Ling-Wei Luo

CONTACT INFORMATION

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AUTOBIOGRAPHY

I am Ling-Wei Luo and was born in Kaohsiung city, Taiwan in 1983. Incidentally, I am deaf in one ear since childhood. My family includes two members: my mother and my younger sister, and they are working on the cosmetic industries. Currently, I am an Adjunct Assistant Professor in the Department of Physics, Tamkang University in Taiwan, and principally devoted to teach the course of general physics. I am independent and responsible in my work, have an approachable personality. In addition, I am also highly cooperative with colleagues and friends. Since I was a child, I have been very interested in science and love to explore the origin of phenomena.

I got a bachelor's degree in the Department of Applied Physics at National Pingtung University of Education in Taiwan in 2007. In my junior year, I started to join the research on nanotechnology and optics. At the same time, I served as the manager of the nanotechnology laboratory and teaching assistant of the course of advanced experiment, and was responsible for the test and calibration of the Scanning Probe Microscope (SPM). Additionally, I also assist students in using SPM.

I studied the master's and then the doctoral degree at the Department of Physics in National Tsing Hua University (NTHU) in Taiwan. The research field includes the particle physics, cosmology and gravity. After one-year master's program in NTHU, I directly apply for the doctoral program in 2008. At that time, I concentrated on the neutrino physics, and joined the Daya Bay nuclear reactor neutrino experiment. In September 2009 I started to study the cosmology, particularly the dark energy theory, and then became a doctoral candidate in the third year of the doctoral program in 2011. After that, my research direction focused on gravity theory and quantum field theory, especially on gauge field theory. In 2014, I have experience on a substitute lecturer for the course of the introductory particle physics. Finally, in June 2014, I received Ph.D. with the

dissertation titled "Alternative Gravity Theories and Their Applications in Cosmology" in theoretical physics from NTHU.

After graduation, I worked as a Postdoctoral Fellow at the Institute of Physics, National Chiao Tung University (NCTU) in Taiwan and then move to the Department of Physics, NTHU during the period of 2014–2018. In 2017 (the 106 academic year in Taiwan), I am invited to organize and lecture the course of the differential geometry belong to the NCTU-Yau Journal Club: Interplay of Physics and Geometry at the Department of Electrophysics, NCTU. In September of the same year, I participated in the international project of Kamioka Gravitational wave (KAGRA) detector in Gifu in Japan, which is led by Nobelist (2015) Takaaki Kajita-san. In 2018, I move to the Institute of Physics, Academia Sinica in Taiwan, and joined the Taipei area for Gravitational Wave Group (TGWG). And then I mainly work on the gravitational wave physics until now. I also participated in KAGRA detector duty for shift at the KAGRA Observatory in Gifu prefecture, Japan from February 18 to 24, 2020. Starting from February 2021, I served as an Adjunct Assistant Professor in the Department of Physics of Tamkang University. In 2022, I also served as a Research Assistant in the Department of Physics, National Taiwan Normal University. The research direction is about black hole physics and machine learning/deep learning (ML/DL).

My research interests are field theory, cosmology, gravitational physics. My expertise is on the alternative gravity theories beyond general relativity, particularly the theories of gravity with twisted spacetime and gauge theories of gravitation. I have also studied the several problems in cosmology, such as cosmic acceleration and cosmic magnetic fields. Recently I am interested in the modern ML/DL methods. I try to study how to apply ML/DL methods to the data analysis of physics, especially on the observational data of gravitational waves. Furthermore, during the job period of Postdoctoral Fellow, I have supervised more than 3 master and Ph.D. students in physics at NTHU. For scientific services, I have organized more than 10 international conferences/workshops and more than 40 local workshops/seminars in Taiwan.

Based on my experience in participating in both experiments and theory, I can easily realize that ideas on theoretical and experimental research sometimes conflict with each other. Therefore, for professional knowledge, I always notice the compatibility of theoretical and experimental ideas. For research execution, I would try to improve the breadth of knowledge to study the interdisciplinary science.

Education

Department of Physics, National Tsing Hua University, Hsinchu, Taiwan

Ph.D. in Physics **August 2008–July 2014**
M.S. in Physics **September 2007–July 2008**

Department of Applied Physics, National Pingtung University of Education, Pingtung, Taiwan

B.S. in Physics **September 2003–June 2007**

Research Experience

Current Position

Adjunct Assistant Professor **February 2021–Present**
Department of Physics, Tamkang University, New Taipei City, Taiwan

Experiences

Research Assistant **August 2022–July 2023**
Department of Physics, National Taiwan Normal University, Taipei, Taiwan

Postdoctoral Fellow **August 2018–July 2022**
Institute of Physics, Academia Sinica, Nankang, Taipei, Taiwan

Postdoctoral Fellow **August 2016–July 2018**
Department of Physics, National Tsing Hua University, Hsinchu, Taiwan

Affiliate Scientist **October 2014–December 2014**
Physics Division, National Center for Theoretical Sciences, Hsinchu, Taiwan

Postdoctoral Fellow **August 2014–July 2016**
Institute of Physics, National Chiao Tung University, Hsinchu, Taiwan

Honors

Fall 2013 "Student Journal Paper Award" of the Department of Physics, National Tsing Hua University

Article Title: *Generation of Large-Scale Magnetic Fields from Inflation in Teleparallelism*
Journal: Journal of Cosmology and Astroparticle Physics **10**, 058 (2012) (Impact Factor: **6.3**; Citations: **30**).

Referee Experience

Journal Referee

Advances in High Energy Physics (Impact Factor: **1.7**)
Chinese Journal of Physics (Impact Factor: **5.0**)

Chinese Physics C (Impact Factor: **3.6**)
Classical and Quantum Gravity (Impact Factor: **3.5**)
International Journal of Modern Physics D (Impact Factor: **2.2**)
Modern Physics Letters A (Impact Factor: **1.4**)
Universe (Impact Factor: **2.9**)

Society Membership

2017–2023	Collaboration Member of Kamioka Gravitational Wave Detector (KAGRA) [the former Large Scale Cryogenic Gravitational Wave Telescope (LCGT)]
2009–2015	Member of The Physical Society of Taiwan (TPS) [the former Physical Society of Republic of China (PSROC)]
2008–2010	Collaboration Member of Daya Bay Reactor Neutrino Experiment

Teaching Experience

2021 Spring–Present	**Lecturer**	**General Physics** in Tamkang University, New Taipei City, Taiwan
2016–2017	**Lecturer**	**Elementary differential geometry** in NCTU-Yau Journal Club: Interplay of Physics and Geometry in National Chiao Tung University, Hsinchu, Taiwan
2014 Spring	**Substitute Teacher**	**Introduction to Elementary Particle Physics** in National Tsing Hua University, Hsinchu, Taiwan

Publication

The impact factors are based on the Journal Citation Reports edition 2022 and the numbers of citations are based on INSPIRE, the HEP information system, on January 19, 2024.

Personal Publication

1. Kilar Zhang, Ling-Wei Luo, Jie-Shiun Tsao, Chian-Shu Chen, and Feng-Li Lin, *Dark Stars and Gravitational Waves: Topical Review*, Results Phys. 53 (2023) 106967 (2023)
(Impact Factor: **5.3**).

2. Chao-Qiang Geng, Hao-Jui Kuan, Ling-Wei Luo, *Inverse-Chirp Imprint of Gravitational Wave Signals in Scalar Tensor Theory*, Eur. Phys. J. C **80**, 780 (2020)
(Impact Factor: **4.4**; Citations: **10**).

3. Chao-Qiang Geng, Hao-Jui Kuan, Ling-Wei Luo, *Viable Constraint on Scalar Field in Scalar-Tensor Theory*, Class. Quant. Grav. **37**,

no. 11, 115001 (2020)
(Impact Factor: **3.5**; Citations: **6**).

4. Kilar Zhang, Takayuki Hirayama, Ling-Wei Luo, Feng-Li Lin, *Compact Star of Holographic Nuclear Matter and GW170817*, Phys. Lett. B **801**, 135176 (2020)
(Impact Factor: **4.3**; Citations: **15**).

5. Wei-Xiang Feng, Chao-Qiang Geng, and Ling-Wei Luo, *The Buchdahl stability bound in Eddington-inspired Born-Infeld gravity*, Chin. Phys. C **43**, no. 8, 083107 (2019)
(Impact Factor: **3.6**; Citations: **11**).

6. Chao-Qiang Geng, Wei-Cheng Hsu, Jhih-Rong Lu, and Ling-Wei Luo, *Thermodynamics of $f(R)$ Gravity with the Disformal Transformation*, Entropy, **21**, no. 2, 172 (2019)
(Impact Factor: **2.7**; Citations: **5**).

7. Wei-Xiang Feng, Chao-Qiang Geng, W.F. Kao, and Ling-Wei Luo, *Equation of State of Neutron Stars with Junction Conditions in the Starobinsky Model*, Int. J. Mod. Phys. D **26**, 1750186 (2017)
(Impact Factor: **2.2**; Citations: **14**).

8. Chao-Qiang Geng and Ling-Wei Luo, *Teleparallel conformal invariant models induced by Kaluza–Klein reduction*, Class. Quant. Grav. **34**, no.11, 115012 (2017)
(Impact Factor: **3.5**; Citations: **5**).

9. Kaituo Zhang, Puxun Wu, Hongwei Yu, and Ling-Wei Luo, *Stability of Einstein Static State Universe in the Spatially Flat Branemodels*, Phys. Lett. B **758**, 37 (2016)
(Impact Factor: **4.3**; Citations: **15**).

10. Y.K. Hsiao, P.Y. Lin, L.W. Luo, and C.Q. Geng, *Fragmentation Fractions of Two-body b-baryon Decays*, Phys. Lett. B **751**, 127 (2015)
(Impact Factor: **4.3**; Citations: **26**).

11. Yun Chen, Chao-Qiang Geng, Chung-Chi Lee, Ling-Wei Luo, and Zong-Hong Zhu, *Constraints on the Exponential $f(R)$ Model from Latest Hubble Parameter Measurements*, Phys. Rev. D **91**, 044019 (2015)
(Impact Factor: **5.0**; Citations: **16**).

12. Chao-Qiang Geng, Chang Lai, Ling-Wei Luo, and Huan Hsin Tseng, *Kaluza-Klein Theory for Teleparallel Gravity*, Phys. Lett. B **737**, 248

(2014)
(Impact Factor: **4.3**; Citations: **29**).

13. Chao-Qiang Geng, Ling-Wei Luo, and Huan Hsin Tseng, *Teleparallel Gravity in Five Dimensional Theories*, Class. Quant. Grav. **31** 185004 (2014)
(Impact Factor: **3.5**; Citations: **12**).

14. Kazuharu Bamba, Chao-Qiang Geng and Ling-Wei Luo, *Generation of Large-Scale Magnetic Fields from Inflation in Teleparallelism*, JCAP **10**, 058 (2012)
(Impact Factor: **6.3**; Citations: **30**).

15. Kazuharu Bamba, Chao-Qiang Geng, Chung-Chi Lee, and Ling-Wei Luo, *Equation of State for Dark Energy in $f(T)$ Gravity*, JCAP **01** 021 (2011)
(Impact Factor: **6.3**; Citations: **416**).

16. Louis Yang, Chung-Chi Lee, Ling-Wei Luo, and Chao-Qiang Geng, *Observational Constraints on Exponential Gravity*, Phys. Rev. D **82**, 103515 (2010)
(Impact Factor: **5.0**; Citations: **51**).

International Collaboration Publication

1. T. Akutsu *et al.* [KAGRA], *Overview of KAGRA : Data transfer and management*, PTEP **2023**, no.10, 10A102 (2023)
(Impact Factor: **8.3**; Citations: **1**).

2. C. Fletcher *et al.* [Fermi Gamma-ray Burst Monitor Team, LIGO Scientific, VIRGO and KAGRA], *A Joint Fermi-GBM and Swift-BAT Analysis of Gravitational-Wave Candidates from the Third Gravitational-wave Observing Run*, [arXiv:2308.13666 [astro-ph.HE]].

3. R. Abbott *et al.* [LIGO Scientific, VIRGO and KAGRA], *Search for gravitational-lensing signatures in the full third observing run of the LIGO-Virgo network*, [arXiv:2304.08393 [gr-qc]]
(Citations: **28**).

4. R. Abbott *et al.* [LIGO Scientific, VIRGO and KAGRA], *Search for subsolar-mass black hole binaries in the second part of Advanced LIGO's and Advanced Virgo's third observing run*, [arXiv:2212.01477 [astro-ph.HE]]
(Citations: **21**).

5. R. Abbott *et al.* [LIGO Scientific, VIRGO and KAGRA], *Search for gravitational-wave transients associated with magnetar bursts in Advanced LIGO and Advanced Virgo data from the third observing run*, [arXiv:2210.10931 [astro-ph.HE]]
(Citations: **14**).

6. T. Akutsu *et al.* [KAGRA], *Input optics systems of the KAGRA detector during O3GK*, PTEP **2023**, no.2, 023F01 (2023)
(Impact Factor: **8.3**).

7. R. Abbott *et al.* [LIGO Scientific, KAGRA and VIRGO], *Model-based Cross-correlation Search for Gravitational Waves from the Low-mass X-Ray Binary Scorpius X-1 in LIGO O3 Data*, Astrophys. J. Lett. **941**, no.2, L30 (2022)
(Impact Factor: **7.9**; Citations: **14**).

8. H. Abe *et al.* [KAGRA], *Noise subtraction from KAGRA O3GK data using Independent Component Analysis*, Class. Quant. Grav. **40**, no.8, 085015 (2023)
(Impact Factor: **3.5**; Citations: **2**).

9. H. Abe *et al.* [KAGRA], *The Current Status and Future Prospects of KAGRA, the Large-Scale Cryogenic Gravitational Wave Telescope Built in the Kamioka Underground*, Galaxies **10**, no.3, 63 (2022)
(Impact Factor: **2.5**; Citations: **19**).

10. R. Abbott *et al.* [KAGRA, LIGO Scientific and VIRGO], *Search for continuous gravitational wave emission from the Milky Way center in O3 LIGO-Virgo data*, Phys. Rev. D **106**, no.4, 042003 (2022)
(Impact Factor: **5.0**; Citations: **32**).

11. R. Abbott *et al.* [LIGO Scientific, VIRGO, KAGRA and CHIME/FRB], *Search for Gravitational Waves Associated with Fast Radio Bursts Detected by CHIME/FRB during the LIGO–Virgo Observing Run O3a*, Astrophys. J. **955**, no.2, 155 (2023)
(Impact Factor: **4.9**; Citations: **22**).

12. H. Abe *et al.* [KAGRA], *Performance of the KAGRA detector during the first joint observation with GEO 600 (O3GK)*, PTEP **2023**, no.10, 10A101 (2023)
(Impact Factor: **8.3**; Citations: **20**).

13. R. Abbott *et al.* [KAGRA, VIRGO and LIGO Scientific], *First joint observation by the underground gravitational-wave detector KAGRA with GEO 600*, PTEP **2022**, no.6, 063F01 (2022)
(Impact Factor: **8.3**; Citations: **39**).

14. R. Abbott *et al.* [KAGRA, VIRGO and LIGO Scientific], *Search for gravitational waves from Scorpius X-1 with a hidden Markov model in O3 LIGO data*, Phys. Rev. D **106**, no.6, 062002 (2022)
(Impact Factor: **5.0**; Citations: **23**).

15. R. Abbott *et al.* [KAGRA, LIGO Scientific and VIRGO], *All-sky search for continuous gravitational waves from isolated neutron stars using Advanced LIGO and Advanced Virgo O3 data*, Phys. Rev. D **106**, no.10, 102008 (2022)
(Impact Factor: **5.0**; Citations: **72**).

16. R. Abbott *et al.* [LIGO Scientific, KAGRA and VIRGO], *Narrow-band Searches for Continuous and Long-duration Transient Gravitational Waves from Known Pulsars in the LIGO-Virgo Third Observing Run*, Astrophys. J. **932**, no.2, 133 (2022)
(Impact Factor: **4.9**; Citations: **45**).

17. R. Abbott *et al.* [LIGO Scientific, VIRGO and KAGRA], *Tests of General Relativity with GWTC-3*, [arXiv:2112.06861 [gr-qc]]
(Citations: **397**).

18. R. Abbott *et al.* [LIGO Scientific, VIRGO and KAGRA], *All-sky search for gravitational wave emission from scalar boson clouds around spinning black holes in LIGO O3 data*, Phys. Rev. D **105**, no.10, 102001 (2022)
(Impact Factor: **5.0**; Citations: **66**).

19. R. Abbott *et al.* [LIGO Scientific, VIRGO and KAGRA], *Searches for Gravitational Waves from Known Pulsars at Two Harmonics in the Second and Third LIGO-Virgo Observing Runs*, Astrophys. J. **935**, no.1, 1 (2022)
(Impact Factor: **4.9**; Citations: **55**).

20. R. Abbott *et al.* [LIGO Scientific, VIRGO and KAGRA], *Constraints on the cosmic expansion history from GWTC-3*, Astrophys. J. **949**, no.2, 76 (2023)
(Impact Factor: **4.9**; Citations: **177**).

21. R. Abbott *et al.* [KAGRA, VIRGO and LIGO Scientific], *Population of Merging Compact Binaries Inferred Using Gravitational Waves through GWTC-3*, Phys. Rev. X **13**, no.1, 011048 (2023)
(Impact Factor: **12.5**; Citations: **678**).

22. R. Abbott *et al.* [LIGO Scientific, VIRGO and KAGRA], *Search for Gravitational Waves Associated with Gamma-Ray Bursts Detected by Fermi and Swift during the LIGO–Virgo Run O3b*, Astrophys. J. **928**, no.2, 186 (2022)
(Impact Factor: **4.9**; Citations: **27**).

23. R. Abbott *et al.* [KAGRA, VIRGO and LIGO Scientific], *GWTC-3: Compact Binary Coalescences Observed by LIGO and Virgo during the Second Part of the Third Observing Run*, Phys. Rev. X **13**, no.4, 041039 (2023)
(Impact Factor: **12.5**; Citations: **1,504**).

24. R. Abbott *et al.* [KAGRA, Virgo and LIGO Scientific], *All-sky, all-frequency directional search for persistent gravitational waves from Advanced LIGO's and Advanced Virgo's first three observing runs*, Phys. Rev. D **105**, no.12, 122001 (2022)
(Impact Factor: **5.0**; Citations: **32**).

25. R. Abbott *et al.* [LIGO Scientific, VIRGO and KAGRA], *Search for subsolar-mass binaries in the first half of Advanced LIGO and Virgo's third observing run*, Phys. Rev. Lett. **129**, no.6, 061104 (2022)
(Impact Factor: **8.6**; Citations: **48**).

26. R. Abbott *et al.* [LIGO Scientific, VIRGO and KAGRA], *Search for continuous gravitational waves from 20 accreting millisecond X-ray pulsars in O3 LIGO data*, Phys. Rev. D **105**, 022002 (2022)
(Impact Factor: **5.0**; Citations: **45**).

27. R. Abbott *et al.* [KAGRA, VIRGO and LIGO Scientific], *All-sky search for long-duration gravitational-wave bursts in the third Advanced LIGO and Advanced Virgo run*, Phys. Rev. D **104**, no.10, 102001 (2021).
(Impact Factor: **5.0**; Citations: **23**).

28. R. Abbott *et al.* [KAGRA, VIRGO and LIGO Scientific], *All-sky search for short gravitational-wave bursts in the third Advanced LIGO and Advanced Virgo run*, Phys. Rev. D **104**, no.12, 122004 (2021).
(Impact Factor: **5.0**; Citations: **55**).

29. R. Abbott *et al.* [KAGRA, VIRGO and LIGO Scientific], *All-sky search for continuous gravitational waves from isolated neutron stars in the early O3 LIGO data*, Phys. Rev. D **104**, no.8, 082004 (2021).
(Impact Factor: **5.0**; Citations: **57**).

30. R. Abbott *et al.* [LIGO Scientific, KAGRA and VIRGO], *Observation of Gravitational Waves from Two Neutron Star–Black Hole Coalescences*, Astrophys. J. Lett. **915**, no.1, L5 (2021).
(Impact Factor: **7.9**; Citations: **625**).

31. R. Abbott *et al.* [LIGO Scientific, VIRGO and KAGRA], *Search for intermediate-mass black hole binaries in the third observing run of Advanced LIGO and Advanced Virgo*, Astron. Astrophys. **659**, A84 (2022)
(Impact Factor: **6.5**; Citations: **54**).

32. R. Abbott *et al.* [LIGO Scientific Collaboration, Virgo Collaboration,, KAGRA and Virgo], *Constraints on dark photon dark matter using data from LIGO's and Virgo's third observing run*, Phys. Rev. D **105**, no.6, 063030 (2022).
(Impact Factor: **5.0**; Citations: **67**).

33. R. Abbott *et al.* [LIGO Scientific, VIRGO, KAGRA and Virgo], *Searches for Continuous Gravitational Waves from Young Supernova Remnants in the Early Third Observing Run of Advanced LIGO and Virgo*, Astrophys. J. **921**, no.1, 80 (2021)
(Impact Factor: **4.9**; Citations: **47**).

34. R. Abbott *et al.* [LIGO Scientific, Virgo and KAGRA], *Constraints from LIGO O3 Data on Gravitational-wave Emission Due to R-modes in the Glitching Pulsar PSR J0537–6910*, Astrophys. J. **922**, no.1, 71 (2021)
(Impact Factor: **4.9**; Citations: **39**).

35. R. Abbott *et al.* [KAGRA, Virgo and LIGO Scientific], *Search for anisotropic gravitational-wave backgrounds using data from Advanced LIGO and Advanced Virgo's first three observing runs*, Phys. Rev. D **104**, no.2, 022005 (2021).
(Impact Factor: **5.0**; Citations: **89**).

36. R. Abbott *et al.* [KAGRA, Virgo and LIGO Scientific], *Upper limits on the isotropic gravitational-wave background from Advanced LIGO and Advanced Virgo's third observing run*, Phys. Rev. D **104**, no.2, 022004 (2021).
(Impact Factor: **5.0**; Citations: **297**).

37. R. Abbott *et al.* [LIGO Scientific, Virgo and KAGRA], *Constraints on Cosmic Strings Using Data from the Third Advanced LIGO–Virgo Observing Run*, Phys. Rev. Lett. **126**, no.24, 241102 (2021)
(Impact Factor: **8.6**; Citations: **135**).

38. R. Abbott *et al.* [LIGO Scientific, Virgo and KAGRA], *Diving below the Spin-down Limit: Constraints on Gravitational Waves from the Energetic Young Pulsar PSR J0537-6910*, Astrophys. J. **913**, L27 (2021)
(Impact Factor: **4.9**; Citations: **35**).

39. T. Akutsu *et al.* [KAGRA], *Overview of KAGRA: Calibration, detector characterization, physical environmental monitors, and the geophysics interferometer*, PTEP **2021**, no.5, 05A102 (2021).
(Impact Factor: **8.3**; Citations: **94**).

40. T. Akutsu *et al.* [KAGRA], *Overview of KAGRA: KAGRA science*, PTEP **2021**, no.5 (2021).
(Impact Factor: **8.3**; Citations: **60**).

41. T. Akutsu *et al.* [KAGRA], *Overview of KAGRA: Detector design and construction history*, PTEP **2021**, no.5, 05A101 (2021).
(Impact Factor: **8.3**; Citations: **299**).

42. R. Abbott *et al.* [LIGO Scientific, Virgo and KAGRA], *Constraints on Cosmic Strings Using Data from the Third Advanced LIGO–Virgo Observing Run*, Phys. Rev. Lett. **126**, no.24, 241102 (2021)
(Impact Factor: **8.6**; Citations: **135**).

43. B. P. Abbott *et al.* [KAGRA, LIGO Scientific and Virgo Collaboration], *Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA*, Living Rev. Rel. **23**, no.1, 3 (2020).
(Impact Factor: **40.6**; Citations: **2,034**).

44. T. Akutsu *et al.* [KAGRA], *An arm length stabilization system for KAGRA and future gravitational-wave detectors*, Class. Quant. Grav. **37**, no. 3, 035004 (2020).
(Impact Factor: **3.5**; Citations: **11**).

45. T. Akutsu *et al.* [KAGRA], *Application of the independent component analysis to the iKAGRA data*, PTEP **2020**, no.5, 053F01 (2020).
(Impact Factor: **8.3**; Citations: **4**).

Conference Proceeding

1. Ling-Wei Luo, *Teleparallel Gravity in Five Dimensions*, the Proceedings of the *Second LeCosPA International Symposium - Everything About Gravity: Celebrating the Centenary of Einstein's General Relativity* (LeCosPA2015) (2017).

2. Kazuharu Bamba, Chao-Qiang Geng, and Ling-Wei Luo, *Large-scale Magnetic Fields from Inflation in Teleparallel Gravity*, JPS Conf. Proc. **1**, 013123 (2014).
(Citations: **7**).

Other

1. Ling-Wei Luo, *Lecture Note on Elementary Differential Geometry* (2018).

   A lecture note on a course of "NCTU-Yau Journal Club: Interplay of Physics and Geometry" at the Department of Electrophysics in National Chiao Tung University in 2017.
   URL: `https://string.lab.nycu.edu.tw/mainpage/journalclub.htm`.

Presentations in International Conference

1. *Viable Constraints of Scalar-Tensor Theory in the Einstein Frame Formulation*. **Oral** presentation at "NCTS Dark Physics Workshop" in Hsinchu, Taiwan. (January 2020)

2. *Report on TGWG Research - Boson Star Search*. **Oral** presentation at "2019 TGWG Workshop" in New Taipei City, Taiwan. (October 2019)

3. *Coupling Prescriptions of Dirac Spinor in Teleparallelism*. **Poster** presentation at "2019 YITP Asian-Pacific Winter School and Workshop on Gravitation and Cosmology" in Kyoto, Japan. (February 2019)

4. *Neutron Star in Holographic QCD*. **Oral** presentation at "RSE/MOST Research Workshop: Gravitational Waves" in Edinburgh, Scotland, UK. (November 2018)

5. *Spin connection with torsion*. **Oral** presentation at "Cosmology Frontier in Particle Physics: Astroparticle Physics and Early Universe" in Taipei, Taiwan. (September 2018)

6. *Teleparallel Conformal Invariant Models Induced by Kaluza-Klein Reduction*. **Oral** presentation at "International Symposium on Cosmology and Particle Astrophysics — CosPA 2017" in Kyoto, Japan. (December 2017)

7. *Teleparallel Conformal Invariant Models Induced by Kaluza-Klein Reduction*. **Oral** presentation at "2017 Asian-Pacific School and Workshop on Gravitation and Cosmology" in Hong Kong. (August 2017)

8. *Teleparallel Gravity in Five Dimensions.* **Oral** presentation at "Workshop on Dark Physics of the Universe" in Hsinchu, Taiwan. (December 2015)

9. *Teleparallel Gravity in Five Dimensions.* **Oral** presentation at "Second LeCosPA International Symposium — Everything about Gravity: Celebrating the Centenary of Einstein's General Relativity" in Taipei, Taiwan. (December 2015)

10. *Teleparallel Gravity in Five Dimensional Theories.* **Oral** presentation at "RESCEU APCosPA Summer School on Cosmology and Particle Astrophysics" in Nikko city, Tochigi, Japan. (August 2015)

11. *Teleparallel Gravity in Five Dimensional Theories.* **Poster** presentation at "International School on Gravitational Wave Physics, Kyoto, 2015" in Kyoto, Japan. (March 2015)

12. *Teleparallel Gravity in Five Dimensional Theories.* **Oral** presentation at "RESCEU APCosPA Summer School on Cosmology and Particle Astrophysics" in Matsumoto, Nagano, Japan. (August 2014)

13. *Generation of Large-Scale Magnetic Fields from Inflation in Teleparallelism.* **Oral** presentation at "2014 Annual Meeting of PSROC" in Taichung, Taiwan. (January 2014)

14. *Generation of Large-Scale Magnetic Fields from Inflation in Teleparallelism.* **Oral** presentation at "Asia Pacific School/Workshop on Gravitation and Cosmology 2013 (APCTP-NCTS-YITP Joint Program)" in Jeju Island, Korea. (February 2013)

15. *Generation of Large-Scale Magnetic Fields from Inflation in Teleparallelism.* **Oral** presentation at "VIIIth Rencontres du Vietnam - Beyond the Standard Model: Extended Fermion and Scalar Sectors, Experiment and Phenomenology" in Quy Nhon, Vietnam. (December 2012)

16. *Observational Constraints on Exponential Gravity.* **Oral** presentation at "11th RESCEU/DENET Summer School: Dark Energy in the Universe" in Kumamoto, Japan. (July 2011)

17. *Observational Constraints on Exponential Gravity.* **Oral** presentation at "2011 Cross-Strait Meeting on Particle Physics and Cosmology" in Hsinchu, Taiwan. (April 2011)

18. *Determining the Free Parameters in Viable $f(R)$ Models.* **Poster** presentation at "Horiba International Conference - COSMO/CosPA 2010" in Tokyo, Japan. (October 2010)

19. *Simulation of the Cosmic Rays Pass through the Human Body with GEANT4.* **Oral** presentation at "2009 Annual Meeting of PSROC" in Changhua, Taiwan. (January 2009)

Local Presentation

1. *Gravity and Spin.* **Oral** presentation at "NTNU CAG seminar" in Taipei, Taiwan. (January 2022)

2. *Viable Constraints of Scalar-Tensor Theory in the Einstein Frame Formulation.* **Oral** presentation at "NYCU HEP seminar" online. (November 2021)

3. *Viable Constraints on Scalar Mode of Scalar-Tensor Theory in the Einstein Frame Formulation.* **Oral** presentation at "NCU HEP regular seminar" in Jhongli, Taiwan. (October 2020)

4. *Viable Constraints on Scalar Field of Scalar-Tensor Theory in the Einstein Frame Formulation.* **Oral** presentation at "TGWG Seminar" in Taipei, Taiwan. (June 2020)

5. *Coupling Prescriptions of Dirac Spinor in Teleparallelism.* **Oral** presentation at "NCTU HEP/String Seminar" in Hsinchu, Taiwan. (December 2018)

6. *Teleparallel Conformal Invariant Theories Induced by Kaluza-Klein Reduction.* **Oral** presentation at "NTNU HEP Seminar" in Taipei, Taiwan. (November 2018)

7. *Spin connection with torsion.* **Oral** presentation at "NCTS HEP Seminar" in Hsinchu, Taiwan. (September 2018)

8. *Teleparallelism with Applications.* **Oral** presentation at "TGWG Seminar" in Taipei, Taiwan. (August 2017)

9. *Teleparallel Conformal Invariant Models Induced by Kaluza-Klein Reduction.* **Oral** presentation at "NTHU Particle Physics Seminar" in Hsinchu, Taiwan. (June 2017)

10. *Teleparallel Conformal Invariant Models Induced by Kaluza-Klein Reduction.* **Oral** presentation at "Institute of Physics, Academia Sinica HEP regular seminar" in Taipei, Taiwan. (April 2017)

11. *Teleparallel Gravity in Five Dimensional Theories.* **Oral** presentation at "NCU HEP regular seminar" in Jhongli, Taiwan. (January 2015)

12. *Teleparallel Gravity with Extra Dimension.* **Oral** presentation at "NCTU HEP seminar" in Hsinchu, Taiwan. (November 2014)

13. *Extra Dimension and Teleparallel Gravity.* **Oral** presentation at "3rd Tsing Hua Cross-Strait Meeting of Particle Physics and Cosmology" in Xi'an, China. (August 2014)

14. *Teleparallel Gravity and Its Cosmological Applications.* **Oral** presentation at "NTHU Particle Physics Seminar" in Hsinchu, Taiwan. (May 2014)

15. *Teleparallel Gravity in Five Dimensional Theories.* **Oral** presentation at "Pre-Workshop on Gravitation and Cosmology" in Hsinchu, Taiwan. (April 2014)

16. *Generation of Large-Scale Magnetic Fields from Inflation in Teleparallelism.* **Oral** presentation at "NCTS CPA/Gravitation Focus Group - 2nd Joint Retreat on Cosmology and Gravitation" in Hsinchu, Taiwan. (November 2013)

17. *Generation of Large-Scale Magnetic Fields from Inflation in Teleparallelism.* **Oral** presentation at "1st Tsing Hua Cross-Strait Meeting of Particle Physics and Cosmology" in Beijing, China. (August 2013)

18. *Study of Critical Gravity.* **Oral** presentation at "3rd Joint NCTS/FGCPA-LeCosPA Meeting on Dark Energ" in Hsinchu, Taiwan. (April 2012)

19. *Observational Constraints on Exponential Gravity.* **Oral** presentation at "1st Joint NCTS/FGCPA-LeCosPA Meeting on Dark Energ" in Taipei, Taiwan. (June 2011)

20. *ϕCDM Model: An Introduction to Scalar Field Dark Energy Model.* **Oral** presentation at "NTHU Particle Physics Group Student Seminar" in Hsinchu, Taiwan. (April 2010)

Scientific and Academic Service

1. **Organizer**, TGWG Meeting and Seminar (September 2018–January 2023)

2. **Workshop Organizer**, 2020 TGWG Mini-Workshop on Compact Star Physics with Data Analysis of Gravitational Waves (2020)

3. **Conference Organizer**, 2018 and 2019 TGWG Conference on Gravitational Waves (2018/2019)

4. **Workshop Organizer**, 2019 TGWG Workshop on Gravitational Wave Data Analysis (2019)

5. **Workshop Organizer**, 2nd ASTROD International Workshop (AIW2) on Laser Astrodynamics, Space Test of Relativity and Gravitational-Wave Astronomy (2017)

6. **Scientific Secretary**, 4th International Workshop on Dark Matter, Dark Energy and Matter-Antimatter Asymmetry (2016)

7. **Journal Club and Course Organizer**, NCTU-Yau Journal Club: Interplay of Physics and Geometry (September 2016–June 2017)

8. **Seminar Organizer**, NCTU High Energy Group Seminar (2015–2016)

9. **Scientific Secretary**, 2nd International Workshop on Particle Physics and Cosmology after Higgs and Planck (2014)

10. **Scientific Secretary**, Joint NCTS/FGCPA-LeCosPA Meeting on Dark Energy (2011–2014)

11. **Scientific Secretary**, 3rd International Workshop on Dark Matter, Dark Energy and Matter-Antimatter Asymmetry (2012)

12. **Scientific Secretary**, 2011 Cross Strait Meeting on Particle Physics and Cosmology (2011)

13. **Scientific Secretary**, 2011 Spring School on Particles and Fields (2011)

14. **Scientific Secretary**, 1st and 2nd International Workshop on Dark Matter, Dark Energy and Matter-Antimatter Asymmetry (2009/2010)

Visiting Experience

Spring	2019	Department of Physics, The Chinese University of Hong Kong, Hong Kong, China
Fall	2018	(i) Department of Applied Mathematics and Theoretical Physics (DAMTP), University of Cambridge, Cambridge, UK

	(ii) Institute for Gravitational Research (IGR), University of Glasgow, Glasgow, UK
Summer 2016	College of Science, Chongqing University of Posts and Telecommunications, Chongqing, China
Summer 2013	(i) Department of Physics, Tsinghua University, Beijing, China
	(ii) Kavli Institute for Theoretical Physics China (KITPC), Chinese Academy of Sciences, Beijing, China
Winter 2013	School of Mathematics and Physics, Chongqing University of Posts and Telecommunications, Chongqing, China
Summer 2012	School of Mathematics and Physics, Chongqing University of Posts and Telecommunications, Chongqing, China
October 2011	Kavli Institute for Theoretical Physics China (KITPC) at the Chinese Academy of Sciences, Beijing, China
Winter 2011	School of Mathematics and Physics, Chongqing University of Posts and Telecommunications, Chongqing, China

PROGRAMMING SKILL

Programming Languages – HTML, PHP, C/C++, Python, and Mathematica.