

Curriculum Vitae

Teppei Katori

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Author and reviewer IDs

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Current status

2019-present Reader, King's College London

Work experience

2018-2019 Senior Lecturer, Queen Mary University of London

2013-2018 Lecturer, Queen Mary University of London

2009-2013 Postdoctoral Associate, Massachusetts Institute of Technology

Education

2002-2008 Ph.D. at Indiana University, Bloomington

1998-2002 B.S. at Tokyo Institute of Technology

Awards

- 2013** APS Henry Primakoff Award, “For outstanding contributions to a wide range of accelerator based neutrino physics, including cross section measurements and searches for violations of Lorentz and CPT symmetry.”
- 2012** IUPAP C11 young scientist prize, “For his outstanding contributions to accelerator-based neutrino physics including a detailed measurement of the charged-current quasi-elastic scattering process with the MiniBooNE experiment and a search for possible Lorentz invariance violation.”
- 2008** William Koss memorial award for outstanding graduate research in physics
- 2005** COAS Graduate student travel grants

Teaching Experience

- 2018/19** SPA6309, Radiation detectors, SEF038, Introduction to Modern Physics
- 2017/18** SPA6309, Radiation detectors, SEF038, Introduction to Modern Physics
- 2016/17** SPA6309, Radiation detectors
- 2015/16** SPA6309, Radiation detectors, SPA5302, Nuclear Physics and Astrophysics
- 2014/15** SPA5302, Nuclear Physics and Astrophysics
- 2013/14** PHY-300, Synoptic Physics
- 2004** P221 Mechanics Physics Lab
- 2003** G530 Teaching in the U.S. Class Room
- 2002-2003** Tutor of Physics Forum
- 2002** P504 Practicum in Physics Laboratory Instruction

Publications, Talks, and Posters

Major contributed publications

1. K. Abe *et al.* [T2K Collaboration], “Search for neutral-current induced single photon production at the ND280 near detector in T2K,” *J. Phys. G* **46**, 08LT01 (2019) [arXiv:1902.03848 [hep-ex]].
2. M. Asrtsen *et al.* [IceCube Collaboration], “Neutrino Interferometry for High Precision Tests of Space-Time Symmetry with IceCube,” *Nature Physics* **14**, 961 (2018). [arXiv:1709.03434 [hep-ex]].
3. R. Acciarri *et al.* [MicroBooNE Collaboration], “Design and Construction of the MicroBooNE Detector,” *JINST* **12**, P02017 (2017) [arXiv:1612.05824 [physics.ins-det]].
4. C. A. Argüelles, T. Katori and J. Salvado, “New Physics in Astrophysical Neutrino Flavor,” *Phys. Rev. Lett.* **115**, 161303 (2015) arXiv:1506.02043 [hep-ph].
5. T. Katori and S. Mandalia, “PYTHIA hadronization process tuning in GENIE neutrino interaction generator,” *J. Phys. G* **42**, 115004 (2015) arXiv:1412.4301 [hep-ex].
6. J. S. Díaz, T. Katori, J. Spitz and J. M. Conrad, “Search for neutrino-antineutrino oscillations with a reactor experiment,” *Phys. Lett. B* **727**, 412 (2013) [arXiv:1307.5789 [hep-ex]].
7. T. Briese *et al.*, “Testing of Cryogenic Photo-multiplier Tubes for the MicroBooNE Experiment,” *JINST* **8**, T07005 (2013) [arXiv:1304.0821 [physics.ins-det]].

8. Y. Abe *et al.* [Double Chooz Collaboration], “First Test of Lorentz Violation with a Reactor-based Antineutrino Experiment,” *Phys. Rev. D* **86**, 112009 (2012) [arXiv:1209.5810 [hep-ex]].
9. A. A. Aguilar-Arevalo *et al.* [MiniBooNE Collaboration], “Test of Lorentz and CPT violation for short-baseline oscillation excesses,” *Phys. Lett. B* **718**, 1303 (2013) [arXiv:1109.3480 [hep-ex]].
10. L. Bugel *et al.*, “Demonstration of a Light-guide Detector for Liquid Argon TPCs,” *Nucl. Instrum. Meth. A* **640**, 69 (2011) [arXiv:1101.3013 [physics.ins-det]].
11. A. A. Aguilar-Arevalo *et al.* [MiniBooNE Collaboration], “First Measurement of the Muon Neutrino Charged Current Quasielastic Double Differential Cross Section,” *Phys. Rev. D* **81**, 092005 (2010) [arXiv:1002.2680 [hep-ex]].
12. A. A. Aguilar-Arevalo *et al.* [MiniBooNE Collaboration], “Measurement of Muon Neutrino Quasi-Elastic Scattering on Carbon in MiniBooNE,” *Phys. Rev. Lett.* **100**, 032301 (2008) [arXiv:0706.0926 [hep-ex]].
13. T. Katori, V. A. Kostelecký and R. Tayloe, “Global three-parameter model for neutrino oscillations using Lorentz violation,” *Phys. Rev. D* **74**, 105009 (2006) [arXiv:hep-ph/0606154].
14. R. Tayloe *et al.*, “A large-volume detector capable of charged-particle tracking,” *Nucl. Instrum. Meth. A* **562**, 198 (2006).
15. L. B. Auerbach *et al.* [LSND Collaboration], “Tests of Lorentz violation in $\bar{\nu}_\mu \rightarrow \bar{\nu}_e$ oscillations,” *Phys. Rev. D* **72**, 076004 (2005) [arXiv:hep-ex/0506067].

Reviews, white papers

1. M. Betancourt *et al.*, “Comparisons and Challenges of Modern Neutrino Scattering Experiments (TENSIONS2016 Report),” *Phys.Rept.* 773-774 (2018) 1-28, [arXiv:1805.07378 [hep-ex]].
2. L Alvarez-Ruso *et al.*, “NuSTEC White Paper: Status and Challenges of Neutrino-Nucleus Scattering,” *Prog.Part.Nucl.Phys.* 100 (2018) 1-68, [arXiv:1706.03621 [hep-ph]].
3. Teppei Katori and Marco Martini, “Neutrino-Nucleus interactions for oscillation experiments,” *J. Phys. G.* 45 (2017) 1, [arXiv:1611.07770 [nucl-th]].
4. Teppei Katori and Janet Conrad, “Beyond Standard Model Searches in the MiniBooNE experiment,” *Adv.High Energy Phys.* 2014 (2014) 362971 [arXiv:1404.7759 [hep-ex]].
5. Teppei Katori and Joe Grange, “Charged Current Quasi-Elastics Cross Section Measurement in MiniBooNE,” *Mod. Phys. Lett. A*, Vol. 29, No. 12 (2014) 1430011 [arXiv:1404.6484 [hep-ex]].
6. Teppei Katori, “Tests of Lorentz Violation with Neutrinos,” *Kouenerugii Nyuusu (KEK News, Sep. 2012, Japanese-only)*.
7. Teppei Katori, “Tests of Lorentz and CPT violation with MiniBooNE neutrino oscillation excesses,” *Mod. Phys. Lett. A*, Vol. 27, No. 25 (2012) 1230024 [arXiv:1206.6915 [hep-ex]].

Proceedings

1. Teppei Katori, Carlos A. Argüelles, Kareem Farrag, and Shivesh Mandalia “Test of Lorentz Violation with Astrophysical Neutrino Flavor in IceCube,” prepared for the *8th Meeting on CPT and Lorentz Symmetry (CPT 19), Bloomington, Indiana, USA, Jun 17-21 2019*, published in “CPT and Lorentz Symmetry”, Proceedings of the Eighth Meeting on CPT and Lorentz symmetry (V. A. Kostelecký ed.), XXX-XXX, World Scientific (2019). [arXiv:1906.09240 [hep-ph]]

2. Teppei Katori, Carlos A. Argüelles, and Jordi Salvado “Test of Lorentz Violation with Astrophysical Neutrino Flavor,” prepared for the *7th Meeting on CPT and Lorentz Symmetry (CPT 16)*, Bloomington, Indiana, USA, Jun 17-21 2016, published in “CPT and Lorentz Symmetry”, Proceedings of the Seventh Meeting on CPT and Lorentz symmetry (V. A. Kostelecký ed.), 209-212, World Scientific (2016). [arXiv:1607.08448 [hep-ph]]
3. T. Katori, P. Lasorak, S. Mandalia and R. Terri, “First look at the PYTHIA8 hadronization program for neutrino interaction generators,” prepared for the *Tenth International Workshop on Neutrino-Nucleus Interactions in the Few-GeV Region (NuInt 15)*, Osaka, Japan, November 16-21, 2015, will be published in “NuInt 2015”, Proceedings of Tenth International Workshop on Neutrino-Nucleus Interactions in the Few-GeV Region, JPS conference proceedings 12, 010033 (2016), [arXiv:1602.00083 [hep-ph]].
4. Teppei Katori and Shivesh Mandalia, “Hadronization processes in neutrino interactions”, prepared for the *NUFACT2014, Sixteenth International Workshop on Neutrino Factories and Future Neutrino Beam Facilities*, University of Glasgow, Glasgow, UK, August 25-30, 2014, published in “NUFACT 2014”, Proceedings of Sixteenth International Workshop on Neutrino Factories and Future Neutrino Beam Facilities, PoS NUFAC2014 (2015) 053, Proceedings of Science, SISSA (2015).
5. Teppei Katori and Shivesh Mandalia, “Hadronization processes in neutrino interactions”, prepared for the *Center for Theoretical Underground Physics and Related Areas (CETUP*)-Workshop on Neutrino Interactions*, Deadwood, SD, USA, July 21-31, 2014, published in “CETUP* 2014”, Proceedings of Workshop on Neutrino Interactions, Systematic Uncertainties and Near Detector Physics, AIP conference proceedings 1680, 020007, American Institute of Physics Publishing (2014), [arXiv:1412.4301v1 [hep-ex]].
6. Teppei Katori, “Short baseline neutrino oscillation experiments,” prepared for the *Prospects in Neutrino physics (NuPhys2013)*, London, UK, December 19-20 2013, published in “NuPhys2013”, Proceedings of the first meeting (F. Di Lodovico and S. Pascoli ed.), Journal of Physics Conference Series 598 (2015) 1, 012006, Institute of Physics (2013). [arXiv:1404.6882 [hep-ph]].
7. Teppei Katori and Joshua Spitz, “Testing Lorentz Symmetry with the Double Chooz Experiment,” prepared for the *6th Meeting on CPT and Lorentz Symmetry (CPT 13)*, Bloomington, Indiana, USA, Jun 17-21 2013, published in “CPT and Lorentz Symmetry”, Proceedings of the Sixth Meeting on CPT and Lorentz symmetry (V. A. Kostelecký ed.), 4-7, World Scientific (2013). [arXiv:1307.5805 [hep-ph]].
8. Teppei Katori [for the MicroBooNE Collaboration], “MicroBooNE Light Collection System,” prepared for the *Light Detection In Noble Elements (LIDINE2013)*, Fermilab, Batavia, IL, USA, May 29-31 2013, published in “CPT and Lorentz Symmetry”, Proceedings of the First Light Detection In Noble Elements (S. Seibert ed.), JINST **8**, C10011 (2013) [arXiv:1307.5256 [physics.ins-det]].
9. Teppei Katori, “Meson Exchange Current (MEC) model in Neutrino Interaction Generator,” prepared for the *Eighth International Workshop on Neutrino-Nucleus Interactions in the Few-GeV Region (NuInt 12)*, CBPF, Rio de Janeiro, Brazil, October 22-27, 2012 will be published in “NuInt 2012”, Proceedings of Eighth International Workshop on Neutrino-Nucleus Interactions in the Few-GeV Region, AIP conference proceedings 1663, 030001, American Institute of Physics Publishing (2013). [arXiv:1304.6014 [nucl-th]].
10. Teppei Katori, “MiniBooNE and SciBooNE experiments, and their cross section analysis,” prepared for the *Eighth International Workshop on Neutrino-Nucleus Interactions in the Few-GeV Region (NuInt 12)*, CBPF, Rio de Janeiro, Brazil, October 22-27, 2012 will be published in “NuInt 2012”, Proceedings of Eighth International Workshop on Neutrino-Nucleus Interactions in the Few-GeV Region, AIP conference proceedings 1663, 020001, American Institute of Physics Publishing (2015). [arXiv:1304.5325 [hep-ex]].

11. Teppei Katori, “Test of Lorentz and CPT violation with Neutrinos,” prepared for the *36th International Conference on High Energy Physics (ICHEP2012), Melbourne, Australia, July 4-July 11, 2012*, published in “ICHEP2012”, Proceedings of 36th International Conference on High Energy Physics, Pos(ICHEP2012)008, IOP Publishing (2012). [arXiv:1211.7129 [hep-ph]].
12. Teppei Katori [for the MiniBooNE Collaboration], “Test of Lorentz and CPT violation with Neutrinos,” prepared for the *18th International Symposium on Particle Strings and Cosmology (PASCOS2012), Merida, Mexico, Jun 3-Jun 8, 2012*, published in “PASCOS2012”, Proceedings of 18th International Symposium on Particle Strings and Cosmology, IoPScience Journal of Physics: Conference Series, Vol. 486, 012041, IOP Publishing (2012).
13. Teppei Katori [for the MicroBooNE Collaboration], “MicroBooNE, A Liquid Argon Time Projection Chamber (LArTPC) Neutrino Experiment at Fermilab,” prepared for the *New Trends in High-Energy Physics (Crimea 2011), Alushta, Crimea, Ukraine, September 3-10, 2011* published in “Crimea 2011”, 118-126, Proceedings of New Trends in High-Energy Physics, Bogolyubov Institute for Theoretical Physics, National Academy of Sciences of Ukraine (2011).
14. Teppei Katori [for the MicroBooNE Collaboration], “SciBooNE, A Neutrino Cross Section Measurement Experiment at Fermilab,” prepared for the *New Trends in High-Energy Physics (Crimea 2011), Alushta, Crimea, Ukraine, September 3-10, 2011* published in “Crimea 2011”, 110-117, Proceedings of New Trends in High-Energy Physics, Bogolyubov Institute for Theoretical Physics, National Academy of Sciences of Ukraine (2011).
15. Teppei Katori [for the MiniBooNE Collaboration], “MiniBooNE, A Short Baseline Neutrino Oscillation Experiment at Fermilab,” prepared for the *New Trends in High-Energy Physics (Crimea 2011), Alushta, Crimea, Ukraine, September 3-10, 2011* published in “Crimea 2011”, 102-109, Proceedings of New Trends in High-Energy Physics, Bogolyubov Institute for Theoretical Physics, National Academy of Sciences of Ukraine (2011).
16. Teppei Katori [for the MicroBooNE Collaboration], “MicroBooNE, A Liquid Argon Time Projection Chamber (LArTPC) Neutrino Experiment,” prepared for the *Seventh International Workshop on Neutrino-Nucleus Interactions in the Few-GeV Region (NuInt 11), Dehradun, Uttarkhand, India, March 7-11, 2011* published in “NuInt 2011”, Proceedings of Seventh International Workshop on Neutrino-Nucleus Interactions in the Few-GeV Region, AIP conference proceedings 1405, 250-255, American Institute of Physics Publishing (2011). [arXiv:1107.5112 [hep-ex]].
17. Teppei Katori [for the MiniBooNE Collaboration], “Test for Lorentz violation with the MiniBooNE low energy excess,” prepared for the *5th Meeting on CPT and Lorentz Symmetry (CPT 10), Bloomington, Indiana, Jun 28-Jul 2 2010*, published in “CPT and Lorentz Symmetry”, Proceedings of the Fifth Meeting on CPT and Lorentz symmetry (V. A. Kostelecký ed.), 70-74, World Scientific (2010). [arXiv:1008.0906 [hep-ex]].
18. Teppei Katori [for the MiniBooNE Collaboration], “First Measurement of Muon Neutrino Charged Current Quasielastic (CCQE) Double Differential Cross Section,” prepared for the *XII Mexican Workshop on Particles and Field 2009, Mazatlan, Mexico, November 9-14, 2009* published in “XII Mexican Workshop on Particles and Field 2009”, Proceedings of 12th Mexican Workshop on Particles and Field, 356-360, American Institute of Physics Publishing.
19. Teppei Katori [for the MiniBooNE Collaboration], “First Measurement of Muon Neutrino Charged Current Quasielastic (CCQE) Double Differential Cross Section,” prepared for the *11th International Workshop on Neutrino Factories, Superbeams and Beta Beams (NuFact 09), Illinois Institute of Technology, Chicago, IL, July 20-July 25, 2009* published in “NuFact 2009”, Proceedings of 11th International Workshop on Neutrino Factories, Superbeams and Beta Beams, AIP conference proceedings 1222, 471-474, American Institute of Physics Publishing (2010).
20. Teppei Katori [for the MiniBooNE Collaboration], “First Measurement of Muon Neutrino Charged Current Quasielastic (CCQE) Double Differential Cross Section,” prepared for the *Sixth International*

Workshop on Neutrino-Nucleus Interactions in the Few-GeV Region (NuInt 09), Sitges, Barcelona, Spain, May 18-May 22, 2009 published in “NuInt 2009”, Proceedings of Sixth International Workshop on Neutrino-Nucleus Interactions in the Few-GeV Region, AIP conference proceedings 1189, 139-144, American Institute of Physics Publishing (2009). [arXiv:0909.1996 [hep-ex]].

21. Teppei Katori, “Neutrino cross section measurements for long-baseline neutrino oscillation experiments,” prepared for *43rd Rencontres de Moriond “Electroweak interactions and Unified theories”, La Thuile, Italy, March 1-8, 2008*, published in “2008 Electroweak Interactions and Unified Theories”, proceedings of the 43rd Rencontres de Moriond (Jean Tran Thanh Van et. al. ed.), 369-376, The Gioi publishers (2008). [arXiv:0805.2476 [hep-ex]].
22. T. Katori and R. Tayloe [for the MiniBooNE Collaboration], “A Search for Lorentz-Violating Neutrino Oscillations in MiniBooNE,” prepared for *4th Meeting on CPT and Lorentz Symmetry (CPT 07), Bloomington, Indiana, 8-11 Aug 2007*, published in “CPT and Lorentz Symmetry”, Proceedings of the Forth Meeting on CPT and Lorentz symmetry (V. A. Kostelecký ed.), 79-85, World Scientific (2008).
23. T. Katori and R. Tayloe [for the MiniBooNE Collaboration], “Test for Lorentz violation in the Mini-BooNE neutrino oscillation experiment,” prepared for the poster session of *4th Meeting on CPT and Lorentz Symmetry (CPT 07), Bloomington, Indiana, 8-11 Aug 2007*, published in “CPT and Lorentz Symmetry”, Proceedings of the Forth Meeting on CPT and Lorentz symmetry (V. A. Kostelecký ed.), 296-298, World Scientific (2008).
24. Teppei Katori [for the MiniBooNE Collaboration], “Charged-Current Interaction Measurements in MiniBooNE,” prepared for the *Fifth International Workshop on Neutrino-Nucleus Interactions in the Few-GeV Region (NuInt 07), Fermilab, Batavia, IL, May 30-June 3, 2007* published in “NuInt 2007”, Proceedings of Fifth International Workshop on Neutrino-Nucleus Interactions in the Few-GeV Region, AIP conference proceedings 967, 123-129, Institute of Physics Publishing (2007). [arXiv:0709.4498 [hep-ex]].
25. Teppei Katori, V. Alan Kostelecký, and Rex Tayloe, “Global three-parameter model for neutrino oscillations using Lorentz violation ,” prepared for the poster session of *Neutrino 06, Lensic Theater, Santa Fe, NM, June 13-19, 2006*, published in “Neutrino 2006”, Proceedings of Neutrino 2006, Nucl. Phys. Proc. Suppl. 221, (2011) 357.
26. T. Katori and R. Tayloe [for the LSND Collaboration], “Lorentz and CPT violation with LSND,” prepared for *3rd Meeting on CPT and Lorentz Symmetry (CPT 04), Bloomington, Indiana, 4-7 Aug 2004*, published in “CPT and Lorentz Symmetry”, Proceedings of the Third Meeting on CPT and Lorentz symmetry (V. A. Kostelecký ed.), 150-158, World Scientific (2005).

Other selected publications

Full list of publications is available from <http://inspirehep.net/author/profile/T.Katori.1>

1. K. Abe *et al.* [T2K Collaboration], “Search for CP Violation in Neutrino and Antineutrino Oscillations by the T2K Experiment with 2.2×10^{21} Protons on Target,” Phys. Rev. Lett. **121**, no. 17, 171802 (2018) doi:10.1103/PhysRevLett.121.171802 [arXiv:1807.07891 [hep-ex]].
2. A. A. Aguilar-Arevalo *et al.* [MiniBooNE DM Collaboration], “Dark Matter Search in Nucleon, Pion, and Electron Channels from a Proton Beam Dump with MiniBooNE,” Phys. Rev. D **98**, no. 11, 112004 (2018) doi:10.1103/PhysRevD.98.112004 [arXiv:1807.06137 [hep-ex]].
3. A. A. Aguilar-Arevalo *et al.* [MiniBooNE Collaboration], “Significant Excess of ElectronLike Events in the MiniBooNE Short-Baseline Neutrino Experiment,” Phys. Rev. Lett. **121**, no. 22, 221801 (2018) doi:10.1103/PhysRevLett.121.221801 [arXiv:1805.12028 [hep-ex]].
4. K. Abe *et al.* [T2K Collaboration], “Search for CP Violation in Neutrino and Antineutrino Oscillations by the T2K Experiment with 2.2×10^{21} Protons on Target,” Phys. Rev. Lett. **121**, 171802 (2018) doi:10.1103/PhysRevLett.121.171802 [arXiv:1807.07891 [hep-ex]].

5. A. A. Aguilar-Arevalo *et al.* [MiniBooNE Collaboration], “First Measurement of Monoenergetic Muon Neutrino Charged Current Interactions” *Phys. Rev. Lett.* **120**, 141802 (2018) [arXiv:1801.03848 [hep-ex]].
6. A. A. Aguilar-Arevalo *et al.* [MiniBooNE Collaboration], “Dark Matter Search in a Proton Beam Dump with MiniBooNE,” *Phys. Rev. Lett.* **118**, 221803 (2017) [arXiv:1702.02688 [hep-ex]].
7. M. G. Aarten *et al.* [IceCube Collaboration], “PINGU: A Vision for Neutrino and Particle Physics at the South Pole,” *J. Phys. G* **44**, 054006 (2017) [arXiv:1607.02671 [hep-ex]].
8. K. Abe *et al.* [T2K Collaboration], “Measurement of neutrino and antineutrino oscillations by the T2K experiment including a new additional sample of ν_e interactions at the far detector.” *Phys. Rev. D* **96**, no. 9, 092006 (2017) Erratum: [*Phys. Rev. D* **98**, no. 1, 019902 (2018)] doi:10.1103/PhysRevD.96.092006, 10.1103/PhysRevD.98.019902 [arXiv:1707.01048 [hep-ex]].
9. K. Abe *et al.* [T2K Collaboration], “Measurement of Muon Antineutrino Oscillations with an Accelerator-Produced Off-Axis Beam,” *Phys. Rev. Lett.* **116**, 181801 (2016) [arXiv:1512.02495 [hep-ex]].
10. K. Abe *et al.* [T2K Collaboration], “Measurement of ν_μ charged Current quasielastic cross section on carbon with the T2K on-axis neutrino beam,” *Phys. Rev. D* **91**, 112002 (2015) [arXiv:1503.07452 [hep-ex]].
11. K. Abe *et al.* [Hyper-Kamiokande Proto- Collaboration], “Physics potential of a long-baseline neutrino oscillation experiment using a J-PARC neutrino beam and Hyper-Kamiokande,” *PTEP* **2015**, 053C02 (2015) [arXiv:1502.05199 [hep-ex]].
12. K. Abe *et al.* [T2K Collaboration], “Measurements of neutrino oscillation in appearance and disappearance channels by the T2K experiment with 6.6×10^{20} protons on target,” *Phys. Rev. D* **91**, 072010 (2015) [arXiv:1502.01550 [hep-ex]].
13. K. Abe *et al.* [Hyper-Kamiokande Working Group], “A Long Baseline Neutrino Oscillation Experiment Using J-PARC Neutrino Beam and Hyper-Kamiokande,” [arXiv:1412.4673 [physics.ins-det]].
14. K. Abe *et al.* [T2K Collaboration], “Measurement of the ν_μ charged-current quasielastic cross section on carbon with the ND280 detector at T2K ,” *Phys. Rev. D* **92**, 112003 (2015) [arXiv:1411.6264 [hep-ex]].
15. K. Abe *et al.* [T2K Collaboration], “Measurement of the Inclusive Electron Neutrino Charged Current Cross Section on Carbon with the T2K Near Detector,” *Phys. Rev. Lett.* **113**, 241803 (2014) [arXiv:1407.7389 [hep-ex]].
16. A. A. Aguilar-Arevalo *et al.* [MiniBooNE Collaboration], “Improved Search for $\bar{\nu}_\mu \rightarrow \bar{\nu}_e$ Oscillations in the MiniBooNE Experiment,” *Phys. Rev. Lett.* **110**, 161801 (2013) [arXiv:1303.2588 [hep-ex]].
17. A. A. Aguilar-Arevalo *et al.* [The MiniBooNE Collaboration], “Observed Event Excess in the MiniBooNE Search for $\bar{\nu}_\mu \rightarrow \bar{\nu}_e$ Oscillations,” *Phys. Rev. Lett.* **105**, 181801 (2010) [arXiv:1007.1150 [hep-ex]].
18. A. A. Aguilar-Arevalo *et al.* [MiniBooNE Collaboration], “A Search for Electron Antineutrino Appearance at the $\Delta m^2 \sim 1 \text{ eV}^2$ Scale,” *Phys. Rev. Lett.* **103**, 111801 (2009). [arXiv:0904.1958 [hep-ex]].
19. A. A. Aguilar-Arevalo *et al.* [MiniBooNE Collaboration], “A search for muon neutrino and antineutrino disappearance in MiniBooNE,” *Phys. Rev. Lett.* **103**, 061802 (2009) [arXiv:0903.2465 [hep-ex]].
20. A. A. Aguilar-Arevalo *et al.* [MiniBooNE Collaboration], “Unexplained Excess of Electron-Like Events From a 1-GeV Neutrino Beam,” *Phys. Rev. Lett.* **102**, 101802 (2009) [arXiv:0812.2243 [hep-ex]].
21. K. Hiraide *et al.* [SciBooNE Collaboration], “Search for Charged Current Coherent Pion Production on Carbon in a Few-GeV,” *Phys. Rev. D.* **78**, 112004 (2008) [arXiv:0811.0369 [hep-ex]].
22. A. A. Aguilar-Arevalo *et al.* [MiniBooNE Collaboration], “A Search for Electron Neutrino Appearance at the $\Delta m^2 \sim 1 \text{ eV}^2$ Scale,” *Phys. Rev. Lett.* **98**, 231801 (2007) [arXiv:0704.1500 [hep-ex]].

PhD thesis

“A Measurement of the muon neutrino charged current quasielastic interaction and a test of Lorentz violation with the MiniBooNE experiment”, under the supervision of prof. Rex Tayloe, FERMILAB-THESIS-2008-64

Invited plenary talks

1. “Physics of Neutrino Interactions around 1-10 GeV”, NDM 2018, Daejeon, South Korea, June 29, 2018
2. “Highlights from the NuSTEC-News 2015-2017”, NuInt17, The Fields Institute, Toronto, Canada, June 25, 2017
3. “New Physics in Astrophysical Neutrino Flavor”, 7th meeting on CPT and Lorentz Symmetry 2016 (CPT16), Bloomington, IN, USA, June 24, 2016
4. “PYTHIA Hadronization Program for Neutrino Experiments”, Neutrino-Nucleus Interaction 2015 (NuInt15), Osaka University, Osaka, Japan, November 20, 2015
5. “Physics of Neutrino Interactions”, Institute of Physics (IoP) annual meeting, University of Manchester, Manchester, UK, April 30, 2015
6. “Physics in MiniBooNE”, Interplay of Particle and Astroparticle Physics, Queen Mary University of London, London, UK, August 19, 2014
7. “MiniBooNE interaction systematics”, Neutrino-Nucleus Interactions 2014 (NuInt14), Surrey, UK, May 19, 2014
8. “Short Baseline Neutrino Experiments Present and Future”, Topical Research Meeting: Prospects in Neutrino Physics (NuPhys2013), Institute of Physics, London, UK, December 19, 2013
9. “Test of Lorentz and CPT Violation with Double Chooz Reactor Neutrino Oscillation Experiment”, 6th meeting on CPT and Lorentz Symmetry 2013 (CPT13), Bloomington, IN, USA, June 20, 2013
10. “MicroBooNE photon collection system”, Light Detection In Noble Elements 2013 (LIDINE2013), Fermilab, Batavia, IL, USA, May 31, 2013
11. “Tests of Lorentz and CPT violation with neutrino”, APS 2013 April meeting, Denver, CO, April 15, 2013
12. “Test for Lorentz and CPT violation with neutrino oscillation experiments”, TRIUMF colloquium, TRIUMF, Vancouver, Canada, February 12, 2013
13. “MiniBooNE and SciBooNE experiments, and their cross section analyses”, Neutrino-Nucleus Interactions 2012 (NuInt12), CBPF, Rio de Janeiro, Brazil, October 22, 2012
14. “Meson exchange current (MEC) model in neutrino interaction generator”, Neutrino-Nucleus Interactions 2012 (NuInt12), CBPF, Rio de Janeiro, Brazil, October 22, 2012
15. “Test for Lorentz and CPT violation with Neutrinos”, 36th International Conference on High Energy Physics (ICHEP2012), Melbourne, Australia, July 10, 2012
16. “Test for Lorentz and CPT violation with Neutrinos”, 18th International Symposium on Particle Strings and Cosmology (PASCOS2012), Merida, Mexico, June 5, 2012
17. “Tests of Lorentz Invariance with Neutrinos”, NPAC forums, UW-Madison, Madison, WI, February 29, 2012
18. “Test for Lorentz and CPT violation with the MiniBooNE excesses”, Wine and Cheese seminar, Fermilab, Batavia, IL, November 11, 2011

19. “MiniBooNE, A Neutrino Oscillation Experiment at Fermilab”, Physics and Astronomy colloquium, Tufts University, Boston, MA, September 30, 2011
20. “MicroBooNE, A Liquid Argon Time Projection Chamber (LArTPC) Neutrino Experiment at Fermilab”, New Trends in High Energy Physics 2011, Alushta, Crimea, Ukraine, September 9, 2011
21. “SciBooNE, A Neutrino Cross Section Measurement Experiment at Fermilab”, New Trends in High Energy Physics 2011, Alushta, Crimea, Ukraine, September 6, 2011
22. “MiniBooNE, A Neutrino Oscillation Experiment at Fermilab”, New Trends in High Energy Physics 2011, Alushta, Crimea, Ukraine, September 6, 2011
23. “US Liquid Argon Time Projection Chamber (LArTPC) experiments”, Neutrino-Nucleus Interactions 2011 (NuInt11), Dehradun, India, March 7, 2011
24. “Test for Lorentz Violation with the MiniBooNE Low Energy Excess”, 5th meeting on CPT and Lorentz Symmetry 2010 (CPT10), Bloomington, IN, USA, June 30, 2010
25. “First Measurement of Muon Neutrino Charged Current Quasielastic (CCQE) Double Differential Cross Section”, Elba Electron-Nucleus Scattering Workshop XI, Elba, Italy, June 23, 2010
26. “Test for Lorentz violation in the neutrino oscillation experiments”, Polskie Towarzystwo Fizyczne Oddzial Wroclaw, Seminarium Instytutow Fizyki U Wr, Wroclaw, Poland, November 27, 2009
27. “Measurement of Muon Neutrino Charged Current Quasielastic (CCQE) Cross Section in MiniBooNE”, XII Mexican Workshop on Particles and Field 2009, Mazatlan, Mexico, November 10, 2009
28. “First Measurement of Muon Neutrino Charged Current Quasielastic (CCQE) Double Differential Cross Section”, Neutrino-Nucleus Interactions 2009 (NuInt09), Sitges, Spain, May 19, 2009
29. “Neutrino cross section measurements for long-baseline neutrino oscillation experiments”, The 43rd Rencontres de Moriond “Electroweak interactions and Unified theories”, La Thuile, Italy, March 06, 2008
30. “The first result of MiniBooNE oscillation experiment”, Physics of Massive Neutrinos 2007 (PMN07), Blaubeuren, Germany, July 03, 2007
31. “Charged-Current Interaction Measurements in MiniBooNE”, Neutrino-Nucleus Interactions 2007 (NuInt07), Fermilab, Batavia, IL, June 31, 2007
32. “FINeSSE, Δ s measurement through the Neutrino-Nucleon Neutral Current Scattering”, Pan Pacific spin 2005, Tokyo Institute of Technology, Tokyo, Japan, July 5, 2005

Invited lecture contributions

1. “STFC high energy physics graduate school,” Durham university, UK, September 1-13, 2019
2. “Neutrino Interaction Physics,” Graduate school summer lecture series, Yokohama National University, Yokohama, Japan, August 7 - 9, 2019
3. “High-Energy Neutrino Astronomy,” 15th Rencontres du Vietnam “Vietnam School on Neutrinos”, Quy Nhon, Vietnam, July 12 - 13, 2019
4. “Neutrino oscillation experiments”, Young Experimentalists and Theorists Institute (YETI2019), IPPP, Durham, UK, January 7, 2018
5. “STFC high energy physics graduate school,” Lancaster university, UK, September 2-14, 2018
6. “Neutrino Interaction Physics,” Graduate school summer lecture series, Yokohama National University, Yokohama, Japan, July 30 - August 3, 2018

7. “Lorentz violation in Neutrino Physics (experiment),” 3rd IUCSS summer school on the Lorentz and CPT-violating Standard-Model Extension, Indiana University, Bloomington, USA, June 20-21, 2018
8. “STFC high energy physics graduate school,” Lancaster university, UK, September 3-15, 2017.
9. “Physics of Neutrino Interactions around 1-10 GeV,” 30th neutrino workshop . *Physics of Neutrino Interaction*, IPMU, Kashiwa, Japan, February 4, 2017
10. “Physics of Neutrino Interactions around 1-10 GeV,” Two-body current contributions in neutrino-nucleus scattering, CEA Saclay, Saclay, France, April 11, 2016
11. “Neutrino Oscillation Experiments and Neutrino Interactions” NuSTEC school: International School for Neutrino Nucleus Scattering Physics, Okayama University, Okayama, Japan, November 11, 2015
12. “Lorentz violation in Neutrino Physics (experiment),” 2nd IUCSS summer school on the Lorentz and CPT-violating Standard-Model Extension, Indiana University, Bloomington, USA, June 12, 2015
13. “MiniBooNE QE scattering measurements, Neutrino cross section measurements”, Valencia Neutrino Interaction T2K meeting (VANISH2014), University of Valencia, Valencia, Spain, April 3-4, 2014
14. “Neutrino oscillation experiments”, Young Experimentalists and Theorists Institute (YETI2014), IPPP, Durham, UK, January 14, 2014
15. “Gas argon TPC (teaching assistant)”, EDIT2012 (Excellence in Detector and Instrumentation Technologies symposium, Fermilab, Feb.21-22, 2012

Seminars

1. “Observation of a Significant Excess of Electron-Like Events in the MiniBooNE Short-Baseline Neutrino Experiment,” HEP seminar, University of Milano-Bicocca, Italy, May 23, 2019
2. “Observation of a Significant Excess of Electron-Like Events in the MiniBooNE Short-Baseline Neutrino Experiment,” HEP seminar, DESY, Germany, April 24, 2019
3. “Observation of a Significant Excess of Electron-Like Events in the MiniBooNE Short-Baseline Neutrino Experiment,” HEP seminar, University of Humburg, Germany, April 23, 2019
4. “Observation of a Significant Excess of Electron-Like Events in the MiniBooNE Short-Baseline Neutrino Experiment,” HEP seminar, Lancaster University, UK, March 8, 2019
5. “Observation of a Significant Excess of Electron-Like Events in the MiniBooNE Short-Baseline Neutrino Experiment,” HEP seminar, Royal Holloway University of London, UK, February 13, 2019
6. “Observation of a Significant Excess of Electron-Like Events in the MiniBooNE Short-Baseline Neutrino Experiment,” CERN seminar, CERN, Switzerland, February 5, 2019
7. “Neutrino Interferometry for High Precision Tests of Space-Time Symmetry,” HEP seminar, University of Sussex, UK, December 13, 2018
8. “Observation of a Significant Excess of Electron-Like Events in the MiniBooNE Short-Baseline Neutrino Experiment,” HEP seminar, Imperial College London, UK, November 28, 2018
9. “Observation of a Significant Excess of Electron-Like Events in the MiniBooNE Short-Baseline Neutrino Experiment,” RAL seminar, Rutherford Appleton Lab, UK, November 23, 2018
10. “Observation of a Significant Excess of Electron-Like Events in the MiniBooNE Short-Baseline Neutrino Experiment,” HEP seminar, Karlsruhe Institute of Technology, Germany, November 15, 2018
11. “Neutrino Interferometry for High Precision Tests of Space-Time Symmetry,” HEP seminar, University of Edinburgh, UK, November 9, 2018

12. “Observation of a Significant Excess of Electron-Like Events in the MiniBooNE Short-Baseline Neutrino Experiment,” HEP seminar, University of Warwick, UK, November 1, 2018
13. “Physics of Neutrino Interactions around 1-10 GeV,” HEP seminar, Yokohama National University, Japan, August 3, 2018
14. “Observation of a Significant Excess of Electron-Like Events in the MiniBooNE Short-Baseline Neutrino Experiment,” HEP seminar, Yokohama National University, Japan, July 31, 2018
15. “Neutrino Interferometry for High Precision Tests of Space-Time Symmetry,” ICRR seminar, Kamioka observatory, Japan, July 25, 2018
16. “Test for Lorentz and CPT violation with neutrinos”, HEP seminar, SungKyunKwan University (SKKU), UK, June 26, 2018
17. “Challenging of neutrino SIS/DIS interactions,” HEP seminar, Michigan State University, USA, June 19, 2018
18. “Observation of a Significant Excess of Electron-Like Events in the MiniBooNE Short-Baseline Neutrino Experiment,” HEP seminar, University College London (UCL), UK, June 14, 2018
19. “Neutrino Interferometry for High Precision Tests of Space-Time Symmetry with IceCube,” Cavendish HEP seminar, University of Cambridge, UK, May 1, 2018
20. “Physics of Neutrino Interactions around 1-10 GeV,” HEP seminar, University of Southampton, Southampton, UK, January 26, 2018
21. “Neutrino Interferometry for High Precision Tests of Space-Time Symmetry with IceCube,” HEP seminar, Yokohama National University, Japan, December 25, 2017
22. “Search for NC single photon production in T2K near detector”, Neutrino Physics Center (NPC) seminar, Fermilab, USA, June 1, 2017
23. “Test for Lorentz and CPT violation with neutrinos”, Astroparticle seminar, Fermilab, USA, May 22, 2017
24. “Test for Lorentz and CPT violation with neutrinos”, HEP seminar, King’s college London, Spain, March 15, 2017
25. “Physics of Neutrino Interactions around 1-10 GeV”, HEP seminar, University of Edinburgh, Edinburgh, UK, February 22, 2017
26. “Physics of Neutrino Interactions around 1-10 GeV”, HEP seminar, University of Bristol, Bristol, UK, November 30, 2016
27. “New Physics in Astrophysical Neutrino Flavors”, HEP seminar, University of Nottingham, Nottingham, UK, November 25, 2016
28. “New Physics in Astrophysical Neutrino Flavors”, HEP seminar, University of Rome “La Sapienza”, Rome, Italy, May 2, 2016
29. “Test for Lorentz and CPT violation with neutrinos”, HEP seminar, Instituto de Física Corpuscular (IFIC), Valencia, Spain, April 5, 2016
30. “Test for Lorentz and CPT violation with neutrinos”, HEP seminar, Lancaster University, Lancaster, UK, March 11, 2016
31. “Test for Lorentz and CPT violation with neutrinos”, HEP seminar, University of Oxford, Oxford, UK, March 1, 2016
32. “Neutrino Physics, Past, Present, and Future”, Louvain HEP seminar, University of Louvain, Louvain, Belgium, January 20, 2016

33. “Physics of Neutrino Interactions”, Nuclear physics seminar, University of Surrey, Surrey, UK, November 24, 2015
34. “Test for Lorentz and CPT violation with neutrinos”, HEP seminar, Chiba University, Chiba, Japan, June 9, 2015
35. “Test for Lorentz and CPT violation with neutrinos”, HEP seminar, University of Birmingham, Birmingham, UK, March 18, 2015
36. “Test for Lorentz and CPT violation with neutrinos”, HEP seminar, University of Sheffield, Sheffield, UK, February 19, 2015
37. “Test for Lorentz and CPT violation with neutrinos”, HEP seminar, University College London, London, UK, December 12, 2014
38. “Test for Lorentz and CPT violation with neutrinos”, Cavendish HEP seminar, University of Cambridge, Cambridge, UK, November 11, 2014
39. “Neutrino Physics, Past, Present, and Future”, Gent HEP seminar, University of Gent, Gent, Belgium, June 23, 2014
40. “Liquid Argon Detector R&D in USA”, Sussex HEP seminar, University of Sussex, Sussex, UK, March 6, 2014
41. “Liquid Argon Detector R&D in USA”, RAL HEP seminar, Rutherford Appleton Laboratory, Swindon, UK, February 19, 2014
42. “Test for Lorentz and CPT violation with neutrino oscillation experiments”, HEP seminar, Queen Mary University of London, London, UK, October 25, 2013
43. “Test for Lorentz and CPT violation with neutrino oscillation experiments”, HEP seminar, Royal Holloway University of London, London, UK, July 31, 2013
44. “Test for Lorentz and CPT violation with neutrino oscillation experiments”, HEP seminar, Imperial College London, London, UK, March 14, 2013
45. “Test for Lorentz and CPT violation with neutrino oscillation experiments”, ACP seminar, Kavli IPMU, Kashiwa, Japan, February 6, 2013
46. “Test for Lorentz and CPT violation with neutrino oscillation experiments”, Penn State HEP/Astrophysics seminar, Pennsylvania State University, State College, PA, January 23, 2013
47. “Test for Lorentz and CPT violation with neutrino oscillation experiments”, SMU HEP seminar, Southern Methodist University, Dallas, TX, September 24, 2012
48. “MiniBooNE, a neutrino oscillation experiment at Fermilab”, HEP seminar, University of Toronto, Toronto, ON, Canada, April 10, 2012
49. “Test of Lorentz and CPT violation with neutrinos”, HEP seminar, University of Toronto, Toronto, ON, Canada, April 5, 2012
50. “Test for Lorentz and CPT violation with the MiniBooNE excesses”, Harvard HEP seminar, Harvard University, Boston, MA, October 5, 2011
51. “Test for Lorentz and CPT violation with the MiniBooNE excesses”, MIT lunch seminar, Massachusetts Institute of Technology, Boston, MA, September 29, 2011
52. “Test for Lorentz and CPT violation with the MiniBooNE excesses”, U-Chicago HEP lunch seminar, University of Chicago, Chicago, IL, April 18, 2011
53. “Test for Lorentz and CPT violation with the MiniBooNE excesses”, NU HEP seminar, Northwestern university, Evanston, IL, April 11, 2011

54. “MiniBooNE, a neutrino oscillation experiment at Fermilab”, Glasgow HEP seminar, University of Glasgow, Glasgow, Scotland, March 21, 2011
55. “MiniBooNE, a neutrino oscillation experiment at Fermilab”, BHU HEP seminar, Banaras Hindu University, Varanasi, India, March 17, 2011
56. “Analysis Techniques of Neutrino Cross Section Measurements in MiniBooNE”, PPD/Neutrino physics discussion seminar, Fermilab, Batavia, IL, November 5, 2010
57. “MiniBooNE, a neutrino oscillation experiment at Fermilab”, HEP/Nuclear physics joint seminar, University of Maryland, College Park, MD, October 5, 2010
58. “MiniBooNE, a neutrino oscillation experiment at Fermilab”, SMU HEP seminar, Southern Methodist University, Dallas, TX, September 27, 2010
59. “First Measurement of Muon Neutrino Charged Current Quasielastic (CCQE) Double Differential Cross Section”, NU HEP seminar, Northwestern university, Evanston, IL, September 20, 2010
60. “First Measurement of Muon Neutrino Charged Current Quasielastic (CCQE) Double Differential Cross Section”, U-Chicago HEP lunch seminar, University of Chicago, Chicago, IL, March 15, 2010
61. “First Measurement of Muon Neutrino Charged Current Quasielastic (CCQE) Double Differential Cross Section”, CU HEP seminar, Columbia University, New York City, NY, March 10, 2010
62. “First Measurement of Muon Neutrino Charged Current Quasielastic (CCQE) Double Differential Cross Section”, MIT lunch seminar, Massachusetts Institute of Technology, Boston, MA, March 9, 2010
63. “First Measurement of Muon Neutrino Charged Current Quasielastic (CCQE) Double Differential Cross Section”, Wroclaw neutrino group seminar, Wroclaw, Poland, November 30, 2009
64. “MiniBooNE, a neutrino experiment at Fermilab”, Wroclaw undergrad seminar, Wroclaw, Poland, November 26, 2009
65. “MiniBooNE, a neutrino experiment at Fermilab”, HEP group seminar, Waseda university, Tokyo, Japan, June 10, 2009
66. “First Measurement of Muon Neutrino Charged Current Quasielastic (CCQE) Double Differential Cross Section”, ICRR seminar, Kamioka observatory, Japan, June 8, 2009
67. “Test of Lorentz violation in the neutrino oscillation experiments”, KEK seminar, Tsukuba, Japan, June 5, 2009
68. “First Measurement of Muon Neutrino Charged Current Quasielastic (CCQE) Double Differential Cross Section”, J-PARC T2K group seminar, Tokai, Japan, June 3, 2009
69. “MiniBooNE, a neutrino experiment at Fermilab”, Spin and hadron group seminar, Tokyo Institute of Technology, Tokyo, Japan, June 1, 2009
70. “MiniBooNE, a neutrino experiment at Fermilab”, LPNHE seminar, Denis Diderot (Paris-VII) University, Paris, France, May 25, 2009
71. “A measurement of the muon neutrino charged current quasielastic (CCQE) interaction and a test of Lorentz violation with the MiniBooNE experiment”, PhD defense seminar, Bloomington, IN, December 10, 2008
72. “Measurement of muon neutrino charged current quasielastic (CCQE) scattering on carbon in MiniBooNE”, University of Wisconsin, Madison, WI, May 23, 2008
73. “Test for Lorentz and CPT violation using the neutrino oscillation”, Columbia University Particle seminar, New York, NY, September 19, 2007

74. “The first result of MiniBooNE oscillation experiment”, McGill University HEP seminar, Montreal, QC, Canada, May 09,2007
75. “ Δ s, Lorentz Violation and Neutrinos ”, Kyoto University spin physics group seminar, Kyoto, Japan, July 12, 2005
76. “ Δ s, Lorentz Violation and Neutrinos ”, PhD candidacy seminar, Bloomington, IN, April 26, 2005

Workshop contributions

1. “Challenging of neutrino SIS/DIS interactions,” NuSTEC workshop on Neutrino Shallow- and Deep-Inelastic Scattering, L’Aquila, Italy, October 13, 2018
2. “Physics of Neutrino Interactions around 1-10 GeV,” HEP workshop on nucleon structure and QCD, Tokyo Institute of Technology, Japan, July 30, 2018
3. “Challenging of neutrino SIS/DIS interactions,” European Center of Theoretical Nuclear physics and related topics (ECT*), Trento, Italy, July 10, 2018
4. “Physics for Accelerator-based Neutrino Oscillation experiments”, European Center of Theoretical Nuclear physics and related topics (ECT*), Trento, Italy, Apr. 27, 2018
5. “Experimental Challenges of Beam-based Neutrino Physics around 1-10 GeV,” UK input to European strategy, IPPP Durham, Apr. 17, 2018
6. “Neutrino Interferometry for High Precision Tests of Space-Time Symmetry with IceCube,” NExT physics meeting, Royal Holloway University of London, Nov. 1, 2017
7. “SIS and DIS neutrino interactions”, IPPP-NuSTEC workshop, IPPP, Durham, April 18, 2017
8. “Physics of Neutrino Interactions since INT2013,” INT workshop 16-63W, Institute of Nuclear Theory, University of Washington, WA, USA, December 8, 2016
9. “Tests of Lorentz and CPT violation with neutrinos,” Nu-exotic workshop, University of Lancaster, Lancaster, UK, December 5, 2016
10. “Physics of Neutrino Interactions around 1-10 GeV”, KM3NeT-HyperK mPMT workshop, NIKHEF, Amsterdam, Germany, July 14, 2016
11. “Single photo production in neutrino experiments,” ALPs workshop, Institute of particle physics and phenomenology (IPPP), Durham, UK, April 14, 2016
12. “Physics of Neutrino Interactions around 1-100 GeV,” Atmospheric Neutrino Workshop (ANW’16), University of Munich, Munich, Germany, February 8, 2016
13. “Physics of Neutrino Interactions around 1-10 GeV,” MANTS (ANTARES, Baikal, KM3NeT, IceCube), University of Amsterdam, Amsterdam, Netherlands, October 18, 2015
14. “Nucleon correlations in neutrino oscillation experiments”, International Workshop on Experimental and Theoretical Topics in CLAS Data Mining, MIT, MA, USA, August 09, 2014
15. “Hadronization model in neutrino oscillation physics”, Center for Theoretical Underground Physics and Related Areas (CETUP*), Lead, SD, USA, July 28, 2014
16. “Importance of high angle measurements (for experimentalists) and low momentum transfer (for theorists)”, INT workshop INT-13-54W, Institute of Nuclear Theory, University of Washington, Seattle, USA, December 12, 2013
17. “Neutral Current Single Gamma Production, Current Experiments”, INT workshop 13-54W, Institute of Nuclear Theory, University of Washington, Seattle, USA, December 11, 2013

18. “Lorentz violation in Neutrinos ”, NExT meeting on BSM physics in light of LHC, Planck results and θ_{13} discovery, Southampton, UK, November 27, 2013
19. “MicroBooNE neutrino cross section measurements”, Neutrino Nucleus Generators, PITTPACC, Pittsburgh, PA, June 9, 2013
20. “MicroBooNE photon detection system”, LArTPC R&D workshop, Fermilab, Batavia, March 20, 2013
21. “Test for Lorentz and CPT violation with neutrino oscillation experiments”, Short talk for Queen Mary University of London, London, UK, March 12, 2013
22. “Research plan”, Short talk for Excellence Cluster (phone), Munich, Germany, February 6, 2013
23. “Test of Lorentz and CPT violation with MiniBooNE excesses”, LVNU’12, IUCSS, Bloomington, IN, March 11, 2012
24. “Neutrino signals with SME”, SME workshop, IUCSS, Bloomington, IN, August 13, 2011
25. “Test of Lorentz and CPT Violation”, GSA lecture series, Fermilab, Batavia, IL, June 9, 2011
26. “Test for Lorentz and CPT violation with the MiniBooNE excesses”, Short-Baseline Neutrino Workshop (SBNW11), Fermilab, Batavia, IL, May 13, 2011
27. “Test of Lorentz violation in the neutrino oscillation experiments”, ICRR lecture series, Kashiwa, Japan, June 26, 2009
28. “MiniBooNE CCQE analysis”, Saclay T2K group, Saclay, France, May 27, 2009
29. “The neutrino interaction measurements in MiniBooNE experiment”, Physics of Massive Neutrinos (PMN) 2007, Blaubeuren, Germany, July 03, 2007
30. “ Δs measurement through the neutrino neutral current elastic scattering”, International School of Physics ”Enrico Fermi” course 167, Varenna, Italy, June 29, 2007
31. “MiniBooNE, a neutrino oscillation search at Fermilab”, National Nuclear Physics Summer School (NNPSS) 2006, Bloomington, IN, July 28, 2006

Parallel session talks

1. “Neutrino Interferometry for New Physics Search,” IoP APP-HEPP annual meeting, Imperial College London, April 4, 2019
2. “Neutrino Interferometry for High Precision Tests of Space-Time Symmetry with IceCube,” IoP APP-HEPP annual meeting, University of Bristol, Mar. 26, 2018
3. “Search for Accelerator-Produced sub-GeV Dark Matter Particles in MiniBooNE”, IDM2016, University of Sheffield, Sheffield, UK, July 18, 2016
4. “Hadronization processes in neutrino interactions for oscillation physics,” QCD@LHC 2015, Queen Mary University of London, London, UK, September 2, 2015
5. “Hadronization model in neutrino oscillation physics,” NuFact 2014, University of Glasgow, Glasgow, Scotland, UK, August 27, 2014
6. “Test for Lorentz and CPT violation with the MiniBooNE excesses”, Phenomenology Symposium (PHENO) 2011, Madison, WI, May 9, 2011
7. “Global Lorentz Violation Model for Neutrino Oscillation with MiniBooNE”, Phenomenology Symposium (PHENO) 2008, Madison, WI, April 28, 2008
8. “SciBooNE experiment, the neutrino cross section measurement”, Division of Nuclear Physics (DNP) 2007 Meeting, Newport News, VA, October 13, 2007

9. “Charged-Current Interaction Measurements in MiniBooNE”, Division of Nuclear Physics (DNP) 2007 Meeting, Newport News, VA, October 13, 2007
10. “Charged-current cross section measurements in MiniBooNE”, Division of Nuclear Physics (DNP) 2006 Meeting, Nashville, TN, October 26, 2006
11. “Global 3 parameter model for neutrino oscillations with Lorentz Violation”, Division of Nuclear Physics (DNP) 2006 Meeting, Nashville, TN, October 26, 2006
12. “FINeSSE, Δs measurement through neutrino scattering”, Division of Nuclear Physics (DNP) 2005 Meeting, Maui, HI, September 21, 2005
13. “Search for Lorentz Violation in LSND”, Division of Nuclear Physics (DNP) 2005 Meeting, Maui, HI, September 22, 2005
14. “FINeSSE, prototype beam test”, Division of Nuclear Physics (DNP) 2004 Meeting, Chicago, IL, October 29, 2004

Posters

1. “New Physics in Astrophysical Neutrino Flavor”, Topical Research Meeting: Prospects in Neutrino Physics (NuPhys 2018), Cavendish Conference Centre, London, DEcember 20, 2018
2. “Search for NC gamma at T2K near detector”, NuInt17, The Fields Institute, Toronto, Canada, June 27, 2017
3. “New Physics in Astrophysical Neutrino Flavor”, 27th International Conference on Neutrino Physics and Astrophysics (Neutrino 2016), Imperial College London, London, July 5, 2016
4. “Atmospheric-Neutrino Flux-Integrated Differential Cross-Section Measurement in IceCube”, Topical Research Meeting: Prospects in Neutrino Physics (NuPhys 2015), Barbican centre, London, December 16, 2015
5. “New Physics in Astrophysical Neutrino Flavor”, Topical Research Meeting: Prospects in Neutrino Physics (NuPhys 2015), Barbican centre, London, December 16, 2015
6. “First Measurement of Muon Neutrino Charged Current Quasielastic (CCQE) Double Differential Cross Section”, 11th International Workshop on Neutrino Factories, Superbeams and Beta Beams (NuFact 09), Illinois Institute of Technology, Chicago, IL, July 22, 2009
7. “Charged-Current Quasi-Elastic (CCQE) Interaction Measurements in MiniBooNE”, NSF site visit at Indiana University Cyclotron Facility, IUCF, Bloomington, IN, December 5, 2007
8. “Test for Lorentz violation in the MiniBooNE Experiment”, Fourth Meeting on CPT and Lorentz Symmetry Neutrino 2007, Bloomington, IN, August 9, 2007
9. “Global three parameter model for Neutrino Oscillations using Lorentz Violation”, Neutrino 2006, Lensis Theater, Santa Fe, NM, June 15, 2006
10. “A look inside the particle identification of MiniBooNE”, DOE site visit at Fermi National Accelerator Laboratory, Fermilab, Batavia, IL, August, 2006
11. “Test of Lorentz Violation with LSND”, Fermilab’s Graduate Student Association (GSA) New Perspectives 2006, Fermilab, Batavia, IL, May 31, 2006
12. “FINeSSE, Fine-grained Intense Neutrino Scintillator Scattering Experiment”, NSF site visit at Indiana University Cyclotron Facility, IUCF, Bloomington, IN, November 17, 2004
13. “FINeSSE, prototype detector beam test”, Fermilab’s Graduate Student Association (GSA) New Perspectives 2004, Fermilab, Batavia, IL, June 4, 2004
14. “FINeSSE, a neutrino scattering experiment”, Neutrino 2004, College de France, Paris, France, June 13-19, 2004 (absence from the poster session)

Outreach

1. “Neutrino Physics,” Lecture series for IoP retired members, Institute of Physics, UK, July 4, 2019
2. “Tests of Lorentz violation with neutrinos,” School of Physics and Astronomy public lecture series, Queen Mary University of London, Sep. 27, 2018
3. “Neutrino physics,” UCAS talk, Queen Mary University of London, Mar. 10, 2018
4. “Tests of Lorentz violation with neutrinos,” PsiStar lecture series, Queen Mary University of London, Feb. 1, 2018
5. “MiniBooNE-DM, Search for Accelerator-produced sub-GeV Dark Matter Particles,” Dark Matter Day event, Queen Mary University of London, October 31, 2017
6. “PhD in USA”, Story Collider, The Book Club, London, March 25, 2015
7. “Neutrino physics”, University and Colleges Admissions Service (UCAS) talk, Queen Mary University of London, London, February 12, 2014
8. “Masterclass video conference, meet the featured scientist”, Masterclass video conference, Fermilab, Batavia, IL, March 22, 2013
9. “Tape: A Celebration”, an art show at Chicago Art Department, 1932 S. Halsted st. #100, Chicago, IL, August 12, 2011
10. “Neutrino, Ghost Particle of the Atom”, State of the Arts Chicago, Truman College, Chicago, IL, May 2, 2011
11. “Hard Science”, an art show at Chicago Art Department, 1837 S. Halsted st., Chicago, IL, August 27, 2010
12. “Video meeting with Japanese students from Kyoto university, how to apply US graduate school?”, Fermilab, Batavia, IL, August 2, 2010
13. “Meeting with Super-Science High school (SSH) students from Japan”, QuarkNet Fermilab program, Fermilab, Batavia, IL, July 12, 2010
14. “Video conference to discuss Masterclass LEP/DELPHI data and LHC events”, QuarkNet Fermilab Masterclass, Fermilab, Batavia, IL, February 23, 2010
15. “Meeting with Super-Science High school (SSH) students from Japan”, QuarkNet Fermilab program, Fermilab, Batavia, IL, October 10, 2009
16. “An introduction of Japan for 3rd grade students”, Cicero public schools board of education district 99, Cicero, IL, May 12, 2009
17. “An introduction of Japan for 3rd grade students”, Cicero public schools board of education district 99, Cicero, IL, April 27, 2009

Students, interns

PhD

1. Kareem Farrag, 2017 - , Queen Mary University of London
2. Shivesh Mandalia, 2015 - , Queen Mary University of London
3. Pierre Lasorak, 2014-2018, Queen Mary University of London

Masters

2018/19 Miho Wakai, King's College London

2018/19 John Garrood, Soniya Samani, Alex Wantling, Queen Mary University of London

2016/17 Tobias Barton, Liam Hartley, Jesal Mandalia, Shivanath Shivananda, Carl Stanley, Queen Mary University of London

2014/15 Givanni Bernardi, Shivesh Mandalia, Queen Mary University of London

Summer interns

2018 Yahui Li, Zhenxiong Xie, Sun Yat-sen University, P. R. China (funded by SYSU)

2016 Rishi Moulana, University of Cambridge (funded by the Ogden Trust), Carl Stanley, Queen Mary University of London (funded by Queen Mary University of London)

2015 Afrida Alam, Leicester University (funded by the Ogden Trust), Sara McCarney, King's College London (funded by the Ogden Trust), Rishi Moulana, University of Cambridge (funded by the Ogden Trust)

2014 Ryan Hill, Queen Mary University of London (funded by Queen Mary University of London)

Membership

1. Member of Institute of Physics, Astro Particle Physics (APP), High Energy Particle Physics (HEPP), and Nuclear Physics (NP)
2. Member of American Physical Society, Division of Astrophysics (DAP), Division of Nuclear Physics (DNP), and Division of Particles and Fields (DPF)

Collaborations

1. NuSTEC collaboration
2. IceCube-Gen2 collaboration
3. Hyper-Kamiokande collaboration
4. T2K collaboration
5. SciBooNE collaboration
6. MiniBooNE collaboration

past MicroBooNE collaboration, DUNE collaboration

Service work

I have reviewed number of grants, both large scale project grants (Belgium, Brazil, Chile) and fellowships (Belgium, Italy, Spain, UK). I have refereed number of journals, including NIMA, JphysG, NPB, EPJC, and PRD. The full list is available from Publons (<https://publons.com/author/1288269/teppeikatori>).

2019- IoP astro particle physics (APP) committee chair

2018- IoP high energy particle physics (HEPP) committee member

2014- IoP astro particle physics (APP) committee member

2013- Main editor of the Neutrino Cross-Section Newsletter

2012-2013 MicroBooNE experiment cross section working group convener
2009-2013 MicroBooNE experiment active detector working group convener
2013 2013 APS Henry Primakoff award selection committee
2010 MiniBooNE experiment CCQE/NCEL group convener
2007 SciBooNE experiment shift coordinator
2006-2007 MiniBooNE experiment shift coordinator