

Curriculum Vitae

Teppei Kitahara

*Designated Assistant Professor, Institute for Advanced Research, Nagoya University, Nagoya 464-8601, Japan, and
Kobayashi-Maskawa Institute for the Origin of Particles and the Universe, Nagoya University,
Nagoya 464-8602, Japan*

First Name : Tepei (鉄平)
Last Name : Kitahara (北原)
Phone : +81 (0)52-789-2863
Email : teppeik@kmi.nagoya-u.ac.jp
Nationality : Japan
Sex : male
Marital Status : married, a wife and a son
Birth : Nagano, Japan, March 24, 1988
PhD : Theoretical Physics, The Univ. of Tokyo, March 24, 2015
Webpage : <http://www.eken.phys.nagoya-u.ac.jp/~teppeik/>
ORCID : <https://orcid.org/0000-0002-4847-9511>

Education

- March 2015 : Ph.D. in Theoretical Physics (Adviser : Prof. Takeo Moroi)
: Dissertation “Aspects of High-Scale Supersymmetry in a Singlet-Extended Model”
: The University of Tokyo, Japan
- March 2012 : M.Sc. in Theoretical Physics (Adviser : Prof. Takeo Moroi)
: Master Thesis “The Higgs Sector of Next-to Minimal Supersymmetric Standard Model”
: The University of Tokyo, Japan
- March 2010 : B.Sc. in Physics
: Undergraduate Study in Physics
: Bachelor’s Degree Thesis “CP violation in kaon system”
: E-lab, Nagoya University, Japan

Academic Employment

- Oct. 2018 – Mar. 2023 : Designated Assistant Professor
Institute for Advanced Research, Nagoya University, Japan
- Oct. 2018 – Mar. 2020 : Long-term Visiting Researcher
Physics Department, Technion–Israel Institute of Technology, Israel
- Oct. 2015 – Sep. 2018 : Postdoctoral Fellow
IKP, Karlsruhe Institute of Technology (KIT), Germany
- Apr. 2015 – Sep. 2015 : Postdoctoral Fellow
IPNS, High Energy Accelerator Research Organization (KEK), Japan

Research Interests

Theoretical Particle Physics:

Flavor physics, Physics beyond the Standard Model, CP violation, Supersymmetry, Lepton physics,
Higgs physics, Dark matter, Collider phenomenology, Long-distance correction,
Effective field theories, Scattering amplitudes, Weak measurement

Awards

- Oct. 2018 : The Lady Davis Fellowship Trust (declined for technical reasons)
- Mar. 2018 : Young Scientist Award of the Physical Society of Japan (Theoretical Particle Physics)
- 2015 : Repayment Exemption for Students with Excellent Grades -FY2015-, Japan Student Services Organization (JASSO); Half-exemption

Grants

- Jul. 2020 – :
MEXT, Leading Initiative for Excellent young Researchers (LEADER) candidate (PI)
- Apr. 2019 – Mar. 2023 :
JSPS, KAKENHI Grant-in-Aid for Early-Career Scientists, “Probing physics beyond the standard model by precise predictions for flavor physics,” 4,160,000JPY (PI)

Fellowships

- Apr. 2012 – Mar. 2015 : Research Assistant, Faculty of Science, The University of Tokyo

Teaching experience

- “Mathematical Physics Tutorial I” for undergraduate class of Global 30 international programs (G30) at Department of Physics, Nagoya University, October 2021 – March 2022 (in English)
- “Mathematical Physics Tutorial I” for undergraduate class of Global 30 international programs (G30) at Department of Physics, Nagoya University, October 2020 – March 2021 (in English)
- Two lectures for graduate class “Introduction to Particle Physics – CP violation–” at Department of Physics, Technion–Israel Institute of Technology, June 2019 (in English)
- Teaching Assistant for undergraduate class “Quantum Mechanics” at Department of Physics, the University of Tokyo, April 2014 – September 2014

Professional Activities

- Member, The Physical Society of Japan, 2012 – current
- Referee on International peer-reviewed journals, Jun. 2017 – current, total: 17
Journal of High Energy Physics, Physical Review D, European Physical Journal C, Physics Letters B
- Invited review article: “Review of muon $g - 2$ anomaly and its new physics implications,” High Energy News, October 2021 (in Japanese)
- International conference convener: “Implications of LHCb measurements and future prospects” at CERN (online), October 2020
- Domestic conference convener: “The progress of the Particle Physics 2021, 2022 (PPP 2021, 2022)”, YITP (online), September 2021

Publication List

Teppei Kitahara

Designated Assistant Professor, Nagoya University, Nagoya 464-8602, Japan

Research and Publications

The alphabetical authorship is used, which is a tradition in the high energy physics

Under-Reviewed Manuscripts

- [1] R. Balkin, G. Durieux, **T. Kitahara**, Y. Shadmi, and Y. Weiss, “On-shell Higgsing for EFTs,” [arXiv:2112.09688](#)

Peer-Reviewed Publications

- [2] M. Endo, S. Iguro, **T. Kitahara**, M. Takeuchi, and R. Watanabe, “Non-resonant new physics search at the LHC for the $b \rightarrow c\tau\nu$ anomalies,” *JHEP* **02**, 106 (2022) [[arXiv:2111.04748 \[hep-ph\]](#)].
- [3] M. Endo, K. Hamaguchi, S. Iwamoto and **T. Kitahara**, “Supersymmetric Interpretation of the Muon $g - 2$ Anomaly,” *JHEP* **07**, 075 (2021) [[arXiv:2104.03217 \[hep-ph\]](#)].
- [4] G. Durieux, **T. Kitahara**, C. S. Machado, Y. Shadmi and Y. Weiss, “Constructing massive on-shell contact terms,” *JHEP* **12**, 175 (2020) [[arXiv:2008.09652 \[hep-ph\]](#)].
- [5] S. Iguro and **T. Kitahara**, “Implications for new physics from a novel puzzle in $\bar{B}_{(s)}^0 \rightarrow D_{(s)}^{(*)+} \{\pi^-, K^-\}$ decays,” *Phys. Rev. D* **102**, no.7, 071701 (2020), **Rapid Communication** [[arXiv:2008.01086 \[hep-ph\]](#)].
- [6] D. Ueda and **T. Kitahara**, “Novel approach to neutron electric dipole moment search using weak measurement,” *J. Phys. B: At. Mol. Opt. Phys.* **54** 085502 (2021) [[arXiv:2002.11731 \[hep-ph\]](#)].
- [7] M. Endo, S. Iguro, **T. Kitahara**, “Probing $e\mu$ flavor-violating ALP at Belle II,” *JHEP* **06**, 040 (2020) [[arXiv:2002.05948 \[hep-ph\]](#)].
- [8] M. Endo, K. Hamaguchi, S. Iwamoto, **T. Kitahara**, “Muon $g - 2$ vs LHC Run 2 in Supersymmetric Models,” *JHEP* **04**, 165 (2020) [[arXiv:2001.11025 \[hep-ph\]](#)].
- [9] **T. Kitahara**, T. Okui, G. Perez, Y. Soreq and K. Tobioka, “New physics implications of recent search for $K_L \rightarrow \pi^0\nu\bar{\nu}$ at KOTO,” *Phys. Rev. Lett.* **124**, no.7, 071801 (2020) [[arXiv:1909.11111 \[hep-ph\]](#)]. Selected as **Editors’ Suggestion** and **cover of this issue**. Featured in **APS Physics Synopsis**, **Science News**, **ParticleBites**, **Popular Mechanics**, **Phys.org**, and so on.
- [10] G. Durieux, **T. Kitahara**, Y. Shadmi and Y. Weiss, “The electroweak effective field theory from on-shell amplitudes,” *JHEP* **01**, 119 (2020) [[arXiv:1909.10551 \[hep-ph\]](#)].
- [11] M. Blanke, A. Crivellin, **T. Kitahara**, M. Moscati, U. Nierste and I. Nišandžić, “Addendum to “Impact of polarization observables and $B_c \rightarrow \tau\nu$ on new physics explanations of the $b \rightarrow c\tau\nu$ anomaly”,” *Phys. Rev. D* **100**, no. 3, 035035 (2019) [[arXiv:1905.08253 \[hep-ph\]](#)].
- [12] S. Iguro, **T. Kitahara**, Y. Omura, R. Watanabe and K. Yamamoto, “ D^* polarization vs. $R_{D^{(*)}}$ anomalies in the leptoquark models,” *JHEP* **02**, 194 (2019) [[arXiv:1811.08899 \[hep-ph\]](#)].
- [13] M. Blanke, A. Crivellin, S. de Boer, **T. Kitahara**, M. Moscati, U. Nierste and I. Nišandžić, “Impact of polarization observables and $B_c \rightarrow \tau\nu$ on new physics explanations of the $b \rightarrow c\tau\nu$ anomaly,” *Phys. Rev. D* **99**, no. 7, 075006 (2019) [[arXiv:1811.09603 \[hep-ph\]](#)].
- [14] M. Endo, **T. Kitahara** and D. Ueda, “SMEFT top-quark effects on $\Delta F = 2$ observables,” *JHEP* **07**, 182 (2019) [[arXiv:1811.04961 \[hep-ph\]](#)].
- [15] A. A. Alves Junior, ..., **T. Kitahara**, *et al.*, “Prospects for Measurements with Strange Hadrons at LHCb,” *JHEP* **05**, 048 (2019) [[arXiv:1808.03477 \[hep-ex\]](#)].

- [16] S. de Boer, **T. Kitahara** and I. Nišandžić, “Soft-Photon Corrections to $\bar{B} \rightarrow D\tau^-\bar{\nu}_\tau$ Relative to $\bar{B} \rightarrow D\mu^-\bar{\nu}_\mu$,” *Phys. Rev. Lett.* **120**, no. 26, 261804 (2018) [arXiv:1803.05881 [hep-ph]].
- [17] M. Endo, T. Goto, **T. Kitahara**, S. Mishima, D. Ueda and K. Yamamoto, “Gluino-mediated electroweak penguin with flavor-violating trilinear couplings,” *JHEP* **04**, 019 (2018) [arXiv:1712.04959 [hep-ph]].
- [18] V. Chobanova, G. D’Ambrosio, **T. Kitahara**, M. Lucio Martínez, D. Martínez Santos, I. S. Fernández and K. Yamamoto, “Probing SUSY effects in $K_S^0 \rightarrow \mu^+\mu^-$,” *JHEP* **05**, 024 (2018) [arXiv:1711.11030 [hep-ph]].
- [19] G. D’Ambrosio and **T. Kitahara**, “Direct CP Violation in $K \rightarrow \mu^+\mu^-$,” *Phys. Rev. Lett.* **119**, no. 20, 201802 (2017) [arXiv:1707.06999 [hep-ph]].
- [20] A. Crivellin, G. D’Ambrosio, **T. Kitahara** and U. Nierste, “ $K \rightarrow \pi\nu\bar{\nu}$ in the MSSM in Light of the ϵ'_K/ϵ_K Anomaly,” *Phys. Rev. D* **96**, no. 1, 015023 (2017) [arXiv:1703.05786 [hep-ph]].
- [21] M. Endo, **T. Kitahara**, S. Mishima and K. Yamamoto, “Revisiting Kaon Physics in General Z Scenario,” *Phys. Lett. B* **771**, 37 (2017) [arXiv:1612.08839 [hep-ph]].
- [22] **T. Kitahara** and Y. Yamamoto, “Protophobic Light Vector Boson as a Mediator to the Dark Sector,” *Phys. Rev. D* **95**, no. 1, 015008 (2017) [arXiv:1609.01605 [hep-ph]].
- [23] **T. Kitahara**, U. Nierste and P. Tremper, “Singularity-free Next-to-leading Order $\Delta S = 1$ Renormalization Group Evolution and ϵ'_K/ϵ_K in the Standard Model and Beyond,” *JHEP* **12**, 078 (2016) [arXiv:1607.06727 [hep-ph]].
- [24] **T. Kitahara**, U. Nierste and P. Tremper, “Supersymmetric Explanation of CP Violation in $K \rightarrow \pi\pi$ Decays,” *Phys. Rev. Lett.* **117**, no. 9, 091802 (2016) [arXiv:1604.07400 [hep-ph]].
- [25] K. Harigaya, M. Ibe and **T. Kitahara**, “ATLAS on-Z Excess via gluino-Higgsino-singlino decay chains in the NMSSM,” *JHEP* **01**, 030 (2016) [arXiv:1510.07691 [hep-ph]].
- [26] T. Abe, **T. Kitahara** and M. M. Nojiri, “Prospects for Spin-1 Resonance Search at 13 TeV LHC and the ATLAS Diboson Excess,” *JHEP* **02**, 084 (2016) [arXiv:1507.01681 [hep-ph]].
- [27] G. Mishima, R. Jinno and **T. Kitahara**, “Diquark bound states with a completely crossed ladder truncation,” *Phys. Rev. D* **91**, 076011 (2015) [arXiv:1502.05415 [nucl-th]].
- [28] K. Ishikawa, **T. Kitahara** and M. Takimoto, “Towards a Scale Free Electroweak Baryogenesis,” *Phys. Rev. D* **91**, no. 5, 055004 (2015) [arXiv:1410.5432 [hep-ph]].
- [29] K. Ishikawa, **T. Kitahara** and M. Takimoto, “Singlino Resonant Dark Matter and 125 GeV Higgs Boson in High-Scale Supersymmetry,” *Phys. Rev. Lett.* **113**, no. 13, 131801 (2014) [arXiv:1405.7371 [hep-ph]].
- [30] M. Endo, **T. Kitahara** and T. Yoshinaga, “Future Prospects for Stau in Higgs Coupling to Di-photon,” *JHEP* **04**, 139 (2014) [arXiv:1401.3748 [hep-ph]].
- [31] T. Abe, J. Hisano, **T. Kitahara** and K. Tobioka, “Gauge invariant Barr-Zee type contributions to fermionic EDMs in the two-Higgs doublet models,” *JHEP* **01**, 106 (2014) Erratum: [*JHEP* **04**, 161 (2016)] [arXiv:1311.4704 [hep-ph]].
- [32] M. Endo, K. Hamaguchi, S. Iwamoto, **T. Kitahara** and T. Moroi, “Reconstructing Supersymmetric Contribution to Muon Anomalous Magnetic Dipole Moment at ILC,” *Phys. Lett. B* **728**, 274 (2014) [arXiv:1310.4496 [hep-ph]].
- [33] M. Endo, K. Hamaguchi, **T. Kitahara** and T. Yoshinaga, “Probing Bino contribution to muon $g - 2$,” *JHEP* **11**, 013 (2013) [arXiv:1309.3065 [hep-ph]].
- [34] **T. Kitahara** and T. Yoshinaga, “Stau with Large Mass Difference and Enhancement of the Higgs to Diphoton Decay Rate in the MSSM,” *JHEP* **05**, 035 (2013) [arXiv:1303.0461 [hep-ph]].
- [35] **T. Kitahara**, “Vacuum Stability Constraints on the Enhancement of the $h \rightarrow \gamma\gamma$ rate in the MSSM,” *JHEP* **11**, 021 (2012) [arXiv:1208.4792 [hep-ph]].

Invited Review Article

- [36] M. Endo, S. Iwamoto and **T. Kitahara**, “Review of muon $g-2$ anomaly and its new physics implications,” *High Energy News* **40-2**, 56-65 (2021) (in Japanese).

Report, Proceedings and Thesis

- [37] E. Goudzovski, ..., **T. Kitahara**, *et al.*, “New Physics Searches at Kaon and Hyperon Factories,” [arXiv:2201.07805](#)
- [38] **T. Kitahara**, “Direct CP Violation in $K \rightarrow \mu^+ \mu^-$,” *Springer Proc. Phys.* **234**, 211–216 (2019). (proceedings of FPCP2018 conference)
- [39] A. Cerri, ..., **T. Kitahara**, *et al.*, “Opportunities in Flavour Physics at the HL-LHC and HE-LHC,” *CERN Yellow Rep. Monogr.* **7**, 867 (2019) [[arXiv:1812.07638 \[hep-ph\]](#)]. (Report from Working Group 4 on the Physics of the HL-LHC, and Perspectives at the HE-LHC)
- [40] **T. Kitahara**, “Recent developments on direct CP violation in the kaon system and connection to $K \rightarrow \pi \nu \bar{\nu}$ measurements,” *PoS HQL* **2018**, 026 (2018) [[arXiv:1811.03332 \[hep-ph\]](#)]. (proceedings of HQL2018 conference)
- [41] **T. Kitahara**, “Standard Model and New physics for ϵ'_K/ϵ_K ,” *EPJ Web Conf.* **179**, 01007 (2018). (proceedings of FCCP2017 conference)
- [42] **T. Kitahara**, “Correlations of ϵ'_K/ϵ_K with $K \rightarrow \pi \nu \bar{\nu}$ in Models of New Physics,” *Proceedings of 52th Rencontres de Moriond electroweak interactions and unified theories, March 18-25, 2017* [[arXiv:1705.05462 \[hep-ph\]](#)].
- [43] **T. Kitahara**, U. Nierste and P. Tremper, “Direct CP violation in $K \rightarrow \pi\pi$ decays and supersymmetry,” *PoS ICHEP* **2016**, 564 (2016) [[arXiv:1612.07967 \[hep-ph\]](#)]. (proceedings of ICHEP2016 conference)
- [44] **T. Kitahara**, U. Nierste and P. Tremper, “Recent progress on CP violation in $K \rightarrow \pi\pi$ decays in the SM and a supersymmetric solution,” *J. Phys. Conf. Ser.* **800**, no. 1, 012019 (2017) [[arXiv:1611.08278 \[hep-ph\]](#)]. (proceedings of KAON2016 conference)
- [45] **T. Kitahara**, “Aspects of High-Scale Supersymmetry in a Singlet-Extended Model,” *UTokyo Repository* **1150220** (2015) [[arXiv:1508.04810 \[hep-ph\]](#)]. (doctoral thesis in the University of Tokyo)

Conference and Seminar Presentations

International Conference Talks

- [1] “Theoretical overview of kaon physics”, **Invited review talk**, Second International Workshop on the Extension Project for the J-PARC Hadron Experimental Facility, J-PARC, Japan, online talk, February 2022
- [2] “Muon $g-2$ anomaly + SUSY (theory)”, **Invited review talk**, The 75th General Meeting of ILC Physics Subgroup, Japan, online talk, December 2021
- [3] “LHC phenomenology in light of $R(D)$ and $R(D^*)$ anomalies”, **Invited talk**, International Joint Workshop on the SM and Beyond, National Taiwan University, Taiwan, online talk, October 2021
- [4] “Anomaly in current low-energy data”, **Invited plenary review talk**, Strings and Fields 2021, YITP, Japan, online talk, August 2021
- [5] “Muon $g-2$ /EDM in physics beyond the Standard Model”, **Invited review talk**, The 22th muon $g-2$ /EDM Collaboration Meeting, J-PARC, Japan, online talk, June 2021
- [6] “Implications for new physics from a novel puzzle in $B_{(s)}^0 \rightarrow D_{(s)}^+ \{\pi^-, K^-\}$ decays”, **Invited talk**, Mini-Workshop on Colour Allowed Non-Leptonic TreeLevel Decays, Universität Siegen, Germany, online talk, April 2021
- [7] “New physics implications of recent search for $K_L \rightarrow \pi^0 \nu \bar{\nu}$ at KOTO”, **Invited talk**, COST Workshop: Probing BSM physics at different scales, Magnus Haus, Berlin, Germany, January 2020

- [8] “New physics implications of recent search for $K_L \rightarrow \pi^0 \nu \bar{\nu}$ at KOTO experiment”, **Invited talk**, 27th Regular Meeting of New Higgs Working Group, Osaka University, Japan, December 2019
- [9] “Theory status and implications of $R(D^{(*)})$ and polarization observables”, **Invited review talk**, 18th International Conference on B -Physics at Frontier Machines (BEAUTY2019), Ljubljana, Slovenia, October 2019
- [10] “Hunt for new physics in kaon decays”, **Invited review talk**, 2nd Workshop on Hadronic Contributions to New Physics Searches (HC2NP2019), Tenerife, Spain, September 2019
- [11] “Lepton-flavor universality violation from soft-photon corrections to B semileptonic decays”, Heavy-Quark Physics and Fundamental Symmetries: Interplay between theory and experiment, INT, University of Washington, USA, August 2019
- [12] “Soft-photon corrections to semileptonic B -meson decays”, **Invited plenary talk**, ANOMALIES 2019, IIT Hyderabad, India, July 2019
- [13] “Unaccounted QED corrections in $R(D^{(*)})$?”, **Invited lecture**, GDR-InF workshop: QED corrections to (semi)leptonic B decays, LPNHE, Paris, July 2019
- [14] “Soft-photon corrections to semileptonic decays of B -meson”, **Invited talk**, 2019 NPKEI workshop, Korea University, Korea, May 2019
- [15] “Soft-photon corrections to B -meson semileptonic decays”, **Invited talk**, 6th KEK Flavor Factory Workshop (KEK-FF 2019), KEK, Japan, February 2019
- [16] “Kaon physics and connection to B anomalies”, **Invited review talk**, High energy implications of flavor anomalies, CERN, Switzerland, October 2018
- [17] “Effect of QED corrections on $R(D)$ ”, 10Th International Workshop on the CKM Unitarity Triangle (CKM 2018), Heidelberg University, Germany, September 2018
- [18] “Direct CP violation in Kaon”, **Invited lecture**, Post FPCP 2018 Workshop, IIT Hyderabad, India, July 2018
- [19] “Direct CP violation in $K \rightarrow \mu^+ \mu^-$ ”, **Invited talk**, 16th Conference on Flavor Physics and CP Violation (FPCP 2018), University of Hyderabad, India, July 2018
- [20] “Kaon physics : theory view”, **Invited review talk**, Workshop on the physics of HL-LHC, and perspectives at HE-LHC, CERN, Switzerland, June 2018
- [21] “The recent progress on direct CP violation in the kaon system and probing new physics”, **Invited talk**, The 3rd physics and applied physics seminar in Germany for Japanese researchers, Max-Planck-Institut für Astrophysik, Munich, Germany, June 2018
- [22] “The recent developments on direct CP violation in the kaon system and its connection to the upcoming $K \rightarrow \pi \nu \bar{\nu}$ measurements”, **Invited talk**, Heavy Quarks and Leptons 2018 (HQL2018), Yamagata Terrsa, Yamagata, Japan, May 2018
- [23] “Standard Model and New physics for ϵ'_K ”, **Invited talk**, Flavour changing and conserving processes 2017 (FCCP2017), Villa Orlandi, Anacapri, Capri Island, Italy, September 2017
- [24] “The ϵ'_K/ϵ_K tension and supersymmetric interpretation”, **Invited talk**, XIIth Meeting on B Physics. Tensions in Flavour measurements: a path toward Physics beyond the Standard Model, Centro Congressi Università di Napoli Federico II, Napoli, Italy, May 2017
- [25] “Supersymmetry and CP violation in kaon decays”, **Invited talk**, Rare’N’Strange 2017: strange physics at LHCb, Universidade de Santiago de Compostela, Spain, April 2017
- [26] “Epsilonprime and K to pi neutrino antineutrino correlations and new physics”, MORIOND 2017 EW Session YSF, La Thuile, Italy, March 2017
- [27] [poster] “Supersymmetric explanation of CP violation in $K \rightarrow \pi \pi$ decays”, MUTAG 2016, Helmholtz Institute Mainz, Germany, December 2016

- [28] “Supersymmetric explanation of CP violation in $K \rightarrow \pi\pi$ decays”, KAON 2016 conference, University of Birmingham, England, September 2016
- [29] “Interpretations of ϵ'_K/ϵ_K in the MSSM”, The annual Theory Meeting on Particle Physics Phenomenology 2016 (KEK-PH 2016), KEK, Japan, February 2016
- [30] “Phenomenology of singlet extended supersymmetric model – Dark matter, Baryogenesis”, Joint KEK Theory Fermilab Theory Workshop 2015, Fermilab, USA, August 2015
- [31] “Reconstructing Supersymmetric Contribution to Muon Anomalous Magnetic Dipole Moment at ILC”, Asian Linear Collider workshop 2015 (ALCW 2015), KEK, Japan, April 2015
- [32] “Singlino Resonant Dark Matter in High-Scale nMSSM”, The annual Theory Meeting on Particle Physics Phenomenology 2014 (KEK-PH 2014), KEK, Japan, October 2014
- [33] [poster] “Singlino Resonant Dark Matter and 125 GeV Higgs Boson in High-Scale Supersymmetry”, Summer Institute 2014 -Phenomenology of Elementary Particles and Cosmology- (SI 2014), Fuji-Yoshida, Japan, August 2014
- [34] “Future Prospects for Stau in Higgs Coupling to Di-photon”, The 22nd International Conference on Supersymmetry and Unification of Fundamental Interactions (SUSY2014), University of Manchester, England, July 2014
- [35] “Gauge invariant Barr-Zee type contributions to fermionic EDMs in the two-Higgs doublet models”, Basis of the Universe with Revolutionary Ideas 2014 (BURI 2014), Toyama University, Japan, February 2014
- [36] “Probing Bino Contribution to Muon $g-2$ ”, SUSY: Model-building and Phenomenology, Kavli IPMU, Japan, December 2013
- [37] “Gauge invariant Barr-Zee type contributions to fermionic EDMs in the 2HDMs”, The annual Theory Meeting on Particle Physics Phenomenology 2013 FALL (KEK-PH 2013 FALL), KEK, Japan, October 2013
- [38] “Vacuum Stability Constraints on the Enhancement of the Higgs to Diphoton Rate in the MSSM”, The annual Theory Meeting on Particle Physics Phenomenology 2013 (KEK-PH 2013), KEK, Japan, March 2013
- [39] [poster] “Vacuum Stability Constraints on the Enhancement of the Higgs to Diphoton Rate in the MSSM”, G-COE International Symposium on Physical Sciences Frontier, University of Tokyo, Japan, December 2012

National Conference Talks

- [40] “New physics interpretations of the muon $g - 2$ anomaly”, **Invited review talk**, ILC Summer Camp 2021, Japan, online talk, September 2021
- [41] “New physics interpretations of flavor and muon $g - 2$ anomalies”, **Invited review talk**, JPS 2021 Fall meetings, Kobe University, Japan, online talk, September 2021
- [42] “SMEFT and on-shell amplitudes”, **Invited talk**, EFT study meeting, Morioka, Japan, July 2021
- [43] “New physics interpretation of the muon $g - 2$ anomaly”, **Invited review talk**, 2021 Tera-Scale Conference, KEK, Japan, online talk, May 2021
- [44] “Precision measurements and new physics searches”, **Invited review talk**, The committee on Future Projects in High Energy Physics: 9th workshop, online talk, April 2021
- [45] “Probing electron-muon flavor-violating ALP at Belle II”, JPS 2021 Annual (76th) Meeting, online talk, March 2021
- [46] “New physics implications of recent search for $K_L \rightarrow \pi^0 \nu \bar{\nu}$ at KOTO experiment”, JPS 2020 Fall meetings, University of Tsukuba, Japan, online talk, September 2020
- [47] “The electroweak effective field theory from on-shell amplitudes”, The progress of the Particle Physics 2020 (PPP 2020), YITP, Japan, online talk, September 2020

- [48] “Review of current flavor anomalies in precision measurements of mesons and discrimination of new physics models”, **Invited review talk**, JPS 2020 Annual (75th) Meeting, Nagoya University, Japan, March 2020
- [49] “Introduction to B physics (theory),” **Invited lectures**, Flavor Physics Workshop 2019, Osaka, Japan, November 2019
- [50] “Probing new physics by precision measurements of kaon decays”, **Invited review talk**, The progress of the Particle Physics 2018 (PPP 2018), YITP, Japan, August 2018
- [51] “Probing direct CP violation in $K \rightarrow \mu^+ \mu^-$ ”, JPS 2018 Annual (73th) Meeting, Tokyo University of Science, Japan, March 2018
- [52] “Improvements of theoretical prediction to the $\Delta S = 1$ Kaon decay and effects from supersymmetric models”, **Award lecture**, JPS 2018 Annual (73th) Meeting, Tokyo University of Science, Japan, March 2018
- [53] “Supersymmetric explanation of CP violation in $K \rightarrow \pi\pi$ decays”, The progress of the Particle Physics 2016 (PPP 2016), YITP, Japan, September 2016
- [54] “Prospects for Spin-1 Resonance Search at 13TeV LHC and the ATLAS Diboson Excess”, 4th New Physics Forum, ICRR, Japan, August 2015
- [55] “Electroweak Baryogenesis at TeV scale and ILC”, Summer camp on ILC accelerator and physics/detectors 2015, Hotel Tenbo, Ikaho, Japan, July 2015
- [56] “Towards a Scale Free Electroweak Baryogenesis in the nMSSM”, JPS 2015 Annual (70th) Meeting, Waseda University, Japan, March 2015
- [57] “Diquark bound state using Bethe-Salpeter equation beyond ladder approximation”, **Invited talk**, Beyond the Standard Model in Okinawa 2015, Okinawa Institute of Science and Technology, Japan, March 2015
- [58] “Phenomenology of Singlino Resonant Dark Matter”, **Invited talk**, Beyond the Standard Model in Okinawa 2015, Okinawa Institute of Science and Technology, Japan, March 2015
- [59] “Singlino Resonant Dark Matter in High-Scale nMSSM”, **Invited talk**, 2014 Tera-Scale Conference, Osaka University, Japan, November 2014
- [60] “Singlino Resonant Dark Matter in High-Scale nMSSM”, JPS 2014 Fall meetings, Saga University, Japan, September 2014
- [61] “Singlino Resonant Dark Matter and 125 GeV Higgs Boson in High-Scale Supersymmetry”, The progress of the Particle Physics 2014 (PPP 2014), YITP, Japan, July 2014
- [62] “Reconstructing Supersymmetric Contribution to Muon Anomalous Magnetic Dipole Moment at ILC”, JPS 2014 Annual (69th) Meeting, Tokai University, Japan, March 2014
- [63] “Fermionic EDMs in the 2HDM with Z_2 symmetry”, JPS 2013 Fall meetings, Kochi University, Japan, September 2013
- [64] [poster] “Vacuum Stability and the Higgs to diphoton decay rate in the MSSM”, The progress of the Particle Physics 2013 (PPP 2013), YITP, Japan, August 2013
- [65] “Vacuum Stability Constraints on the Enhancement of the Higgs to Diphoton Rate in the MSSM”, JPS 2013 Annual (68th) Meeting, Hiroshima University, Japan, March 2013
- [66] “Vacuum Stability Constraints on the decay of the Higgs in the MSSM”, GCOE 9th RA Meeting, Atami, Japan, February 2013
- [67] [poster] “Constraints on Higgs boson decay to two Photon from the vacuum metastability in the MSSM”, Young Nuclear and Particle Physicist Group of Japan Summer School, Fuji-Yoshida, Japan, August, 2012
- [68] “The Higgs Sector of the Next-to-MSSM”, Young Nuclear and Particle Physicist Group of Japan Summer School, Shirahamaso Inn, Shiga, Japan, August 2011

Seminar Talks

- [69] “Hunting for physics beyond the Standard Model in rare decays of K and B mesons”, **Invited talk**, ITP, Chinese Academy of Sciences, China, online talk, February 2022
- [70] “Hunting for physics beyond the Standard Model in rare decays of K and B mesons”, **Invited talk**, T-2 group, Los Alamos National Laboratory, USA, online talk, February 2022
- [71] “Hunting for physics beyond the Standard Model in rare decays of K and B mesons”, **Invited talk**, Tsung-Dao Lee Institute, China, online talk, February 2022
- [72] “Hunting for physics beyond the Standard Model in rare decays of K and B mesons”, **Invited talk**, Jilin University, China, online talk, December 2021
- [73] “Constructing Massive Scattering Amplitudes for Electroweak Effective Field Theory”, **Invited talk**, Kobe University, Japan, December 2021
- [74] “Constructing Massive Scattering Amplitudes for Electroweak Effective Field Theory”, **Invited talk**, Osaka City University, Japan, online talk, October 2021
- [75] “LHC phenomenology in light of $R(D)$ and $R(D^*)$ anomalies”, **Invited talk**, Shinshu University, Japan, online talk, October 2021
- [76] “Hunting for New Physics in Kaon Decays ”, **Invited talk**, Indian Institute of Technology Delhi, India, online talk, June 2021
- [77] “Massive Scattering Amplitudes and Electroweak Effective Field Theory”, **Invited talk**, YITP Elementary Particle Group Theory Seminar, YITP, Japan, online talk, May 2021
- [78] “Electroweak effective field theory from massive scattering amplitudes”, **Invited talk**, RIKEN BNL Research Center, USA, online talk, December 2020
- [79] “New physics effect on search for $K_L \rightarrow \pi^0 \nu \bar{\nu}$ at KOTO experiment”, **Invited talk**, Technische Universität Dortmund, Germany, online talk, November 2020.
- [80] “Electroweak effective field theory from massive scattering amplitudes”, **Invited talk**, Kyushu University, Japan, online talk, October 2020
- [81] “Review of current flavor anomalies in precision measurements of mesons”, **Invited talk**, Kyoto University, Japan, online talk, July 2020
- [82] “ CP Violation in Kaon System and New Physics”, **Invited talk**, Center for Theoretical Physics of the Universe, Institute for Basic Science, Korea, online talk, June 2020
- [83] “Direct CP violation in $K \rightarrow \mu^+ \mu^-$ and new physics search”, **Invited talk**, KEK, Japan, online talk, May 2020
- [84] “Novel approach to neutron electric dipole moment search using weak measurement”, **Invited talk**, Florida State University, USA, online talk, April 2020
- [85] “New physics implications of recent search for $K_L \rightarrow \pi^0 \nu \bar{\nu}$ at KOTO experiment ”, **Invited talk**, INPAC-TDLI at SJTU Joint Seminar, China, online talk, March 2020
- [86] “Novel approach to neutron electric dipole moment search using weak measurement”, **Invited talk**, Joint particle physics seminars, Ben-Gurion University of the Negev, Israel, January 2020
- [87] “ CP violation in Kaon decays”, Laboratoire d’Annecy-le-Vieux de Physique Théorique (LAPTh), CNRS, France, July 2019
- [88] “ CP violation in Kaon”, **Invited talk**, Joint particle physics seminars, Hebrew University, Israel, November 2018
- [89] “Soft-photon corrections to semileptonic B -meson decays”, **Invited talk**, Ben-Gurion University of the Negev, Israel, November 2018
- [90] “Soft-photon corrections to semileptonic B decays”, University of Tokyo, Japan, August 2018

- [91] “Soft-photon corrections to $R(D)$ ”, KEK, Japan, March 2018
- [92] “Direct CP Violation in $K \rightarrow \mu^+ \mu^-$ ”, Nagoya University, Japan, January 2018
- [93] “Tension of CP Violation in the Kaon Decay and Supersymmetric Interpretation”, Shinshu University, Japan, June 2017
- [94] “Tension of CP Violation in the Kaon Decay and Supersymmetric Interpretation”, Niigata University, Japan, June 2017
- [95] “Beryllium anomaly and its possible connection to Dark Sector”, **Invited talk**, Theoretical Astroparticle Physics group seminar, Karlsruhe Institute of Technology, Germany, February 2017
- [96] “Recent progress on CP violation in $K \rightarrow \pi\pi$ decays in the SM and SUSY solution”, Osaka University, Japan, August 2016
- [97] “Recent progress on CP violation in $K \rightarrow \pi\pi$ decays in the SM and SUSY solution”, Nagoya University, Japan, August 2016
- [98] “Recent progress on CP violation in $K \rightarrow \pi\pi$ decays in the SM and SUSY solution”, University of Tokyo, Japan, August 2016
- [99] “Recent progress on CP violation in $K \rightarrow \pi\pi$ decays in the SM and SUSY solution”, KEK, Japan, August 2016
- [100] “Singlino Resonant Dark Matter and 125 GeV Higgs Boson in High-Scale Supersymmetry”, **Invited talk**, Nagoya University, Japan, May 2015
- [101] “Towards a scale free electroweak baryogenesis”, **Invited talk**, Toyama University, Japan, May 2015
- [102] “Gauge invariant Barr-Zee type contributions to fermionic EDMs in the 2HDMs”, **Invited talk**, Tohoku University, Japan, November 2013
- [103] “Stau with Large Mass Difference and Enhancement of the Higgs to Diphoton Decay Rate in the MSSM”, **Invited talk**, Saitama University, Japan, May 2013

Public Outreach talks

- [104] “Search for the Baryon asymmetry by EDM and New Physics”, **Invited talk**, Elementary particle Cafe, Shinjuku, Japan, January 2014

Media coverage

- [105] Press release, “[Novel mechanism to avoid theoretical bound on kaon rare decays](#)”, Nagoya University, February 25, 2020; “[FSU researchers propose new physics to explain decay of subatomic particle](#)”, Florida State University, March 4, 2020
- [106] Interviewed in “[Misbehaving kaons could hint at the existence of new particles](#)”, Science News, February 4, 2020
- [107] News from Karlsruhe Institute of Technology, “[Young Scientist Award for Dr. Teppei Kitahara](#)”, October 2017

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