malta*, Malta · 22 Oct.
- **Correlated processes, a Gaussian gravitational wave background signal, and pulsar timing arrays**
  INVITED SEMINAR · *Institut de Física d'Altes Energies (IFAE)*, Barcelona, Spain · 16 Oct.
- **Prospects in nanohertz gravitational wave astronomy**
  INVITED SEMINAR · *Department of Physics, National Central University*, Taiwan · 9 Apr.

Workshops & Invited Talks

- **Frontiers of gravitational wave astronomy with pulsar timing arrays**
  INVITED SEMINAR · *Institute for Basic Science*, Korea · 6 Mar.
- **Simulating gravitational wave background signals in pulsar timing arrays**
  INVITED SEMINAR · *Max Planck Institute for Gravitational Physics (Albert Einstein Institute)*, Hannover, Germany · 19 Feb.
- **Gravitational wave science with pulsar timing arrays**
  INVITED SEMINAR · *Department of Physics, Chung-Ang University*, Korea · 20 Jan.

2024

- **Advancing gravitational wave astronomy with pulsar timing arrays**
  INVITED SEMINAR · *Institute of Physics, Academia Sinica*, Taiwan · 30 Dec.
- Advancing nanohertz gravitational wave science
  TALK · *The 8th APCTP Alumni Scientific Symposium*, hosted at the Asia Pacific Center for Theoretical Physics, Pohang, Korea · 4–8 Nov.
- Testing the Gaussianity of a stochastic gravitational wave background
  TALK · *Kashiwa-no-ha Dark Matter and Cosmology Symposium (Satellite workshop of COSMO 2024)*, hosted at the Kavli Institute for the Physics and Mathematics of the Universe, The University of Tokyo, Japan · 28 Oct.–1 Nov.
- New physics prospects with nanohertz gravitational waves
  TALK · *APCTP-KIAS Focused research on the origin and evolution of the Universe*, hosted at the Asia Pacific Center for Theoretical Physics, Pohang, Korea · 17–21 Jun.
- Gravitational physics frontiers in the nanohertz regime with PTA and SKA
  TALK · *YITP long-term workshop Gravity and Cosmology 2024 (GC2024)*, hosted by the Yukawa Institute for Theoretical Physics, Kyoto University, Japan · 29 Jan.–1 Mar.
- Gravity and cosmology in the nanohertz GW regime
  TALK · *Bangkok Workshop on Gravity and Cosmology*, hosted by the Physics Department, Chulalongkorn University, Thailand · 22–26 Jan.

2023

- **Pulsar timing array gravitational physics frontier**
  INVITED SEMINAR · *Leung Center for Cosmology and Particle Astrophysics, National Taiwan University*, Taiwan · 6 Dec.
- **On future pulsar timing array gravitational physics frontier**
  INVITED ONLINE SEMINAR · *Center of Quantum SpaceTime, Sogang University*, Korea · 27 Nov.
- **Testing gravity using inter-pulsar correlation measurements**
  INVITED TALK · *CosPA (Cosmology and Particle Astrophysics) 2023 Symposium*, Department of Physics and Institute of Theoretical Physics, The Chinese University of Hong Kong, Hong Kong · 11 Nov.
- **Testing gravity in the nanohertz GW regime using PTA correlations**
  INVITED SEMINAR · *Department of Physics, National Taiwan Normal University*, Taiwan · 28 Sep.
- Testing gravity in the nanohertz gravitational wave regime
  TALK · *The 27th International Summer Institute on Phenomenology of Elementary Particle Physics and Cosmology (SI2023)*, hosted by the National Center for Theoretical Sciences Physics Division and the Physics Department, National Tsing Hua University, Taiwan · 21–25 Aug.
- Testing gravity in the nanohertz GW regime using PTA correlations
  TALK · *Pulsar Timing Arrays: A Star-Way to New Physics*, hosted by the Mainz Institute for Theoretical Physics, Johannes Gutenberg University Mainz, Germany · 14–18 Aug.
- **Theoretical milestones and recent progress on the nanohertz gravitational wave background**
  INVITED SEMINAR · *National Center for Theoretical Sciences Physics Division, National Taiwan University*, Taiwan · 8 May

Workshops & Invited Talks

- Stochastic gravitational wave background correlation signals in a pulsar timing array
  TALK · *2023 Annual Meeting of the Physical Society of Taiwan (TPS2023)*, hosted by the National Cheng Kung University, Taiwan · 16–18 Jan.
- Stochastic gravitational wave background correlations in a pulsar timing array
  TALK · *19th Rencontres du Vietnam 2023: Theory meeting experiments (TMEX-2023)*, hosted by the International Centre for Interdisciplinary Science Education, Quy Nhon, Vietnam · 5–11 Jan.

2022

- **PTAfast: Finding the Galileon and other degrees of freedom in the nanohertz GW sky**
  INVITED ONLINE TALK · *CosPA (Cosmology and Particle Astrophysics) 2022 Symposium*, Asia Pacific Center for Theoretical Physics, Korea · 2 Dec.
- **Stochastic gravitational wave background phenomenology in a pulsar timing array**
  INVITED SEMINAR · *Department of Physics, National Tsing Hua University*, Taiwan · 27 Oct.
- Stochastic gravitational wave background phenomenology beyond Einstein
  TALK · *The 31st Workshop on General Relativity and Gravitation in Japan (JGRG31)*, virtual, hosted by the University of Tokyo, Japan · 24–28 Oct.
- **The stochastic gravitational wave background in a pulsar timing array**
  INVITED SEMINAR · *Department of Physics, National Taiwan Normal University*, Taiwan · 6 Oct.
- **The stochastic gravitational wave background in a pulsar timing array**
  INVITED SEMINAR · *Department of Electrophysics, National Yang Ming Chiao Tung University*, Taiwan · 4 Oct.
- Beyond Einstein phenomenology in the nanohertz gravitational wave sky
  TALK · *NCTS The Future is Illuminating*, virtual, hosted by the National Center for Theoretical Sciences Physics Division, Hsinchu Hub, Taiwan · 28–30 Jun.
- Backreaction of modes on inflationary dynamics through a classical-quantum correspondence
  TALK · *Quantum Field Theory in Curved Spacetimes Workshop*, virtual · 23–27 May
- **Self-tuning phenomenology through degeneracy and beyond**
  INVITED SEMINAR · *Department of Physics, National Taiwan Normal University*, Taiwan · 29 Mar.
- Self-tuning beyond degeneracy through the cosmic tadpole
  TALK · *Asia-Pacific School and Workshop on Gravitation and Cosmology 2022*, virtual, hosted by the Department of Physics, Soochow, Taiwan and GSROC (Taiwan) · 19–22 Mar.
- **The cosmological constant problem, Fab Four, and well-tempered cosmology**
  INVITED SEMINAR · *Institute of Physics, Academia Sinica*, Taiwan · 18 Feb.

2021

- **Gravitational wave signatures from dark sector interactions**
  INVITED SEMINAR · *National Center for Theoretical Sciences Physics Division, National Taiwan University*, Taiwan · 27 Dec.
- Towards well-tempered dark energy and teleparallel gravity
  TALK · *The 30th Workshop on General Relativity and Gravitation in Japan (JGRG30)*, virtual, hosted by the Waseda University, Japan · 6–10 Dec.
- Progress on well-tempered cosmology: new teleparallel extensions and observational status
  TALK · *LeCosPA 4th International Symposium Unity of Physics – From Plasma Wakefields to Black Holes*, hosted by the Leung Center for Cosmology and Particle Astrophysics, National Taiwan University · 29 Nov.–3 Dec.
- Towards a model-independent reconstruction approach for late-time Hubble data
  TALK · *Brookhaven Forum: Opening New Windows to the Universe (BF2021)*, virtual, hosted by the Brookhaven National Laboratory · 3–5 Nov.
- **The dark Universe: Theory and data assembles**
  INVITED ONLINE TALK · *39th Samahang Pisika ng Pilipinas Physics Conference*, Physics Society of the Philippines · 20–22 Oct.

Workshops & Invited Talks

- Towards well-tempered dark energy models
  TALK · *8th Korea-Japan workshop on Dark Energy*, virtual, hosted by the Yukawa Institute for Theoretical Physics, Kyoto University, Japan · 18–22 Oct.
- A data-driven reconstruction of Horndeski gravity using late-time Hubble data
  TALK · *AAPPS-DACG Workshop 2021 on Astrophysics, Cosmology and Gravitation*, virtual, hosted by the Asia Pacific Center for Theoretical Physics, Korea · 4–8 Oct.
- Gravitational wave signatures from dark sector interactions
  POSTER · *Black Holes Inside and Out (BHIO2021)*, virtual, hosted by the Tokyo Institute of Technology and the Yukawa Institute of Theoretical Physics, Japan and the Florida Space Institute, US · 27 Sep.–1 Oct.
- A data-driven reconstruction of Horndeski gravity using late-time Hubble data
  TALK · *Alternative Gravities and Fundamental Cosmology (ALTECOSMOFUN'21)*, virtual, hosted by the Szczecin Cosmology Group, Institute of Physics, University of Szczecin, Poland · 6–10 Sep.
- New scaling solutions in coupled vector dark energy
  TALK · *Iberian Cosmology Meeting (IberiCOS 2021)*, virtual, hosted by the University of Coimbra and Instituto Superior Técnico, University of Lisbon, Portugal · 29 Mar.–1 Apr.
- Gravitational waves from dark sector interactions
  TALK · *International Webinar on Recent Developments in Cosmology and Modified Gravity (RDCM-2021)*, virtual, hosted by the Department of Mathematics, BITS-Pilani, Hyderabad Campus, India · 9–11 Mar.
- SIGRAV International School 2021: Gravity of Compact Astrophysical Objects and Gravitational Waves
  PARTICIPANT · virtual, hosted by the Italian Society of General Relativity and Gravitation, Italy · 1–5 Feb.
- IV Joint ICTP-Trieste/ICTP-SAIFR School on Cosmology: Challenges for the Standard Cosmological Model
  PARTICIPANT · virtual, hosted by IFT-UNESP, São Paulo, Brazil · 18–29 Jan.

2019

- Hairy black holes in kinetic gravity braiding
  TALK · *The 29th Workshop on General Relativity and Gravitation in Japan (JGRG29)*, Kobe University, Japan · 25–29 Nov.
- New solutions in Horndeski theory
  POSTER · *2019 YITP Asian-Pacific Winter School and Workshop on Gravitation and Cosmology*, Yukawa Institute for Theoretical Physics, Kyoto University, Japan · 11–15 Feb.

2018

- ICTP Summer School on Cosmology 2018
  PARTICIPANT · Abdus Salam International Centre for Theoretical Physics, Trieste, Italy · 18–29 Jun.

References

Kin-Wang Ng
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Institute of Physics *and* Institute of Astronomy and Astrophysics, Academia Sinica,
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Jackson Levi Said
Associate Professor
Institute of Space Sciences and Astronomy *and* Department of Physics, University of Malta,
Msida, 2080 Malta
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Full List of Publications

1. **R. C. Bernardo**, R. Mandal and K.-W. Ng, *Non-Gaussian timing residual skewness in pulsar timing arrays*, 2610.02735.
2. **R. C. Bernardo**, *Testing internal dynamics in neutron stars with radio pulsar timing*, 2610.02291.
3. **R. C. Bernardo**, *Intrinsic versus observation induced spin nonstationarity in pulsar timing*, 2610.01978.
4. **R. C. Bernardo**, *Stationarity and angular momentum conservation in pulsar spin noise*, 2610.01929.
5. **R. C. Bernardo**, *Stochastic problems in pulsar timing*, 2604.08373.
6. **R. C. Bernardo**, D. Grandón, J. Levi Said, V. H. Cárdenas, G. C. Belinario and R. Reyes, *Cosmo-learn: code for learning cosmology using different methods and mock data*, *Eur. Phys. J. C* **86** (2026) 788 [2508.20971].
7. **R. C. Bernardo** and K.-W. Ng, *Simulating a Gaussian stochastic gravitational wave background signal in pulsar timing arrays*, *Phys. Rev. D* **113** (2026) 043512 [2507.15756].
8. **R. C. Bernardo**, S. Koh and G. Tumurtushaa, *Implications of pulsar timing arrays for Gauss-Bonnet Inflation*, *JCAP* **10** (2025) 013 [2505.10235].
9. **R. C. Bernardo**, E. A. Enriquez, R. Mendoza, R. Reyes and A. C. Velasco, *Nature-inspired optimization, the Philippine Eagle, and cosmological parameter estimation*, *Astron. Comput.* **54** (2026) 101026 [2505.10299].
10. **R. C. Bernardo** and Y. Chen, *Genetic algorithm demystified for cosmological parameter estimation*, *Astron. Comput.* **55** (2026) 101041 [2505.10450].
11. CosmoVerse Network collaboration, *The CosmoVerse White Paper: Addressing observational tensions in cosmology with systematics and fundamental physics*, *Phys. Dark Univ.* **49** (2025) 101965 [2504.01669].
12. **R. C. Bernardo**, S. Appleby, F. Bernardeau and C. Pichon, *The Topology of Rayleigh-Levy Flights in Two Dimensions*, *Astron. Astrophys.* **705** (2026) A18 [2503.07244].
13. **R. C. Bernardo** and K.-W. Ng, *Charting the nanohertz gravitational wave sky with pulsar timing arrays*, *Int. J. Mod. Phys. D* **34** (2025) 2540013 [2409.07955].
14. **R. C. Bernardo** and K.-W. Ng, *Accurate pulsar timing array residual variances and correlation of the stochastic gravitational-wave background*, *Phys. Rev. D* **113** (2026) L021501 [2409.01218].
15. **R. C. Bernardo**, S. Appleby and K.-W. Ng, *Toward a test of Gaussianity of a gravitational wave background*, *JCAP* **01** (2025) 017 [2407.17987].
16. **R. C. Bernardo**, G.-C. Liu and K.-W. Ng, *Correlations for an anisotropic polarized stochastic gravitational wave background in pulsar timing arrays*, *JCAP* **04** (2024) 034 [2312.03383].
17. **R. C. Bernardo** and K.-W. Ng, *Beyond the Hellings-Downs curve: Non-Einsteinian gravitational waves in pulsar timing array correlations*, *Astron. Astrophys.* **691** (2024) A126 [2310.07537].
18. S. Appleby and **R. C. Bernardo**, *Tadpole cosmology: Milne solution as a cosmological constant hideout*, *JCAP* **12** (2023) 003 [2308.01712].
19. **R. C. Bernardo** and K.-W. Ng, *Testing gravity with cosmic variance-limited pulsar timing array correlations*, *Phys. Rev. D* **109** (2024) L101502 [2306.13593].
20. **R. C. Bernardo** and K.-W. Ng, *Hunting the stochastic gravitational wave background in pulsar timing array cross correlations through theoretical uncertainty*, *JCAP* **08** (2023) 028 [2304.07040].
21. **R. C. Bernardo** and K.-W. Ng, *Constraining gravitational wave propagation using pulsar timing array correlations*, *Phys. Rev. D* **107** (2023) L101502 [2302.11796].

22 **R. C. Bernardo** and Y.-R. Lee, *Hubble constant by natural selection: Evolution chips in the Hubble tension*, *Astron. Comput.* (2023) 100740 [2212.02203].

23 **R. C. Bernardo**, D. Grandón, J. Levi Said and V. H. Cárdenas, *Dark energy by natural evolution: Constraining dark energy using Approximate Bayesian Computation*, *Phys. Dark Univ.* **40** (2023) 101213 [2211.05482].

24 **R. C. Bernardo** and K.-W. Ng, *Stochastic gravitational wave background phenomenology in a pulsar timing array*, *Phys. Rev. D* **107** (2023) 044007 [2208.12538].

25 **R. C. Bernardo** and K.-W. Ng, *Pulsar and cosmic variances of pulsar timing-array correlation measurements of the stochastic gravitational wave background*, *JCAP* **11** (2022) 046 [2209.14834].

26 K. H. A. Villegas and **R. C. Bernardo**, *Quantum and higher curvature corrections to the anti-de Sitter black hole*, *Gen. Rel. Grav.* **56** (2024) 56 [2208.07663].

27 **R. C. Bernardo** and K.-W. Ng, *Looking out for the Galileon in the nanohertz gravitational wave sky*, *Phys. Lett. B* **841** (2023) 137939 [2206.01056].

28 S. Appleby and **R. C. Bernardo**, *Tadpole cosmology: self tuning without degeneracy*, *JCAP* **07** (2022) 035 [2202.08672].

29 **R. C. Bernardo** and C.-Y. Chen, *Dressed black holes in the new tensor–vector–scalar theory*, *Gen. Rel. Grav.* **55** (2023) 23 [2202.08460].

30 **R. C. Bernardo**, C.-Y. Chen, J. Said Levi and Y.-H. Kung, *Confronting quantum-corrected teleparallel cosmology with observations*, *JCAP* **04** (2022) 052 [2111.11761].

31 C. J. Palpal-latoc, **R. C. Bernardo** and I. Vega, *Testing time-delayed cosmology*, *Eur. Phys. J. C* **82** (2022) [2111.10742].

32 **R. C. Bernardo**, D. Grandón, J. Said Levi and V. H. Cárdenas, *Parametric and nonparametric methods hint dark energy evolution*, *Phys. Dark Univ.* **36** (2022) 101017 [2111.08289].

33 **R. C. Bernardo**, *Inflationary quantum dynamics and backreaction using a classical-quantum correspondence*, *Eur. Phys. J. C* **81** (2021) 994 [2109.08508].

34 **R. C. Bernardo**, J. L. Said, M. Caruana and S. Appleby, *Well-Tempered Minkowski Solutions in Teleparallel Horndeski Theory*, 2108.02500.

35 **R. C. Bernardo**, J. L. Said, M. Caruana and S. Appleby, *Well-tempered teleparallel Horndeski cosmology: a teleparallel variation to the cosmological constant problem*, *JCAP* **10** (2021) 078 [2107.08762].

36 **R. C. Bernardo** and J. Levi Said, *Towards a model-independent reconstruction approach for late-time Hubble data*, *JCAP* **08** (2021) 027 [2106.08688].

37 **R. C. Bernardo** and J. Levi Said, *A data-driven Reconstruction of Horndeski gravity via the Gaussian processes*, *JCAP* **09** (2021) 014 [2105.12970].

38 **R. C. Bernardo**, *Gravitational wave signatures from dark sector interactions*, *Phys. Rev. D* **104** (2021) 024070 [2103.02311].

39 **R. C. Bernardo**, *Self-tuning kinetic gravity braiding: Cosmological dynamics, shift symmetry, and the tadpole*, *JCAP* **03** (2021) 079 [2101.00965].

40 **R. C. Bernardo** and I. Vega, *Stealth black hole perturbations in kinetic gravity braiding*, *J. Math. Phys.* **62** (2021) 072501 [2007.06006].

41 **R. C. Bernardo**, J. Celestial and I. Vega, *Stealth black holes in shift symmetric kinetic gravity braiding*, *Phys. Rev. D* **101** (2020) 024036 [1911.01847].

42 **R. C. Bernardo** and I. Vega, *Tailoring cosmologies in cubic shift-symmetric Horndeski gravity*, *JCAP* **10** (2019) 058 [1903.12578].

43 **R. C. Bernardo** and I. Vega, *Hair-dressing Horndeski: An approach for obtaining hairy solutions in cubic Horndeski gravity*, *Phys. Rev. D* **99** (2019) 124049 [1902.04988].

44 **R. C. S. Bernardo** and J. P. H. Esguerra, *Maximally-localized position, Euclidean path-integral, and thermodynamics in GUP quantum mechanics*, *Annals Phys.* **391** (2018) 293.

45 **R. C. S. Bernardo** and J. P. H. Esguerra, *Euclidean path integral formalism in deformed space with minimum measurable length*, *J. Math. Phys.* **58** (2017) 042103.

46 **R. C. S. Bernardo** and J. P. H. Esguerra, *Quantum scattering in one-dimensional systems satisfying the minimal length uncertainty relation*, *Annals Phys.* **375** (2016) 444.

47 **R. C. S. Bernardo** and J. P. H. Esguerra, *Energy levels of one-dimensional systems satisfying the minimal length uncertainty relation*, *Annals Phys.* **373** (2016) 521.

48 **R. C. S. Bernardo** and J. P. H. Esguerra, *Exactly Solvable Dynamical Models with a Minimal Length Uncertainty*, *Few Body Syst.* **56** (2015) 219 [1602.02240].

49 P. C. S. Cruz, **R. C. S. Bernardo** and J. P. H. Esguerra, *Energy levels of a quantum particle on a cylindrical surface with non-circular cross-section in electric and magnetic fields*, *Annals of Physics* **379** (2017) 159.

50 **R. C. S. Bernardo** and C. P. Palisoc, *Wronskian method for bound state central force problem*, *European Journal of Physics* **35** (2014) 035024.

51 **R. C. Bernardo**, J. P. Esguerra, J. D. Vallejos and J. J. Canda, *Wind-influenced projectile motion*, *European Journal of Physics* **36** (2015) 025016.

52 J. P. Esguerra, **R. C. Bernardo**, J. D. Vallejos and J. J. Canda, *Reply to comment on 'wind-influenced projectile motion'*, *European Journal of Physics* **36** (2015) 068004.

Conference Proceedings

1. G. C. Belinario, **R. C. Bernardo** and R. Reyes, *Constraining cosmic dark energy using bright standard sirens*, in *Proceedings of the Samahang Pisika ng Pilipinas*, vol. 42, pp. SPP–2024–2E–01, 2024, https://proceedings.spp-online.org/article/view/SPP-2024-2E-01.

2. J. A. Peralta, R. Reyes and **R. C. Bernardo**, *Jitter-based method for hubble function reconstruction*, in *Proceedings of the Samahang Pisika ng Pilipinas*, vol. 41, pp. SPP–2023–2D–03, 2023, https://proceedings.spp-online.org/article/view/SPP-2023-2D-03.

3. **R. Bernardo**, *Effect of transverse uniform electric field on spinless quantum particle confined on the surface of an elliptic cylinder*, in *Proceedings of the Samahang Pisika ng Pilipinas*, vol. 31, pp. SPP2013–PA–9, 2013, https://proceedings.spp-online.org/article/view/SPP2013-PA-9.

4. **R. C. S. Bernardo** and J. P. H. Esguerra, *Energy levels of a quantum particle on a corrugated tube in a uniform electric field*, in *Proceedings of the Samahang Pisika ng Pilipinas*, vol. 33, pp. SPP–2015–PB–43, 2015, https://proceedings.spp-online.org/article/view/1249.

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