

# Curriculum Vitae

## Teppei Kitahara

*Associate Professor, Chiba University, Chiba 263-8522, Japan and  
Visiting Researcher, Nagoya University, Furo-cho Chikusa-ku, Nagoya 464-8602 Japan*

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Nationality : Japan  
Sex : male  
Marital Status : married, a wife, a son and a daughter  
Birth : Nagano, Japan, March 24, 1988  
PhD : Theoretical Physics, The Univ. of Tokyo, March 24, 2015  
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## 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  
: Bachelor’s Degree Thesis “ $CP$  violation in kaon system”  
:  $E$ -lab, Nagoya University, Japan

## Academic Employment

Feb. 2024 – Present : Associate Professor  
: Department of Physics, Chiba University, Japan  
Aug. 2023 – Present : Visiting Researcher  
: Kobayashi-Maskawa Institute for the Origin of Particles and the Universe  
: (KMI), Nagoya University, Japan  
Jun. 2023 – Jan. 2024 : Tenure-track Associate Professor  
: Institute of Theoretical Physics (ITP), Chinese Academy of Sciences, China  
Oct. 2018 – May 2023 : Designated Assistant Professor  
: Institute for Advanced Research & KMI, Nagoya University, Japan  
Apr. 2022 – Mar. 2023 : Assistant Professor (cross-appointment)  
: Theory Center, Institute of Particle and Nuclear Studies (IPNS),  
: High Energy Accelerator Research Organization (KEK), Japan  
Oct. 2018 – Mar. 2020 : Long-term visiting researcher  
: Physics Department, Technion–Israel Institute of Technology, Israel  
Oct. 2015 – Sep. 2018 : Postdoctoral Fellow  
: Institut für Kernphysik, Karlsruhe Institute of Technology (KIT), Germany  
Apr. 2015 – Sep. 2015 : Postdoctoral Fellow  
: IPNS, 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 radiative corrections, Effective field theories, Scattering amplitudes, Quantum physics

## Awards

- Apl. 2026 : MEXT Prize for Young Scientists in the field of science and technology for the fiscal year 2026,  
: “Comprehensive Theoretical Study of Flavor Physics”
- Jul. 2023 : Particle Physics Medal Young Scientist Award in Theoretical Particle Physics,  
: “Soft-Photon Corrections to  $B \rightarrow D\tau\nu$  Relative to  $B \rightarrow D\mu\nu$ ”
- Mar. 2022 : AY 2021 Nagoya University President’s Award, Nagoya University,  
: “Commitment to Outreach and Extracurricular Activities” as a member of KMI Science Communication Team
- Feb. 2020 : Editors’ Suggestion, Cover of the issue, Physical Review Letters,  
: “New physics implications of recent search for  $K_L \rightarrow \pi^0\nu\bar{\nu}$  at KOTO”
- Mar. 2018 : Young Scientist Award of the Physical Society of Japan (Theoretical Particle Physics),  
: “Improvements of theoretical prediction to the  $\Delta S = 1$  Kaon decay and effects  
: from supersymmetric models”

## Grants

Apr. 2025 – Mar. 2029 :  
JSPS, KAKENHI Grant-in-Aid for Scientific Research (C), “Evaluation and developments of long-distance QED corrections in precision measurements,” 4,680,000JPY (PI)

Jul. 2024 – Mar. 2026 :  
JSPS, KAKENHI Grant-in-Aid for Research Activity Start-up, “Multifaceted approaches to new physics focusing on  $CP$  violation,” 2,730,000JPY (PI)

Dec. 2023 :  
National Natural Science Foundation of China, Excellent Young Scientists Fund Program (Overseas), “Pursuit of  $CP$ -violating physics beyond the Standard Model through precision flavor physics” (declined for technical reasons)

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)

Oct. 2018 :  
The Hebrew University of Jerusalem, The Lady Davis Fellowship Trust (declined for technical reasons)

## Fellowships

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

## Science Committee

May 2023 – Present : ILC-Japan Physics Working Group Committee, Japan Association of High Energy Physicists (JAHEP)

Apr. 2025 – Present : Particle Theory Division Committee, Japan Particle and Nuclear Theory Forum

Dec. 2024 – Present : Particle Physics Medal Young Scientist Award Selection Committee, Japan Particle and Nuclear Theory Forum

Oct. 2021 – Jan. 2024 : The committee on Future Projects in High Energy Physics, JAHEP

## Teaching Experience

“Theory of Elementary Particles I (Quantum Field Theory)” at Department of Physics, Chiba University, October 2026 – Present

“Classical Mechanics Tutorial 2” at Department of Physics, Chiba University, October 2025 – Present

“Quantum Mechanics I” at Department of Physics, Chiba University, April 2025 – Present

“Mathematics for Physics IV (Complex Analysis)” at Department of Physics, Chiba University, October 2024 – Present

“Theory of Elementary Particles III (Flavor Physics)” at Department of Physics, Chiba University, October 2024 – Present

“Modern Physics” at Department of Physics, Chiba University, April 2024 – Present

“Mathematical Physics Tutorial I” for undergraduate class of Global 30 international programs (G30) at Department of Physics, Nagoya University, October 2020 – March 2022 (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)

## Intensive Lectures

“Flavor physics and  $CP$  violation,” Hiroshima University, Higashi-Hiroshima, Japan, July 2026

“Flavor physics and  $CP$  violation,” Tohoku University, Sendai, Japan, July 2024

## Professional Activities

The Physical Society of Japan, 2012 – Present

Japan Particle and Nuclear Theory Forum, 2012 – Present

Referee on International peer-reviewed journals, Jun. 2017 – Present, total:  $\geq 47$

Physical Review Letters, Physical Review D, Journal of High Energy Physics, European Physical Journal C, Physics Letters B, Nuclear Physics B, Modern Physics Letters A, Journal of Physics G, Progress of Theoretical and Experimental Physics, International Journal of Theoretical Physics

International conference convener: “Workshop for Tera-Scale Physics and Beyond,” December 2025 – Present

International conference convener: “Meeting on Physics at  $B$  factories organizer,” March 2024 – Present

Domestic conference convener: “New Physics Forum,” February 2024 – Present

Domestic conference convener: “Summer school for Future Higgs Factories 2025” at The University of Tokyo Yamanaka Dormitory, Japan, August 2025

Domestic conference convener: “Nonperturbative methods in QFTs -Kondo Condensation-” at Chiba University, Japan, March 2025

International conference convener: “12th International Workshop on the CKM Unitarity Triangle (CKM 2023)” at University of Santiago de Compostela, Spain, September 2023

International conference convener: “KEK Flavor Factories 2023 (KEK-FF 2023)” at KEK, February 2023

Domestic conference convener: “Flavor Physics workshop 2022” at Izu-no-kuni, Japan, November 2022

Domestic conference convener: “The progress of the Particle Physics 2021, 2022 (PPP 2021, PPP 2022)” at YITP, September 2021, August 2022

International conference convener: “Implications of LHCb measurements and future prospects” at CERN, October 2020

## **Social Activities**

Jun. 2021 – May 2023 : KMI Science Communication Team, KMI, Nagoya University, Japan

# Publication List

Teppei Kitahara

*Department of Physics, Graduate School of Science, Chiba University, Chiba 263-8522, Japan*

## Research and Publications

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

## Under-Reviewed Manuscripts

- [1] **T. Kitahara**, M. K. Mohapatra and K. Sasaki, “Baryon-Meson Sum Rule for  $b \rightarrow s\nu\bar{\nu}$ ,” [arXiv:2604.20340 [hep-ph]].

## Peer-Reviewed Publications

- [2] T. Banno, J. Hisano, **T. Kitahara**, K. Ogawa and N. Osamura, “Full Three-Loop Electroweak Multiplet Contributions to the Electron Electric Dipole Moment,” [arXiv:2602.11888 [hep-ph]], to be published in JHEP.
- [3] **T. Kitahara**, J. Miyamoto, K. Sasaki, “Complete one-loop QED corrections to  $D_s^+$  leptonic decays and impact on the CKM unitarity test,” [arXiv:2511.22383 [hep-ph]], to be published in JHEP.
- [4] G. D’Ambrosio, A. Dery, Y. Grossman, **T. Kitahara**, R. Marchevski, D. Martínez Santos, S. Schacht, “CP violation in  $K \rightarrow \mu^+\mu^-$  with and without time dependence through a tagged analysis,” *JHEP* **09**, 190 (2025) [arXiv:2507.13445 [hep-ph]].
- [5] A. Crivellin, S. Iguro and **T. Kitahara**, “Discriminating tauphilic leptoquark explanations of the B anomalies via  $K \rightarrow \pi\nu\bar{\nu}$  and  $B \rightarrow K\nu\bar{\nu}$ ,” *Phys. Rev. D* **112**, no.9, 9 (2025) [arXiv:2505.05552 [hep-ph]].
- [6] T. Banno, J. Hisano, **T. Kitahara**, K. Ogawa and N. Osamura, “Two-loop corrections to QCD  $\theta$  angle from evanescent operator in the BMHV scheme,” *JHEP* **09**, 135 (2025) [arXiv:2502.14500 [hep-ph]].
- [7] C. Delaunay, **T. Kitahara**, Y. Soreq and J. Zupan, “Light scalar beyond the Higgs mixing limit,” *JHEP* **10**, 222 (2025) [arXiv:2501.16477 [hep-ph]].
- [8] T. Banno, J. Hisano, **T. Kitahara**, K. Ogawa and N. Osamura, “Impact of the electroweak Weinberg operator on the electric dipole moment of electron,” *JHEP* **02**, 082 (2025) [arXiv:2408.02375 [hep-ph]].
- [9] S. Iguro, **T. Kitahara** and R. Watanabe, “Global fit to  $b \rightarrow c\tau\nu$  anomalies as of Spring 2024,” *Phys. Rev. D* **110**, no.7, 7 (2024) [arXiv:2405.06062 [hep-ph]].
- [10] T. Banno, J. Hisano, **T. Kitahara** and N. Osamura, “Closer look at the matching condition for radiative QCD  $\theta$  parameter,” *JHEP* **02**, 195 (2024) [arXiv:2311.07817 [hep-ph]].
- [11] **T. Kitahara** and K. Tobioka, “MeV sterile neutrino in light of the Cabibbo-angle anomaly,” *Phys. Rev. D* **108**, no.11, 11 (2023) [arXiv:2308.13003 [hep-ph]].
- [12] S. Iguro and **T. Kitahara**, “Electric dipole moments as probes of the  $R_{D^{(*)}}$  anomaly,” *Phys. Rev. D* **110**, no.7, 7 (2024) [arXiv:2307.11751 [hep-ph]].
- [13] S. Iguro, **T. Kitahara**, M. S. Lang and M. Takeuchi, “Current status of the muon  $g - 2$  interpretations within two-Higgs-doublet models,” *Phys. Rev. D* **108**, no.11, 11 (2023) [arXiv:2304.09887 [hep-ph]].
- [14] S. Banik, A. Crivellin, S. Iguro and **T. Kitahara**, “Asymmetric di-Higgs signals of the next-to-minimal 2HDM with a U(1) symmetry,” *Phys. Rev. D* **108**, no.7, 075011 (2023) [arXiv:2303.11351 [hep-ph]].
- [15] J. Hisano, **T. Kitahara**, N. Osamura and A. Yamada, “Novel loop-diagrammatic approach to QCD  $\theta$  parameter and application to the left-right model,” *JHEP* **03**, 150 (2023) [arXiv:2301.13405 [hep-ph]].
- [16] A. Crivellin, M. Kirk, **T. Kitahara**, and F. Mescia, “Global Fit of Modified Quark Couplings to EW Gauge Bosons and Vector-Like Quarks in Light of the Cabibbo Angle Anomaly,” *JHEP* **03**, 234 (2023) [arXiv:2212.06862 [hep-ph]].

- [17] M. Fedele, M. Blanke, A. Crivellin, S. Iguro, **T. Kitahara**, U. Nierste and R. Watanabe, “Impact of  $\Lambda_b \rightarrow \Lambda_c \tau \nu$  measurement on New Physics in  $b \rightarrow c l \nu$  transitions,” *Phys. Rev. D* **107**, no.5, 055005 (2023) [arXiv:2211.14172 [hep-ph]].
- [18] A. Dery, M. Ghosh, Y. Grossman, **T. Kitahara**, and S. Schacht, “A Precision Relation between  $\Gamma(K \rightarrow \mu^+ \mu^-)(t)$  and  $\mathcal{B}(K_L \rightarrow \mu^+ \mu^-)/\mathcal{B}(K_L \rightarrow \gamma \gamma)$ ,” *JHEP* **03**, 014 (2023) [arXiv:2211.03804 [hep-ph]].
- [19] S. Iguro, **T. Kitahara**, Y. Omura and H. Zhang, “Chasing the two-Higgs doublet model in the di-Higgs production,” *Phys. Rev. D* **107**, no.7, 075017 (2023) [arXiv:2211.00011 [hep-ph]].
- [20] C. Delaunay, J. P. Karr, **T. Kitahara**, J. C. J. Koelemeij, Y. Soreq and J. Zupan, “Self-consistent extraction of spectroscopic bounds on light new physics,” *Phys. Rev. Lett.* **130**, no.12, 121801 (2023) [arXiv:2210.10056 [hep-ph]]. Featured in *Mynavi news*.
- [21] Y. Hamada, **T. Kitahara**, and Y. Sato, “Monopole-fermion scattering and varying Fock space,” *JHEP* **11**, 116 (2022) [arXiv:2208.01052 [hep-th]].
- [22] S. Iguro, **T. Kitahara**, and Y. Omura, “Scrutinizing the 95–100 GeV di-tau excess in the top associated process,” *Eur. Phys. J. C* **82**, no.11, 1053 (2022) [arXiv:2205.03187 [hep-ph]].
- [23] A. Crivellin, M. Kirk, **T. Kitahara**, and F. Mescia, “Large  $t \rightarrow cZ$  as a sign of vectorlike quarks in light of the W mass,” *Phys. Rev. D* **106**, no.3, L031704 (2022), *Letter* [arXiv:2204.05962 [hep-ph]].
- [24] E. Goudzovski, ..., **T. Kitahara**, *et al.*, “New Physics Searches at Kaon and Hyperon Factories,” *Rept. Prog. Phys.* (2022) [arXiv:2201.07805 [hep-ph]].
- [25] R. Balkin, G. Durieux, **T. Kitahara**, Y. Shadmi, and Y. Weiss, “On-shell Higgsing for EFTs,” *JHEP* **03**, 129 (2022) [arXiv:2112.09688 [hep-ph]].
- [26] 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]].
- [27] 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]].
- [28] 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]].
- [29] 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]].
- [30] 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]].
- [31] M. Endo, S. Iguro, **T. Kitahara**, “Probing  $e\mu$  flavor-violating ALP at Belle II,” *JHEP* **06**, 040 (2020) [arXiv:2002.05948 [hep-ph]].
- [32] 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]].
- [33] **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.
- [34] 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]].
- [35] 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]].
- [36] 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]].

- [37] 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]].
- [38] 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]].
- [39] 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]].
- [40] 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]].
- [41] 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]].
- [42] 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]].
- [43] 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]].
- [44] A. Crivellin, G. D’Ambrosio, **T. Kitahara** and U. Nierste, “ $K \rightarrow \pi\nu\bar{\nu}$  in the MSSM in Light of the  $\epsilon'_K/\epsilon_K$  Anomaly,” *Phys. Rev. D* **96**, no. 1, 015023 (2017) [arXiv:1703.05786 [hep-ph]].
- [45] 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]].
- [46] **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]].
- [47] **T. Kitahara**, U. Nierste and P. Tremper, “Singularity-free Next-to-leading Order  $\Delta S = 1$  Renormalization Group Evolution and  $\epsilon'_K/\epsilon_K$  in the Standard Model and Beyond,” *JHEP* **12**, 078 (2016) [arXiv:1607.06727 [hep-ph]].
- [48] **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]].
- [49] 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]].
- [50] 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]].
- [51] 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]].
- [52] 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]].
- [53] 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]].
- [54] 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]].
- [55] 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]].
- [56] 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]].

- [57] 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]].
- [58] **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]].
- [59] **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

- [60] **T. Kitahara**, “The fifth force behind the fundamental constants,” *Kagaku January 2024, Iwanami Shoten* (2024) (in Japanese).
- [61] M. Endo, **T. Kitahara**, and K. Yagyu, “Violation of Electroweak Symmetry Breaking?  $W$  boson mass anomaly,” *High Energy News* **41-2**, 62-70 (2022) (in Japanese).
- [62] 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

- [63] **T. Kitahara**, “New Directions in Kaon Physics: Interference in  $K^0 \rightarrow \mu^+\mu^-$  as a New Golden Mode,” *Proceedings of 60th Rencontres de Moriond on Electroweak Interactions and Unified Theories: Moriond EW 2026, March 15-22, 2026* [arXiv:2605.01744 [hep-ph]].
- [64] J. Aebischer, ..., **T. Kitahara**, *et al.* “Kaon physics: a cornerstone for future discoveries,” *J. Phys. G* **52**, no.10, 100501 (2025) [arXiv:2503.22256 [hep-ph]].
- [65] **T. Kitahara**, “Theoretical point of view on Cabibbo angle anomaly,” *Int. J. Mod. Phys. A* **39**, no.26n27, 2442011 (2024) [arXiv:2407.00122 [hep-ph]].
- [66] **T. Kitahara** and K. Tobioka, “Sterile neutrinos in light of the Cabibbo-angle anomaly,” *J. Phys. Conf. Ser.* **2446**, no.1, 012009 (2023). (proceedings of KAON2022 conference)
- [67] T. Bose, ..., **T. Kitahara**, *et al.* [Snowmass2021 Energy Frontier Beyond the Standard Model report], “Report of the Topical Group on Physics Beyond the Standard Model at Energy Frontier for Snowmass 2021,” [arXiv:2209.13128 [hep-ph]].
- [68] S. Iguro, **T. Kitahara**, and R. Watanabe, “Global fit to  $b \rightarrow c\tau\nu$  anomalies 2022 mid-autumn,” [arXiv:2210.10751 [hep-ph]].
- [69] R. Boughezal, ..., **T. Kitahara**, *et al.* [Snowmass2021 TF06 topical group report] “Theory Techniques for Precision Physics – Snowmass 2021 TF06 Topical Group Report,” [arXiv:2209.10639 [hep-ph]].
- [70] A. Aryshev, ..., **T. Kitahara**, *et al.* [ILC International Development Team], “The International Linear Collider: Report to Snowmass 2021,” [arXiv:2203.07622 [physics.acc-ph]].
- [71] M. Endo, K. Hamaguchi, S. Iwamoto, S. i. Kawada, **T. Kitahara**, T. Moroi and T. Suehara, [Snowmass2021 contribution] “Stau study at the ILC and its implication for the muon  $g - 2$  anomaly,” [arXiv:2203.07056 [hep-ph]].
- [72] S. Alioli, ..., **T. Kitahara**, *et al.*, “Theoretical developments in the SMEFT at dimension-8 and beyond,” [arXiv:2203.06771 [hep-ph]].
- [73] **T. Kitahara**, “Direct  $CP$  Violation in  $K \rightarrow \mu^+\mu^-$ ,” *Springer Proc. Phys.* **234**, 211–216 (2019). (proceedings of FPCP2018 conference)
- [74] 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)
- [75] **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)

- [76] **T. Kitahara**, “Standard Model and New physics for  $\epsilon'_K/\epsilon_K$ ,” *EPJ Web Conf.* **179**, 01007 (2018). (proceedings of FCCP2017 conference)
- [77] **T. Kitahara**, “Correlations of  $\epsilon'_K/\epsilon_K$  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]].
- [78] **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)
- [79] **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)
- [80] **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] “New directions in Kaon Physics,” **Invited talk**, Rare n Strange III: strange physics at LHCb, A Coruña, Spain, June 2026
- [2] **Invited talk**, Tensions in the CKM Paradigm: From B Decays to the Cabibbo Anomaly, International Center for Scientific Culture Villa Orlandi, Anacapri, Italy, May 2026
- [3] “Kaon physics theory,” **Invited review talk**, 24th Conference on Flavor Physics and CP Violation (FPCP 2026), Physikzentrum Bad Honnef, Germany, May 2026
- [4] “New directions in Kaon Physics,” **Invited talk**, Rencontres de Moriond Electroweak Interactions & Unified Theories 2026 (Moriond EW 2026), La Thuile, Italy, March 2026
- [5] “Theoretical Perspective on Flavor Physics,” **Invited plenary review talk**, Workshop on High Energy Physics Phenomenology XVIII (WHEPP-2025), IIT Hyderabad, Hyderabad, India, December 2025
- [6] “A Theory Wishlist for the Next Collider Decade,” **Invited review talk**, The 41th Regular Meeting of the New Higgs Working Group, The University of Osaka, Japan, November 2025
- [7] “Theoretical Perspective on Flavor Physics,” **Invited talk**, 10th International Symposium of Quantum Beam Science at Ibaraki University (ISQBS2025), Ibaraki University, Japan, October 2025
- [8] “Theory of kaon rare decays,” **Invited review talk**, International Workshop and Town Meeting on the Extension Project for the J-PARC Hadron Experimental Facility (HEF-ex WS/Town-Meeting 2025), RIKEN, Wako, Japan, September 2025
- [9] “Theoretical Perspective on Flavour Physics,” **Invited review talk**, the 4th J-PARC Symposium 2024, Mito City Civic Center, Mito, Japan, October 2024
- [10] “Anomalies in the charm-strange sector,” **Invited plenary review talk**, 21st The 2024 International Workshop on Future Tau Charm Facilities (FTCF2024), University of Science and Technology of China (USTC), China, January 2024
- [11] “Higgs factory and flavor physics: theory perspective,” **Invited talk**, 5th general meeting of ILC-Japan Physics Working Group, KEK, Japan, December 2023
- [12] “Implication of the 95GeV di-tau and di-photon excesses,” Higgs2023, IHEP, Beijing, China, November 2023
- [13] “Supersymmetric interpretation of the muon  $g - 2$  anomaly,” **Invited talk**, Dark Matter Studies in Accelerator Physics (DMNet International Symposium), Palazzo Moroni, Padova, Italy, September 2023
- [14] “New physics interpretations of  $R(D^{(*)})$  anomaly and their exciting predictions,” **Invited talk**, The 29th International Workshop on Weak Interactions and Neutrinos (WIN2023), Sun Yat-sen University, China, July 2023

- [15] “Theoretical Progress in Searching for New Physics within Flavor Physics,” **Invited plenary review talk**, The 45th Belle II General Meeting, Nagoya University, Japan, June 2023
- [16] “Hunting for new physics in flavor physics,” **Invited review talk**, The 5th KMI International Symposium (KMI2023) -Quest for the Origin of Particles and the Universe-, Nagoya University, Japan, February 2023
- [17] “Novel loop-diagrammatic evaluation of the radiative  $\theta$  parameter,” **Invited talk**, The 36th New Higgs Working Group (NHWG36), Osaka University, Japan, February 2023
- [18] “Anomalies in Flavor Physics,” **Invited review talk**, the 4th KMI school -Statistical Data Analysis and Anomalies in Particle Physics and Astrophysics-, Nagoya University, Japan, December 2022
- [19] “Sterile neutrinos in light of the Cabibbo-angle anomaly” International Conference on Kaon Physics 2022 (KAON2022), Osaka University, Japan, September 2022
- [20] “A new physics interpretation of the W-boson mass anomaly with  $B$  anomaly,” **Invited talk**, IBS and KMI Joint Workshop 2022, online talk, August 2022
- [21] “ $B$  anomaly hunting at the LHC: tau  $b$  + missing search for leptoquarks,” **Invited talk**, TDLI-PKU BSM workshop 2022: Electroweak lights the way, Tsung-Dao Lee Institute, online talk, August 2022
- [22] “Electromagnetic corrections to  $B$  meson semileptonic decays,” **Invited talk**, 26th meeting on physics at B factories, Nagoya University, Japan, July 2022
- [23] “ $B$  anomaly hunting at the LHC: tau  $b$  + missing search for leptoquarks,” Physics in LHC and Beyond, Matsue, Japan May 2022
- [24] “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
- [25] “Muon  $g-2$  anomaly + SUSY (theory),” **Invited review talk**, The 75th General Meeting of ILC Physics Subgroup, Japan, online talk, December 2021
- [26] “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
- [27] “Anomaly in current low-energy data,” **Invited plenary review talk**, Strings and Fields 2021, YITP, Japan, online talk, August 2021
- [28] “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
- [29] “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 Tree Level Decays, Universität Siegen, Germany, online talk, April 2021
- [30] “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
- [31] “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
- [32] “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
- [33] “Hunt for new physics in kaon decays,” **Invited review talk**, 2nd Workshop on Hadronic Contributions to New Physics Searches (HC2NP2019), Tenerife, Spain, September 2019
- [34] “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
- [35] “Soft-photon corrections to semileptonic  $B$ -meson decays,” **Invited plenary talk**, ANOMALIES 2019, IIT Hyderabad, India, July 2019

- [36] “Unaccounted QED corrections in  $R(D^{(*)})$ ?,” **Invited lecture**, GDR-InF workshop: QED corrections to (semi)leptonic  $B$  decays, LPNHE, Paris, July 2019
- [37] “Soft-photon corrections to semileptonic decays of  $B$ -meson,” **Invited talk**, 2019 NPKE workshop, Korea University, Korea, May 2019
- [38] “Soft-photon corrections to  $B$ -meson semileptonic decays,” **Invited talk**, 6th KEK Flavor Factory Workshop (KEK-FF 2019), KEK, Japan, February 2019
- [39] “Kaon physics and connection to  $B$  anomalies,” **Invited review talk**, High energy implications of flavor anomalies, CERN, Switzerland, October 2018
- [40] “Effect of QED corrections on  $R(D)$ ,” 10Th International Workshop on the CKM Unitarity Triangle (CKM 2018), Heidelberg University, Germany, September 2018
- [41] “Direct  $CP$  violation in Kaon,” **Invited lecture**, Post FPCP2018 Workshop, IIT Hyderabad, India, July 2018
- [42] “Direct  $CP$  violation in  $K \rightarrow \mu^+ \mu^-$ ,” **Invited talk**, 16th Conference on Flavor Physics and  $CP$  Violation (FPCP2018), University of Hyderabad, India, July 2018
- [43] “Kaon physics : theory view,” **Invited review talk**, Workshop on the physics of HL-LHC, and perspectives at HE-LHC, CERN, Switzerland, June 2018
- [44] “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
- [45] “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 Terra, Yamagata, Japan, May 2018
- [46] “Standard Model and New physics for  $\epsilon'_K$ ,” **Invited talk**, Flavour changing and conserving processes 2017 (FCCP2017), Villa Orlandi, Anacapri, Capri Island, Italy, September 2017
- [47] “The  $\epsilon'_K/\epsilon_K$  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
- [48] “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
- [49] “Epsilonprime and K to pi neutrino antineutrino correlations and new physics,” MORIOND 2017 EW Session YSF, La Thuile, Italy, March 2017
- [50] [poster] “Supersymmetric explanation of  $CP$  violation in  $K \rightarrow \pi\pi$  decays,” MUTAG 2016, Helmholtz Institute Mainz, Germany, December 2016
- [51] “Supersymmetric explanation of  $CP$  violation in  $K \rightarrow \pi\pi$  decays,” KAON 2016 conference, University of Birmingham, England, September 2016
- [52] “Interpretations of  $\epsilon'_K/\epsilon_K$  in the MSSM,” The annual Theory Meeting on Particle Physics Phenomenology 2016 (KEK-PH 2016), KEK, Japan, February 2016
- [53] “Phenomenology of singlet extended supersymmetric model – Dark matter, Baryogenesis,” Joint KEK Theory Fermilab Theory Workshop 2015, Fermilab, USA, August 2015
- [54] “Reconstructing Supersymmetric Contribution to Muon Anomalous Magnetic Dipole Moment at ILC,” Asian Linear Collider workshop 2015 (ALCW 2015), KEK, Japan, April 2015
- [55] “Singlino Resonant Dark Matter in High-Scale nMSSM,” The annual Theory Meeting on Particle Physics Phenomenology 2014 (KEK-PH 2014), KEK, Japan, October 2014
- [56] [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

- [57] “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
- [58] “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
- [59] “Probing Bino Contribution to Muon  $g-2$ ,” SUSY: Model-building and Phenomenology, Kavli IPMU, Japan, December 2013
- [60] “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
- [61] “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
- [62] [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

- [63] “Current Status of Flavor Anomalies and Prospects for Flavor Theory,” **Invited talk**, Theoretical Physics Student Seminar 2026, online talk March 2026
- [64] “Flavor in Particle Physics,” **Invited lecture**, Belle integral 2026, KEK, Japan, February 2026
- [65] “Frontier of BSM Exploration: what theorists expect from collider experiments,” **Invited talk**, JPS 2025 Annual (80th) Meeting, Hiroshima University, Higashi-Hiroshima, Japan, September 2025
- [66] “Prospects for the electric dipole moments suggested by  $B$  anomaly,” Flavor Physics Workshop 2024 (FPWS2024), Gamagori, Aichi, Japan, December 2024
- [67] “The Standard Model and QCD,” **Invited lecture**, Summer school for lattice field theory 2024, University of Tsukuba, Tokyo, Japan, September 2024
- [68] “The Cabibbo-Kobayashi-Maskawa Matrix and New Physics,” **Invited talk**, Current status of flavor anomalies and the future of B-factories, Nagoya University, Japan, August 2024
- [69] “Status and Prospects for the  $B$  anomaly,” **Invited talk**, Development of IPNS - From the Current Plans to the Future Plans, Atami, Japan, April 2024
- [70] “Recent Progress and Future Prospects in Flavor Physics,” **Invited review talk**, Current particle physics and its perspective, KEK, Japan, December 2023
- [71] “Recent Progress and Future Prospects in Flavor Anomalies,” **Invited review talk**, The progress of the Particle Physics 2023 (PPP2023), YITP, Japan, August 2023
- [72] “Physics in the light of Next Generation Collider Experiments,” **Invited review talk**, JPS 2022 Annual (77th) Meeting, online talk, September 2022
- [73] “Physics in the light of Next Generation Collider Experiments,” **Invited review talk**, Next generation energy frontier experiments review meeting, Yugawara, Japan, August 2022
- [74] “New physics interpretations of the muon  $g - 2$  anomaly,” **Invited review talk**, ILC Summer Camp 2021, Japan, online talk, September 2021
- [75] “New physics interpretations of flavor and muon  $g - 2$  anomalies,” **Invited review talk**, JPS 2021 Fall meetings, Kobe University, Japan, online talk, September 2021
- [76] “SMEFT and on-shell amplitudes,” **Invited talk**, EFT study meeting, Morioka, Japan, July 2021

- [77] “New physics interpretation of the muon  $g - 2$  anomaly,” **Invited review talk**, 2021 Tera-Scale Conference, KEK, Japan, online talk, May 2021
- [78] “Precision measurements and new physics searches,” **Invited review talk**, The committee on Future Projects in High Energy Physics: 9th workshop, online talk, April 2021
- [79] “Probing electron-muon flavor-violating ALP at Belle II,” JPS 2021 Annual (76th) Meeting, online talk, March 2021
- [80] “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
- [81] “The electroweak effective field theory from on-shell amplitudes,” The progress of the Particle Physics 2020 (PPP2020), YITP, Japan, online talk, September 2020
- [82] “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
- [83] “Introduction to  $B$  physics (theory),” **Invited lectures**, Flavor Physics Workshop 2019 (FPWS2019), Osaka, Japan, November 2019
- [84] “Probing new physics by precision measurements of kaon decays,” **Invited review talk**, The progress of the Particle Physics 2018 (PPP2018), YITP, Japan, August 2018
- [85] “Probing direct  $CP$  violation in  $K \rightarrow \mu^+ \mu^-$ ,” JPS 2018 Annual (73th) Meeting, Tokyo University of Science, Japan, March 2018
- [86] “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
- [87] “Supersymmetric explanation of  $CP$  violation in  $K \rightarrow \pi\pi$  decays,” The progress of the Particle Physics 2016 (PPP2016), YITP, Japan, September 2016
- [88] “Prospects for Spin-1 Resonance Search at 13TeV LHC and the ATLAS Diboson Excess,” 4th New Physics Forum, ICRR, Japan, August 2015
- [89] “Electroweak Baryogenesis at TeV scale and ILC,” Summer camp on ILC accelerator and physics/detectors 2015, Hotel Tenbo, Ikaho, Japan, July 2015
- [90] “Towards a Scale Free Electroweak Baryogenesis in the nMSSM,” JPS 2015 Annual (70th) Meeting, Waseda University, Japan, March 2015
- [91] “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
- [92] “Phenomenology of Singlino Resonant Dark Matter,” **Invited talk**, Beyond the Standard Model in Okinawa 2015, Okinawa Institute of Science and Technology, Japan, March 2015
- [93] “Singlino Resonant Dark Matter in High-Scale nMSSM,” **Invited talk**, 2014 Tera-Scale Conference, Osaka University, Japan, November 2014
- [94] “Singlino Resonant Dark Matter in High-Scale nMSSM,” JPS 2014 Fall meetings, Saga University, Japan, September 2014
- [95] “Singlino Resonant Dark Matter and 125 GeV Higgs Boson in High-Scale Supersymmetry,” The progress of the Particle Physics 2014 (PPP2014), YITP, Japan, July 2014
- [96] “Reconstructing Supersymmetric Contribution to Muon Anomalous Magnetic Dipole Moment at ILC,” JPS 2014 Annual (69th) Meeting, Tokai University, Japan, March 2014
- [97] “Fermionic EDMs in the 2HDM with  $Z_2$  symmetry,” JPS 2013 Fall meetings, Kochi University, Japan, September 2013

- [98] [poster] “Vacuum Stability and the Higgs to diphoton decay rate in the MSSM,” The progress of the Particle Physics 2013 (PPP2013), YITP, Japan, August 2013
- [99] “Vacuum Stability Constraints on the Enhancement of the Higgs to Diphoton Rate in the MSSM,” JPS 2013 Annual (68th) Meeting, Hiroshima University, Higashi-Hiroshima, Japan, March 2013
- [100] “Vacuum Stability Constraints on the decay of the Higgs in the MSSM,” GCOE 9th RA Meeting, Atami, Japan, February 2013
- [101] [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
- [102] “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

- [103] “Two recent topics in flavor physics: B anomaly and Cabibbo angle anomaly,” Hiroshima University, Higashi-Hiroshima, Japan, July 2026
- [104] “Flavor in Particle Physics,” Tokyo Woman’s Christian University, Tokyo, Japan, October 2025
- [105] “Unitarity of the Cabibbo-Kobayashi-Maskawa Matrix and New Physics,” Ochanomizu University, Tokyo, Japan, February 2025
- [106] “Two recent topics in flavor physics: B anomaly and Cabibbo angle anomaly,” Tohoku University, Sendai, Japan, July 2024
- [107] “Recent Progress and Future Prospects in Flavor Anomalies,” Colloquium, South China Normal University, Institute of Quantum Matter, China, November 2023
- [108] “Recent Progress and Future Prospects in Flavor Anomalies,” Shinshu University, Japan, online talk, October 2023
- [109] “Theoretical review: Anomalies,” Non-collider group meeting, The committee on Future Projects in High Energy Physics, online talk, January 2023
- [110] “Hunting for new physics in precision measurements of flavor physics,” Hokkaido University, Japan, online talk, December 2022
- [111] “B anomaly hunting at the LHC: tau  $b$  + missing search for leptoquarks,” Monash University, Australia, online talk, July 2022
- [112] “B anomaly hunting at the LHC: tau  $b$  + missing search for leptoquarks,” University of Tokyo, Japan, July 2022
- [113] “The W-boson mass anomaly and new physics interpretations,” Osaka University, Japan, June 2022
- [114] “Summary of physics in  $ee/\mu\mu/pp$  collisions + others,” The committee on Future Projects in High Energy Physics, online talk, June 2022
- [115] “Hunting for new physics in rare meson decays,” Durham University, England, online talk, May 2022
- [116] “Deviations from the Standard Model Predictions and New Physics Interpretations,” RIKEN iTHEMS, Japan, May 2022
- [117] “The W-boson mass anomaly and new physics interpretations,” C-lab, Nagoya University, Japan, May 2022
- [118] “Hunting for physics beyond the Standard Model in rare decays of K and B mesons,” ITP, Chinese Academy of Sciences, China, online talk, February 2022
- [119] “Hunting for physics beyond the Standard Model in rare decays of K and B mesons,” T-2 group, Los Alamos National Laboratory, USA, online talk, February 2022

- [120] “Hunting for physics beyond the Standard Model in rare decays of  $K$  and  $B$  mesons,” Tsung-Dao Lee Institute, China, online talk, February 2022
- [121] “Hunting for physics beyond the Standard Model in rare decays of  $K$  and  $B$  mesons,” Colloquium, Jilin University, China, online talk, December 2021
- [122] “Constructing Massive Scattering Amplitudes for Electroweak Effective Field Theory,” Kobe University, Japan, December 2021
- [123] “Constructing Massive Scattering Amplitudes for Electroweak Effective Field Theory,” Osaka City University, Japan, online talk, October 2021
- [124] “LHC phenomenology in light of  $R(D)$  and  $R(D^*)$  anomalies,” Shinshu University, Japan, online talk, October 2021
- [125] “Hunting for New Physics in Kaon Decays ,” Indian Institute of Technology Delhi, India, online talk, June 2021
- [126] “Massive Scattering Amplitudes and Electroweak Effective Field Theory,” YITP Elementary Particle Group Theory Seminar, YITP, Japan, online talk, May 2021
- [127] “Electroweak effective field theory from massive scattering amplitudes,” RIKEN BNL Research Center, USA, online talk, December 2020
- [128] “New physics effect on search for  $K_L \rightarrow \pi^0 \nu \bar{\nu}$  at KOTO experiment,” Technische Universität Dortmund, Germany, online talk, November 2020.
- [129] “Electroweak effective field theory from massive scattering amplitudes,” Kyushu University, Japan, online talk, October 2020
- [130] “Review of current flavor anomalies in precision measurements of mesons,” Kyoto University, Japan, online talk, July 2020
- [131] “ $CP$  Violation in Kaon System and New Physics,” Center for Theoretical Physics of the Universe, Institute for Basic Science, Korea, online talk, June 2020
- [132] “Direct  $CP$  violation in  $K \rightarrow \mu^+ \mu^-$  and new physics search,” KEK, Japan, online talk, May 2020
- [133] “Novel approach to neutron electric dipole moment search using weak measurement,” Florida State University, USA, online talk, April 2020
- [134] “New physics implications of recent search for  $K_L \rightarrow \pi^0 \nu \bar{\nu}$  at KOTO experiment ,” INPAC-TDLI at SJTU Joint Seminar, China, online talk, March 2020
- [135] “Novel approach to neutron electric dipole moment search using weak measurement,” Joint particle physics seminars, Ben-Gurion University of the Negev, Israel, January 2020
- [136] “ $CP$  violation in Kaon decays,” Laboratoire d’Annecy-le-Vieux de Physique Théorique (LAPTh), CNRS, France, July 2019
- [137] “ $CP$  violation in Kaon,” Joint particle physics seminars, Hebrew University, Israel, November 2018
- [138] “Soft-photon corrections to semileptonic  $B$ -meson decays,” Ben-Gurion University of the Negev, Israel, November 2018
- [139] “Soft-photon corrections to semileptonic  $B$  decays,” University of Tokyo, Japan, August 2018
- [140] “Soft-photon corrections to  $R(D)$ ,” KEK, Japan, March 2018
- [141] “Direct  $CP$  Violation in  $K \rightarrow \mu^+ \mu^-$ ,” Nagoya University, Japan, January 2018
- [142] “Tension of  $CP$  Violation in the Kaon Decay and Supersymmetric Interpretation,” Shinshu University, Japan, June 2017
- [143] “Tension of  $CP$  Violation in the Kaon Decay and Supersymmetric Interpretation,” Niigata University, Japan, June 2017

- [144] “Beryllium anomaly and its possible connection to Dark Sector,” Theoretical Astroparticle Physics group seminar, Karlsruhe Institute of Technology, Germany, February 2017
- [145] “Recent progress on  $CP$  violation in  $K \rightarrow \pi\pi$  decays in the SM and SUSY solution,” Osaka University, Japan, August 2016
- [146] “Recent progress on  $CP$  violation in  $K \rightarrow \pi\pi$  decays in the SM and SUSY solution,” Nagoya University, Japan, August 2016
- [147] “Recent progress on  $CP$  violation in  $K \rightarrow \pi\pi$  decays in the SM and SUSY solution,” University of Tokyo, Japan, August 2016
- [148] “Recent progress on  $CP$  violation in  $K \rightarrow \pi\pi$  decays in the SM and SUSY solution,” KEK, Japan, August 2016
- [149] “Singlino Resonant Dark Matter and 125 GeV Higgs Boson in High-Scale Supersymmetry,” Nagoya University, Japan, May 2015
- [150] “Towards a scale free electroweak baryogenesis,” Toyama University, Japan, May 2015
- [151] “Gauge invariant Barr-Zee type contributions to fermionic EDMs in the 2HDMs,” Tohoku University, Japan, November 2013
- [152] “Stau with Large Mass Difference and Enhancement of the Higgs to Diphoton Decay Rate in the MSSM,” Saitama University, Japan, May 2013

## Public Outreach talks

- [153] “Quantum Mechanics, Particle Physics, and the Universe: How the Micro and the Macro Are Connected!” **Invited talk**, Meet and Talk with a University Professor (Outreach Lecture), Chosei Senior High School, Japan, November 2025
- [154] “Search for the Baryon asymmetry by EDM and New Physics,” **Invited talk**, Elementary particle Cafe, Shinjuku, Japan, January 2014

## Media Coverage

- [155] News for MEXT Prize for Young Scientists: [News from Chiba University](#), April 2026; [News from Academic Research & Innovation Management Organization](#), Chiba University, April 2026; [News from KMI](#), Nagoya University, April 2026; [News from Institute for Theoretical Particle Physics \(TTP\)](#), Karlsruhe Institute of Technology, April 2026
- [156] News from KCETA, “[Former KCETA postdoctoral researcher Teppei Kitahara appointed Associate Professor at Chiba University](#),” Karlsruhe Institute of Technology, January 2024
- [157] NHK Ohayo Nippon (pre-recorded), October 2023
- [158] News for Particle Physics Medal Young Scientist Award in Theoretical Particle Physics, [News from KMI](#), Nagoya University, August 2023
- [159] Interview “[Researcher Profiles: Teppei Kitahara](#),” Nagoya University School of Science Public Relations, distributed on YouTube, April 21, 2023
- [160] Press releases, “[Unknown forces could be hiding in the values of fundamental constants](#),” Nagoya University KMI, April 11, 2023; “[Unknown forces could be hiding in the values of fundamental constants](#),” Vrije Universiteit Amsterdam, April 11, 2023; “[Les constantes fondamentales sont-elles aussi bien connues que nous le pensons?](#),” CNRS, May 23, 2023
- [161] Interview, “[Reveal the Individuality of Elementary Particles! Welcome to the World of Flavor Physics](#),” Nagoya University Research Frontline, Roundtable on Particles and the Universe, distributed on Podcast, March 24, 2023
- [162] Interviewed in “[Particle Flavor and Anomaly?](#),” KEK IPNS, September 6, 2022

- [163] Press releases, [“Novel mechanism to avoid theoretical bound on kaon rare decays,”](#) Nagoya University KMI, February 25, 2020; [“FSU researchers propose new physics to explain decay of subatomic particle,”](#) Florida State University, March 4, 2020
- [164] Interviewed in [“Misbehaving kaons could hint at the existence of new particles,”](#) Science News, February 4, 2020
- [165] News for Young Scientist Award of the Physical Society of Japan, [News from KCETA,](#) Karlsruhe Institute of Technology, October 2017

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