

Curriculum Vitae

Yuta Michimura

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Phone: +81-3-5841-8297**Email:** michimura@resceu.s.u-tokyo.ac.jp**URL:** <https://yutamich.gitlab.io/>**Citizenship:** Japan**Date of Birth:** August 23, 1987

EDUCATION

2012–2015 Doctor of Science in Physics

University of Tokyo

Tests of Lorentz Invariance with an Optical Ring Cavity

2010–2012 Master of Science in Physics

University of Tokyo

Search for Anisotropy in the One-Way Speed of Light Using an Optical Ring Cavity

2006–2010 Bachelor of Science in Physics

University of Tokyo

Prototype experiment for the interferometer module of DECIGO Pathfinder

EMPLOYMENT

2024–present Associate Professor

Research Center for the Early Universe, Graduate School of Science,
University of Tokyo

FY2023 The University of Tokyo Excellent Young Researcher

2022–2024 Research Scientist

LIGO Laboratory, The Division of Physics, Mathematics and Astronomy,
California Institute of Technology

2022–2024 Visiting Researcher

Research Center for the Early Universe, Graduate School of Science,
University of Tokyo

2020–2024 PRESTO Researcher

Japan Science and Technology Agency

2014–2022 Assistant Professor
Department of Physics, University of Tokyo

2013–2014 Research Fellowship for Young Scientists (DC2)
Japan Society for the Promotion of Science

AWARDS

2016 Springer Thesis Prize
For: *Tests of Lorentz Invariance with an Optical Ring Cavity*

2016 10th Young Scientist Award of the Physical Society of Japan
For: *Tests of Lorentz Invariance with an Optical Ring Cavity*

GRANTS

Principal Investigator

2024–2028 JSPS Grant-in-Aid for Young Scientific Research (B)
Project: *Characterization of mirror birefringence fluctuations for next generation gravitational wave detectors*
Total budget: 18.59 Million JPY (planned)

2020–2025 JSPS Grant-in-aid for Grant-in-Aid for Transformative Research Areas (A)
Planned Research
Project: *Ultralight dark matter search using gravitational wave detectors and laser interferometer experiments*
Total budget: 149.37 Million JPY (planned)

2020–2024 JST PRESTO “Creating state-of-the-art science by innovative optics and photonics”
Project: *New dark matter search with high precision polarization measurements*
Total budget: 40 Million JPY

2019–2020 The Sumitomo Foundation 2019 Grant for Basic Science Research Projects
Project: *Search for axion dark matter with an optical ring cavity*
Total budget: 3.6 Million JPY

2018–2021 JSPS Grant-in-Aid for Challenging Research (Exploratory)
Project: *Test of macroscopic quantum mechanics with optically levitated mirrors*
Total budget: 6.37 Million JPY

- 2018–2022 JSPS Grant-in-Aid for Young Scientific Research (B)
Project: *Comprehensive Search for Anisotropy in the Speed of Light using an Optical Ring Cavity*
Total budget: 17.42 Million JPY
- 2015–2018 JSPS Grant-in-Aid for Young Scientists (A)
Project: *Search for Lorentz Violation using an Optical Ring Cavity*
Total budget: 24.31 Million JPY
- 2015–2018 JSPS Grant-in-Aid for Challenging Exploratory Research
Project: *Realization of Macroscopic Entanglement with Optically Levitated Mirrors*
Total budget: 3.77 Million JPY
- 2013–2015 Grant-in-Aid for JSPS Research Fellow
Project: *Research on radiation pressure induced instability in the LCGT optical cavities*
Total budget: 2 Million JPY

Co-investigator

- 2024–2027 JSPS Grant-in-Aid for Young Scientific Research (B)
Project: *Full mitigation of birefringence for high-precision optical experiments*
PI: Marc Eisenmann
Total budget: 0.9 Million JPY (planned)
- 2021–2024 JSPS Grant-in-Aid for Young Scientific Research (A)
Project: *Innovative quantum noise reduction strategies for GW detectors*
PI: Matteo Leonardi
Total budget: 0.8 Million JPY
- 2020–2025 JSPS Grant-in-Aid for Young Scientific Research (S)
Project: *Inclusive study on gravitational-wave astrophysics*
PI: Jun'ichi Yokoyama
Total budget: 1.7 Million JPY (planned)
- 2018–2028 MEXT Q-LEAP Program Quantum Metrology & Sensing
Project: *Establishment of earthquake early alert method using high sensitivity gravity gradient sensors*
PI: Masaki Ando
- 2018–2024 JST CREST “Creation of an innovative quantum technology platform base on the advanced control of quantum states” ANR-JST Joint Proposal

Project: *Manipulation of an optomechanically coupled oscillator using a quantum filter*

Research Directors: Kentaro Somiya, Antoine Heidmann

Total budget: 19.3 Million JPY (until October 2020; Research Participant from November 2020 since PRESTO research started)

TEACHING

2014–2022 Co-supervision of 29 undergraduate, 15 master, and 8 Ph.D. projects
Department of Physics, University of Tokyo

2014–2022 Instructor for experiments of fourth-year undergraduate students
Department of Physics, University of Tokyo

2014–2022 Instructor for laboratory class for third-year undergraduate students
Department of Physics, University of Tokyo

2016 Special lectures on Laser Interferometry for Gravitational Wave Detection
Department of Electrical and Information Engineering, Niigata University

2010–2011 Teaching assistant for electrodynamics courses
Department of Physics, University of Tokyo

SELECTED MEMBERSHIPS

2024–present Member, KAGRA System Engineering Office

2024–present Chair, KAGRA Future Strategy Committee

2022–present Board Member, LIGO-Virgo-KAGRA Joint Editorial Board (reappointed)

2021–2023 Board Member, Japan Gravitational Wave Community Steering Committee

2020–present Board Member, DECIGO Steering Committee

2020–2021 Board Member, LIGO-Virgo-KAGRA Joint Editorial Board

2020–present Member, RIKEN iTHEMS Dark Matter Working Group

2019–2021 Member, KAGRA Committee for Publication Control

2019–present Member, JAXA Formation Flying Working Group

2018–2021 Member, KAGRA Future Planning Committee

2017–present Member, KAGRA Diversity Committee

2016–2022 Chief, KAGRA Main Interferometer Subgroup

2016–2019 Board Member, KAGRA Scientific Congress

INVITED TALKS

- December 2023 International workshop on “Double Beta Decay and Underground Science”, Hawaii, USA
Ultralight axion dark matter search with DANCE
- November 2023 Joint RIKEN/N3AS Workshop on Multi-Messenger Astrophysics, Hawaii, USA
KAGRA: The Key to Multi-Messenger Astrophysics
- February 2022 The First Workshop on Particle Physics and Gravitational Waves, Online and Osaka, Japan
Dark matter searches with gravitational wave detectors (in Japanese)
- January 2020 The First School on Quantum Sensors for Fundamental Physics, Durham, UK
Laser Interferometric Search for Non-Standard Physics
- December 2019 The 32th Rironkon Symposium “Changes and the Dawn of the New Era of Astronomy / Astrophysics,” Tokyo, Japan
Status and future prospects of gravitational wave observations with laser interferometers (in Japanese)
- November 2019 The Japan Society of Applied Physics Quantum Electronics Workshop “Space Quantum Electronics,” Yamanashi, Japan
Gravitational wave observations and quantum technologies (in Japanese)
- October 2019 Multi-dimensional Modeling and Multi-Messenger observation from Core-Collapse Supernovae, Fukuoka, Japan
Present status and future prospects of KAGRA gravitational wave telescope
- July 2019 TianQin Summer School on Gravitational Waves 2019, Zhuhai, China
Laser Interferometry for Gravitational Wave Observations
- February 2019 The 3rd Workshop on Gravity and Cosmology by Young Researchers, Kyoto, Japan
Laser interferometry for precision metrology (in Japanese)
Status and prospects of gravitational wave observations (in Japanese)
- January 2019 Conference on Multi-messenger Astronomy in the Era of LIGO-India, Khandala, India
Status of KAGRA: Recent progress towards O3 and future plans
- May 2018 Gravitational Wave Advanced Detector Workshop 2018, Alaska, USA
Sensitivity Optimization of Cryogenic Gravitational Wave Detectors

- October 2017 International OSA Network of Students Okinawa 2017, Okinawa, Japan
Laser Interferometry for Gravitational Wave Astronomy
- May 2017 Gravitational Wave Advanced Detector Workshop 2017, Hamilton Island, Australia
Possible KAGRA Upgrades
- July 2016 Optical Society of Korea Summer Meeting 2016, Busan, South Korea
Recent news and status of the KAGRA gravitational wave telescope
- March 2016 71st Annual Meeting of the Physical Society of Japan, Sendai, Japan
Tests of Lorentz Invariance with an Optical Ring Cavity (in Japanese)
- August 2013 2013 International School on Numerical Relativity and Gravitational Waves, Pohang, South Korea
Alignment Sensing and Control for KAGRA Interferometer

REFEREED PAPERS

1. Yuta Michimura, Haoyu Wang, Francisco Salces-Carcoba, Christopher Wipf, Aidan Brooks, Koji Arai, Rana X. Adhikari:
Physical Review D **109**, 022009 (2024)
Effects of mirror birefringence and its fluctuations to laser interferometric gravitational wave detectors
2. Hiromasa Nakatsuka, Soichiro Morisaki, Tomohiro Fujita, Jun'ya Kume, Yuta Michimura, Koji Nagano, Ippei Obata:
Physical Review D **108**, 092010 (2023)
Stochastic effects on observation of ultralight bosonic dark matter
3. Kenji Tsuji, Tomohiro Ishikawa, Kentaro Komori, Koji Nagano, Yutaro Enomoto, Yuta Michimura, Kurumi Umemura, Ryuma Shimizu, Bin Wu, Shoki Iwaguchi, Yuki Kawasaki, Akira Furusawa, Seiji Kawamura:
Galaxies **11**, 111 (2023)
Optimization of Quantum Noise in Space Gravitational-Wave Antenna DECIGO with Optical-Spring Quantum Locking Considering Mixture of Vacuum Fluctuations in Homodyne Detection
4. Yuka Oshima, Hiroki Fujimoto, Jun'ya Kume, Soichiro Morisaki, Koji Nagano, Tomohiro Fujita, Ippei Obata, Atsushi Nishizawa, Yuta Michimura, Masaki Ando:
Physical Review D **108**, 072005 (2023)
First results of axion dark matter search with DANCE
5. KAGRA Collaboration (including Yuta Michimura as 114th of all 251 authors):
Progress of Theoretical and Experimental Physics **2023**, 10A102 (2023)
Overview of KAGRA : Data transfer and management

6. KAGRA Collaboration (including Yuta Michimura as 108th of all 217 authors):
Progress of Theoretical and Experimental Physics **2023**, 10A101 (2023)
Performance of the KAGRA detector during the first joint observation with GEO 600 (O3GK)
7. KAGRA Collaboration (including Yuta Michimura as 100th of all 202 authors):
Classical and Quantum Gravity **40**, 085015 (2023)
Noise subtraction from KAGRA O3GK data using Independent Component Analysis
8. M. Croquette, S. Deléglise, T. Kawasaki, K. Komori, M. Kuribayashi, A. Lartaux-Vollard, N. Matsumoto, Y. Michimura, M. Andia, N. Aritomi, R. Braive, T. Briant, S. Briaudeau, S. B. Cataño-Lopez, S. Chua, J. Degallaix, M. Fujimoto, K. Gerashchenko, F. Glotin, P. Gruning, K. Harada, A. Heidmann, D. Hofman, P.-E. Jacquet, T. Jacqmin, O. Kozlova, N. Leroy, V. Lorient, F. Loubar, T. Martel, R. Metzдорff, C. Michel, A. Mikami, L. Najera, L. Neuhaus, S. Otabe, L. Pinard, K. Suzuki, H. Takahashi, K. Takeda, Y. Tominaga, A. van de Walle, N. Yamamoto, K. Somiya, P.-F. Cohadon:
AVS Quantum Science **5**, 014403 (2023)
Recent advances toward mesoscopic quantum optomechanics
9. KAGRA Collaboration (including Yuta Michimura as 116th of all 253 authors):
Progress of Theoretical and Experimental Physics **2023**, 023F01 (2023)
Input optics systems of the KAGRA detector during O3GK
10. Tomohiro Ishikawa, Yuki Kawasaki, Kenji Tsuji, Rika Yamada, Izumi Watanabe, Bin Wu, Shoki Iwaguchi, Ryuma Shimizu, Kurumi Umemura, Koji Nagano, Yutaro Enomoto, Kentaro Komori, Yuta Michimura, Akira Furusawa, Seiji Kawamura:
Physical Review D **107**, 022007 (2023)
First-step experiment for sensitivity improvement of DECIGO: Sensitivity optimization for simulated quantum noise by completing the square
11. Shoki Iwaguchi, Atsushi Nishizawa, Yanbei Chen, Yuki Kawasaki, Tomohiro Ishikawa, Masaaki Kitaguchi, Yutaka Yamagata, Bin Wu, Ryuma Shimizu, Kurumi Umemura, Kenji Tsuji, Hirohiko Shimizu, Yuta Michimura, Seiji Kawamura:
Physics Letters A **458**, 128581 (2023)
Displacement-noise-free interferometric gravitational-wave detector using unidirectional neutrons with four speeds
12. Sotatsu Otabe, Kentaro Komori, Ken-ichi Harada, Kaido Suzuki, Yuta Michimura, Kentaro Somiya:
Optics Express **30**, 42579 (2022)
Photothermal effect in macroscopic optomechanical systems with an intracavity nonlinear optical crystal

13. Tomohiro Ishikawa, Shoki Iwaguchi, Bin Wu, Izumi Watanabe, Yuki Kawasaki, Ryuma Shimizu, Yutaro Enomoto, Yuta Michimura, Akira Furusawa, Seiji Kawamura:
Physics Letters A **453**, 128485 (2022)
Can the phase of radiation pressure fluctuations be flipped in a single path for laser interferometric gravitational wave detectors?
14. Bin Wu, Tomohiro Ishikawa, Shoki Iwaguchi, Ryuma Shimizu, Izumi Watanabe, Yuki Kawasaki, Yuta Michimura, Shuichiro Yokoyama, Seiji Kawamura:
Physical Review D **106**, 042007 (2022)
Conceptual design and science cases of a juggled interferometer for gravitational wave detection
15. Takuya Kawasaki, Kentaro Komori, Hiroki Fujimoto, Yuta Michimura, Masaki Ando:
Physical Review A **106**, 013514 (2022)
Angular trapping of a linear-cavity mirror with an optical torsional spring
16. Atsushi Nishizawa, Shoki Iwaguchi, Yanbei Chen, Taigen Morimoto, Tomohiro Ishikawa, Bin Wu, Izumi Watanabe, Yuki Kawasaki, Ryuma Shimizu, Hirohiko Shimizu, Masaaki Kitaguchi, Yuta Michimura, Seiji Kawamura:
Physical Review D **105**, 124017 (2022)
Neutron displacement noise-free interferometer for gravitational-wave detection
17. KAGRA Collaboration (including Yuta Michimura as 70th of all 143 authors):
Galaxies **10**, 63 (2022)
The Current Status and Future Prospects of KAGRA, the Large-Scale Cryogenic Gravitational Wave Telescope Built in the Kamioka Underground
18. Shoki Iwaguchi, Atsushi Nishizawa, Yanbei Chen, Yuki Kawasaki, Masaaki Kitaguchi, Taigen Morimoto, Tomohiro Ishikawa, Bin Wu, Izumi Watanabe, Ryuma Shimizu, Hirohiko Shimizu, Yuta Michimura, Seiji Kawamura:
Physics Letters A **441**, 128150 (2022)
Displacement-noise-free neutron interferometer for gravitational wave detection using a single Mach-Zehnder configuration
19. Koji Nagano, Hiromasa Nakatsuka, Soichiro Morisaki, Tomohiro Fujita, Yuta Michimura, Ippei Obata:
Physical Review D **104**, 062008 (2021)
Axion dark matter search using arm cavity transmitted beams of gravitational wave detectors
20. Kentaro Komori, Takuya Kawasaki, Sotatsu Otabe, Yutaro Enomoto, Yuta Michimura, Masaki Ando:
Physical Review A **104**, L031501 (2021)

Improving force sensitivity by amplitude measurements of light reflected from a detuned optomechanical cavity

21. Rika Yamada, Yutaro Enomoto, Izumi Watanabe, Koji Nagano, Yuta Michimura, Atsushi Nishizawa, Kentaro Komori, Takeo Naito, Taigen Morimoto, Shoki Iwaguchi, Tomohiro Ishikawa, Masaki Ando, Akira Furusawa, Seiji Kawamura:
Physics Letters A **402**, 127365 (2021)
Reduction of quantum noise using the quantum locking with an optical spring for gravitational wave detectors
22. Kiwamu Izumi, Norichika Sago, Tomotada Akutsu, Masaki Ando, Ryuichi Fujita, Kenji Fukunabe, Naoki Kita, Masato Kobayashi, Kentaro Komori, Yuta Michimura, Mitsuru Musha, Koji Nagano, Hiroyuki Nakano, Hiroki Okasaka, Naoki Seto, Ayaka Shoda, Hideyuki Tagoshi, Satoru Takano, Hiroki Takeda, Takahiro Tanaka, Kei Yamada:
Progress of Theoretical and Experimental Physics **2021**, 05A106 (2021)
The current status of contribution activities in Japan for LISA
23. Seiji Kawamura *et al.* (including Yuta Michimura as 47th of all 87 authors):
Progress of Theoretical and Experimental Physics **2021**, 05A105 (2021)
Current status of space gravitational wave antenna DECIGO and B-DECIGO
24. KAGRA Collaboration (including Yuta Michimura as 115th of all 246 authors):
Progress of Theoretical and Experimental Physics **2021**, 05A103 (2021)
Overview of KAGRA: KAGRA science
25. KAGRA Collaboration (including Yuta Michimura as 113th of all 243 authors):
Progress of Theoretical and Experimental Physics **2021**, 05A102 (2021)
Overview of KAGRA: Calibration, detector characterization, physical environmental monitors, and the geophysics interferometer
26. KAGRA Collaboration (including Yuta Michimura as 90th of all 200 authors):
Progress of Theoretical and Experimental Physics **2021**, 05A101 (2021)
Overview of KAGRA: Detector design and construction history
(Corresponding authors: Yuta Michimura, Kentaro Somiya, Kazuhiro Yamamoto)
27. Koji Nagano, Hiroki Takeda, Yuta Michimura, Takashi Uchiyama, Masaki Ando:
Classical and Quantum Gravity **38**, 085018 (2021)
Demonstration of a dual-pass differential Fabry-Perot interferometer for future interferometric space gravitational wave antennas
28. Takafumi Ushiba, Tomotada Akutsu, Sakae Araki, Rishabh Bajpai, Dan Chen, Kieran Craig, Yutaro Enomoto, Ayako Hagiwara, Sadakazu Haino, Yuki Inoue, Kiwamu Izumi, Nobuhiro Kimura, Rahul Kumar, Yuta Michimura, Shinji Miyoki, Iwao Murakami, Yoshikazu Namai, Masayuki Nakano, Masatake Ohashi, Koki

- Okutomi, Takaharu Shishido, Ayaka Shoda, Kentaro Somiya, Toshikazu Suzuki, Suguru Takada, Masahiro Takahashi, Ryutaro Takahashi, Shinichi Terashima, Takayuki Tomaru, Flavio Travasso, Ayako Ueda, Helios Vocca, Tomohiro Yamada, Kazuhiro Yamamoto, Simon Zeidler:
Classical and Quantum Gravity **38**, 085013 (2021)
Cryogenic suspension design for a kilometer-scale gravitational-wave detector
29. Soichiro Morisaki, Tomohiro Fujita, Yuta Michimura, Hiromasa Nakatsuka, Ippei Obata:
Physical Review D **103**, L051702 (2021)
Improved sensitivity of interferometric gravitational-wave detectors to ultralight vector dark matter from the finite light-traveling time
30. KAGRA Collaboration (including Yuta Michimura as 115th of all 245 authors):
Classical and Quantum Gravity **38**, 065011 (2021)
Vibration isolation systems for the beam splitter and signal recycling mirrors of the KAGRA gravitational wave detector
31. Tomohiro Ishikawa, Shoki Iwaguchi, Yuta Michimura, Masaki Ando, Rika Yamada, Izumi Watanabe, Koji Nagano, Tomotada Akutsu, Kentaro Komori, Mitsuru Musha, Takeo Naito, Taigen Morimoto, Seiji Kawamura:
Galaxies **9**, 14 (2021)
Improvement of the Target Sensitivity in DECIGO by Optimizing Its Parameters for Quantum Noise Including the Effect of Diffraction Loss
32. Shoki Iwaguchi, Tomohiro Ishikawa, Masaki Ando, Yuta Michimura, Kentaro Komori, Koji Nagano, Tomotada Akutsu, Mitsuru Musha, Rika Yamada, Izumi Watanabe, Takeo Naito, Taigen Morimoto, Seiji Kawamura:
Galaxies **9**, 9 (2021)
Quantum Noise in a Fabry-Perot Interferometer Including the Influence of Diffraction Loss of Light
33. Takuya Kawasaki, Naoki Kita, Koji Nagano, Shotaro Wada, Yuya Kuwahara, Masaki Ando, Yuta Michimura:
Physical Review A **102**, 053520 (2020)
Optical trapping of the transversal motion for an optically levitated mirror
(Corresponding authors: Takuya Kawasaki, Yuta Michimura)
34. Tomotada Akutsu, Fabián Erasmo Peña Arellano, Ayaka Shoda, Yoshinori Fujii, Koki Okutomi, Mark Andrew Barton, Ryutaro Takahashi, Kentaro Komori, Naoki Aritomi, Tomofumi Shimoda, Satoru Takano, Hiroki Takeda, Enzo Nicolas Tapia San Martin, Ryohei Kozu, Bungo Ikenoue, Yoshiyuki Obuchi, Mitsuhiro Fukushima, Yoichi Aso, Yuta Michimura, Osamu Miyakawa, Masahiro Kamiizumi:
Review of Scientific Instruments **91**, 115001 (2020)

Compact integrated optical sensors and electromagnetic actuators for vibration isolation systems in the gravitational-wave detector KAGRA

35. Yuta Michimura, Tomohiro Fujita, Soichiro Morisaki, Hiromasa Nakatsuka, Ippei Obata:
Physical Review D **102**, 102001 (2020)
Ultralight vector dark matter search with auxiliary length channels of gravitational wave detectors
36. KAGRA Collaboration, LIGO Scientific Collaboration and Virgo Collaboration (including Yuta Michimura as 781st of all 1320 authors):
Living Reviews in Relativity **23**, 3 (2020)
Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA
37. Yuta Michimura, Kentaro Komori, Yutaro Enomoto, Koji Nagano, Atsushi Nishizawa, Eiichi Hirose, Matteo Leonardi, Eleonora Capocasa, Naoki Aritomi, Yuhang Zhao, Raffaele Flaminio, Takafumi Ushiba, Tomohiro Yamada, Li-Wei Wei, Hiroki Takeda, Satoshi Tanioka, Masaki Ando, Kazuhiro Yamamoto, Kazuhiro Hayama, Sadakazu Haino, Kentaro Somiya:
Physical Review D **102**, 022008 (2020)
Prospects for improving the sensitivity of the cryogenic gravitational wave detector KAGRA
38. Yuta Michimura, Kentaro Komori:
The European Physical Journal D **74**, 126 (2020)
Quantum sensing with milligram scale optomechanical systems
39. Rika Yamada, Yutaro Enomoto, Atsushi Nishizawa, Koji Nagano, Sachiko Kuroyanagi, Keiko Kokeyama, Kentaro Komori, Yuta Michimura, Takeo Naito, Izumi Watanabe, Taigen Morimoto, Masaki Ando, Akira Furusawa, Seiji Kawamura:
Physics Letters A **384**, 126626 (2020)
Optimization of quantum noise by completing the square of multiple interferometer outputs in quantum locking for gravitational wave detectors
40. KAGRA Collaboration (including Yuta Michimura as 118th of all 251 authors):
Progress of Theoretical and Experimental Physics **2020**, 053F01 (2020)
Application of independent component analysis to the iKAGRA data
41. Tomofumi Shimoda, Satoru Takano, Ching Pin Ooi, Naoki Aritomi, Yuta Michimura, Masaki Ando, Ayaka Shoda:
International Journal of Modern Physics D **29**, 1940003 (2020)
Torsion-Bar Antenna: A ground-based mid-frequency and low-frequency gravitational wave detector

42. Kentaro Komori, Yutaro Enomoto, Ching Pin Ooi, Yuki Miyazaki, Nobuyuki Matsumoto, Vivishek Sudhir, Yuta Michimura, Masaki Ando:
Physical Review A **101**, 011802(R) (2020)
Attoneutron-meter torque sensing with a macroscopic optomechanical torsion pendulum
43. KAGRA Collaboration (including Yuta Michimura as 103rd of all 216 authors):
Classical and Quantum Gravity **37**, 035004 (2020)
An arm length stabilization system for KAGRA and future gravitational-wave detectors
44. K. Somiya, E. Hirose, Y. Michimura:
Physical Review D **100**, 082005 (2019)
Influence of nonuniformity in sapphire substrates for a gravitational wave telescope
45. Seiji Kawamura *et al.* (including Yuta Michimura as 75th of all 145 authors):
International Journal of Modern Physics D **28**, 1845001 (2019)
Space gravitational-wave antennas DECIGO and B-DECIGO
46. Kohei Yamamoto, Keiko Kokeyama, Yuta Michimura, Yutaro Enomoto, Masayuki Nakano, Gui-Guo Ge, Tomoyuki Uehara, Kentaro Somiya, Kiwamu Izumi, Osamu Miyakawa, Takahiro Yamamoto, Takaaki Yokozawa, Yuta Fujikawa, Nobuyuki Fujii, Takaaki Kajita:
Classical and Quantum Gravity **36**, 205009 (2019)
Design and experimental demonstration of a laser modulation system for future gravitational-wave detectors
47. Koji Nagano, Tomohiro Fujita, Yuta Michimura, Ippei Obata:
Physical Review Letters **123**, 111301 (2019)
Axion Dark Matter Search with Interferometric Gravitational Wave Detectors
48. Hiroki Takeda, Atsushi Nishizawa, Koji Nagano, Yuta Michimura, Kentaro Komori, Masaki Ando, Kazuhiro Hayama:
Physical Review D **100**, 042001 (2019)
Prospects for gravitational-wave polarization tests from compact binary mergers with future ground-based detectors
49. KAGRA Collaboration (including Yuta Michimura as 92th of all 203 authors):
Classical and Quantum Gravity **36**, 165008 (2019)
First cryogenic test operation of underground km-scale gravitational-wave observatory KAGRA
(Corresponding authors: Sadakazu Haino, Nobuyuki Kanda, Yuta Michimura, Hisaaki Shinkai, Takahiro Yamamoto)

50. KAGRA Collaboration (including Yuta Michimura as 82th of all 174 authors):
Classical and Quantum Gravity **36**, 095015 (2019)
Vibration isolation system with a compact damping system for power recycling mirrors of KAGRA
51. Nobuyuki Matsumoto, Seth B. Cataño-Lopez, Masakazu Sugawara, Seiya Suzuki, Naofumi Abe, Kentaro Komori, Yuta Michimura, Yoichi Aso, Keiichi Edamatsu:
Physical Review Letters **122**, 071101 (2019)
Demonstration of Displacement Sensing of a mg-Scale Pendulum for mm- and mg-Scale Gravity Measurements
52. KAGRA collaboration (including Yuta Michimura as 91th of all 194 authors):
Nature Astronomy **3**, 35 (2019)
KAGRA: 2.5 generation interferometric gravitational wave detector
(Corresponding authors: Chunglee Kim, Yuta Michimura, Hisaaki Shinkai, Ayaka Shoda)
53. Ippei Obata, Tomohiro Fujita, Yuta Michimura:
Physical Review Letters **121**, 161301 (2018)
Optical Ring Cavity Search for Axion Dark Matter
(Corresponding authors: Ippei Obata, Tomohiro Fujita, Yuta Michimura)
54. Hiroki Takeda, Atsushi Nishizawa, Yuta Michimura, Koji Nagano, Kentaro Komori, Masaki Ando, Kazuhiro Hayama:
Physical Review D **98**, 022008 (2018)
Polarization test of gravitational waves from compact binary coalescences
55. Yuta Michimura, Kentaro Komori, Atsushi Nishizawa, Hiroki Takeda, Koji Nagano, Yutaro Enomoto, Kazuhiro Hayama, Kentaro Somiya, Masaki Ando:
Physical Review D **97**, 122003 (2018)
Particle swarm optimization of the sensitivity of a cryogenic gravitational wave detector
56. Tomofumi Shimoda, Naoki Aritomi, Ayaka Shoda, Yuta Michimura, Masaki Ando:
Physical Review D **97**, 104003 (2018)
Seismic cross-coupling noise in torsion pendulums
57. Kentaro Komori, Yutaro Enomoto, Hiroki Takeda, Yuta Michimura, Kentaro Somiya, Masaki Ando, Stefan W. Ballmer:
Physical Review D **97**, 102001 (2018)
Direct approach for the fluctuation-dissipation theorem under nonequilibrium steady-state conditions
(Corresponding authors: Kentaro Komori, Yuta Michimura, Stefan W. Ballmer)

58. KAGRA Collaboration, LIGO Scientific Collaboration and Virgo Collaboration (including Yuta Michimura as 637th of all 1101 authors):
Living Reviews in Relativity **21**, 3 (2018)
Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA
59. KAGRA Collaboration (including Yuta Michimura as 83rd of all 227 authors):
Progress of Theoretical and Experimental Physics **2018**, 013F01 (2018)
Construction of KAGRA: an underground gravitational-wave observatory
60. Yuta Michimura, Tomofumi Shimoda, Takahiro Miyamoto, Ayaka Shoda, Koki Okutomi, Yoshinori Fujii, Hiroki Tanaka, Mark A Barton, Ryutaro Takahashi, Yoichi Aso, Tomotada Akutsu, Masaki Ando, Yutaro Enomoto, Raffaele Flaminio, Kazuhiro Hayama, Eiichi Hirose, Yuki Inoue, Takaaki Kajita, Masahiro Kamiizumi, Seiji Kawamura, Keiko Kokeyama, Kentaro Komori, Rahul Kumar, Osamu Miyakawa, Koji Nagano, Masayuki Nakano, Naoko Ohishi, Ching Pin Ooi, Fabián Erasmo Peña Arellano, Yoshio Saito, Katsuhiko Shimode, Kentaro Somiya, Hiroki Takeda, Takayuki Tomaru, Takashi Uchiyama, Takafumi Ushiba, Kazuhiro Yamamoto, Takaaki Yokozawa, Hirotaka Yuzurihara:
Classical and Quantum Gravity **34**, 225001 (2017)
Mirror actuation design for the interferometer control of the KAGRA gravitational wave telescope
61. Yuta Michimura, Yuya Kuwahara, Takafumi Ushiba, Nobuyuki Matsumoto, Masaki Ando:
Optics Express **25**, 13799 (2017)
Optical levitation of a mirror for reaching the standard quantum limit
62. Nobuyuki Matsumoto, Kentaro Komori, Sosuke Ito, Yuta Michimura, Yoichi Aso:
Physical Review A **94**, 033822 (2016)
Direct measurement of optical-trap-induced decoherence
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METRICS

Conference Talks: 110 total; 17 invited

Publications: 113 total; 14 first author; 8 corresponding author

Citations: 10,122 total; 1,811 for first/corresponding author; h-index 38 (ADS, May 8, 2024)