



May 25, 2018

Richard Efrain Ruiz

Address:

Institute for Particle Physics Phenomenology,
Department of Physics, Durham University,
Science Laboratories, South Road,
Durham, DH1 3LE, United Kingdom

Citizenship: USA

Contact:

Web: ipp.dur.ac.uk/~rruiz/
Email: richard.ruiz@durham.ac.uk

InSpire HEP Publication Summary:

As of May 25, 2018, published (citeable): 9 (18).
Citations: 238 (848), $h_{\text{HEP-index}}$: 7 (11).

Education

Doctor of Philosophy, Physics, University of Pittsburgh, August 8, 2015
Thesis: *Hadron Collider Tests of Neutrino Mass-Generating Mechanisms*
ISBN: 9781339241869, [[arXiv:1509.06375](https://arxiv.org/abs/1509.06375)] [[hep-ph](#)]

Masters of Science, Physics, University of Wisconsin-Madison December 24, 2011

Bachelor of Arts, with Honors, Physics, University of Chicago, June 12, 2010
Thesis: *Measurements of Selection Efficiencies for $Z \rightarrow e^+e^-$ & $Z'_{SM} \rightarrow e^+e^-$ in 7 TeV pp Collisions at the CMS Detector*

Bachelor of Science, Mathematics, University of Chicago June 12, 2010

Diploma, Don Bosco Technical Institute, Rosemead, CA, USA June 2006

Professional Certifications and Qualifications

- Responsible Conduct of Research Training: COI, PI Training, NSF Trainees, Integrity - University of Pittsburgh 2013
- Responsible Conduct of Research Training - University of Wisconsin - Madison 2011
- ASNT Qualified Level-1 Liquid Penetrant NDT Technician 2005
- ASNT Qualified Level-1 Magnetic Particle NDT Technician 2005
- ASNT Qualified Level-2 Radiographic Technician 2005
- ASNT Qualified Level-1 Radiographic Technician 2004

Language Skills

Human: English - Native; Japanese - Proficient (Reading, Speaking)

Computer: C++, ROOT, FORTRAN, python, bash, html, CSS, java, \LaTeX , Linux

Positions

Research Associate

• Centre for Cosmology, Particle Physics and Phenomenology (CP3), Starting October 2018
Université catholique de Louvain, Louvain-La-Neuve, Belgium
• Institute for Particle Physics Phenomenology (IPPP), October 2015 - Present
Durham University, Durham, United Kingdom

Graduate Student [AO Fellow (Wisconsin), KLI Fellow (Pitt), Mellon Fellow (Pitt)]

Department of Physics & Astronomy, University of Pittsburgh, Pittsburgh, PA, USA Aug. 2012 - Aug. 2015
Department of Physics, University of Wisconsin - Madison, Madison, WI, USA Aug. 2010 - Aug. 2012

Visiting Graduate Researcher

Center for Future High Energy Physics, IHEP, Beijing, China	Summer 2014
Department of Physics, Tohoku University, Sendai, Japan	Summer 2013
IPMU, U. Tokyo, Kashiwa, Japan (NSF EAPSI Fellow)	Summer 2012
Department of Physics & Astronomy, University of Pittsburgh, Pittsburgh, PA, USA	Feb 2012 - June 2012

Visiting Undergraduate Scientist within Compact Muon Solenoid Collaboration

Fermi National Accelerator Laboratory (FNAL), Batavia, IL, USA	June 2007 - June 2010
European Center for Nuclear Research (CERN), Geneva, Switzerland	June 2008 - June 2010

Undergraduate Scientist

Enrico Fermi Institute, University of Chicago, Chicago, IL, USA	Feb. 2007 - June 2010
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Collaboration Membership

Member - Compact Muon Solenoid Collaboration	Feb. 2007 - Aug. 2010
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Peer-Reviewed Publications

Note: In High Energy Physics, authorship is traditionally alphabetical.

1. *Lepton Number Violation and Chiral W' Couplings at the LHC*,
T. Han, I. Lewis, R. Ruiz, Z. -g. Si, *Phys Rev D* **87**, 035011(2013) [[arXiv:1211.6447 \[hep-ph\]](#)]
2. *Higgs from the Top*,
T. Han, R. Ruiz, *Phys Rev D* **89**, 074045 (2014) [[arXiv:1312.3324 \[hep-ph\]](#)]
3. *Heavy Majorana Neutrinos from $W\gamma$ Fusion at Hadron Colliders*,
D. Alva, T. Han, R. Ruiz *JHEP* **02** (2015), 072 [[arXiv:1411.7305 \[hep-ph\]](#)]
4. *QCD Corrections to Pair Production of Type III Seesaw Leptons at Hadron Colliders*,
R. Ruiz, *JHEP* **12** (2015), 165 [[arXiv:1509.05416 \[hep-ph\]](#)]
5. *Fully-Automated Precision Predictions for Heavy Neutrino Production Mechanisms at Hadron Colliders*,
C. Degrande, O. Mattelaer, R. Ruiz, J. Turner, *Phys Rev D* **94** 053002 (2016) [[arXiv:1602.06957 \[hep-ph\]](#)]
6. *Neutrino Jets from High-Mass W_R Gauge Bosons in TeV-Scale Left-Right Symmetric Models*,
M. Mitra, R. Ruiz, D.J. Scott, M. Spannowsky, *Phys Rev D* **94** 095016 (2016) [[arXiv:1607.03504 \[hep-ph\]](#)]
7. *Automated Neutrino Jet and Top Jet Predictions at Next-to-Leading-Order with Parton Shower Matching in Effective Left-Right Symmetric Models*,
O. Mattelaer, M. Mitra, R. Ruiz, [[arXiv:1610.08985 \[hep-ph\]](#)]
8. *A Comprehensive Framework for Studying W' and Z' Bosons at Hadron Colliders with Automated Jet Veto Resummation*,
B. Fuks, R. Ruiz, *JHEP* **05** (2017), 032, [[arXiv:1701.05263 \[hep-ph\]](#)]
9. *Lepton Number Violation at Colliders from Kinematically Inaccessible Gauge Bosons*,
R. Ruiz, *EPJC* (2017) **77**: 375, [[arXiv:1703.04669 \[hep-ph\]](#)]
10. *Heavy Neutrinos from Gluon Fusion*,
R. Ruiz, M. Spannowsky, P. Waite, *Phys Rev D* **96** 055042 (2017), [[arXiv:1706.02298 \[hep-ph\]](#)]
11. *Lepton Number Violation: Seesaw Models and Their Collider Tests* (Review),
Y. Cai, T. Han, T. Li, R. Ruiz, *Front. Phys.* **6**:40 (2018) [[arXiv:1711.02180 \[hep-ph\]](#)]
12. *Monojet Signatures from Heavy Colored Particles: Future Collider Sensitivities and Theoretical Uncertainties*,
A. Chakraborty, S. Kuttimalai, S. H. Lim, M. M. Nojiri, R. Ruiz, [[arXiv:1805.05346 \[hep-ph\]](#)]
13. *Safe Jet Vetoes*,
S. Pascoli, R. Ruiz, C. Weiland, [[arXiv:1805.09335 \[hep-ph\]](#)]

Conference Proceedings, Working Group Reports, and Other Publications

1. *Higgs Working Group Report of the Snowmass 2013 Community Planning Study*,
T. Dawson, *et al.*, [[arXiv:1310.8361 \[hep-ex\]](#)]
2. *Snowmass 2013 Top Quark Working Group Report*,
K. Agashe *et al.* [Top Quark Working Group Collaboration], [[arXiv:1311.2028 \[hep-ph\]](#)]
3. *Hadron Collider Tests of Neutrino Mass-Generating Mechanisms*, [Book]
R. E. Ruiz, Ph.D. thesis, University of Pittsburgh (2015), ISBN: 9781339241869, [[arXiv:1509.06375 \[hep-ph\]](#)]
4. *CEPC-SPPC Preliminary Conceptual Design Report. 1. Physics and Detector*,
CEPC-SPPC Study Group, IHEP-CEPC-DR-2015-01, IHEP-TH-2015-01, IHEP-EP-2015-01, [[InSpires RECID:1395734](#)]
5. *Physics at a 100 TeV pp collider: Beyond the Standard Model Phenomena*,
T. Golling *et al.*, [CERN Yellow Report](#), no. 3, 441 (2017), [[arXiv:1606.00947 \[hep-ph\]](#)]
6. *Physics at a 100 TeV pp collider: Standard Model processes*,
M.L. Mangano *et al.*, [CERN Yellow Report](#), no. 3, 1 (2017) [[arXiv:1607.01831 \[hep-ph\]](#)]

Software

- FEYNRULES Model: *Standard Model + Heavy Neutrino at NLO in QCD*,
R. Ruiz, <http://feynrules.irmp.ucl.ac.be/wiki/HeavyN>
- FEYNRULES Model: *Effective Left-Right Symmetry model at NLO in QCD*,
R. Ruiz, <http://feynrules.irmp.ucl.ac.be/wiki/EffLRSM>
- FEYNRULES Model: *W' and Z' at NLO in QCD*,
B. Fuks, R. Ruiz, <http://feynrules.irmp.ucl.ac.be/wiki/WZPrimeAtNLO>

Awards, Fellowships, & Prizes

- ATLAS Theorist of the Month - Deutsches Elektronen-Synchrotron (DESY) April 2018
- Andrew Mellon Predoctoral Fellowship - University of Pittsburgh 2014 - 2015
(Note: Highest academic award for PhD students in School of Arts and Sciences.)
- K. Leroy Irvis Graduate Fellowship - University of Pittsburgh 2012 - 2015
- AOF Graduate Fellowship - University of Wisconsin - Madison 2010 - 2012
- Odyssey Scholarship - University of Chicago 2009 - 2010
- Federal Work Study Program - U.S. Dept. of Education / University of Chicago 2007 - 2010

Funding & Grants

- Dietrich School Fellowship for Graduate Summer Research - Univ. of Pittsburgh [\$6k] Summer 2015
- Dietrich School Fellowship for Graduate Summer Research - Univ. of Pittsburgh [\$4k] Summer 2014
- Dietrich School Fellowship for Graduate Summer Research - Univ. of Pittsburgh [\$4k] Summer 2013
- NSF Grant No. [OISE-1210244](#), EAPSI Fellowship - Host: IPMU, Japan [\$6k] Summer 2012
- SITG Research/Travel Grant - University of Chicago [\$7k] Summer 2009

Seminars

1. *Lepton Number Violation and Chiral W' Couplings at the LHC*,
University of Wisconsin - Madison, December 6, 2011
2. *Lepton Number Violation and Chiral W' Couplings at the LHC*,
University of Pittsburgh, February 29, 2012
3. *Higgs from the Top*,
Korea Institute for Advanced Study (KIAS), Seoul, South Korea, June 20, 2013
4. *Lepton Number Violation and Chiral W' Couplings at the LHC*,
KEK, Tsukuba, Japan, June 25, 2013

5. *Lepton Number Violation and Chiral W' Couplings at the LHC*,
Tohoku University, Sendai, Japan, June 27, 2013
6. *Lepton Number Violation and Chiral W' Couplings at the LHC*,
Toyama University, Japan July 1, 2013
7. *Higgs from the Top*,
Toyama University, Japan July 1, 2013
8. *LHC Tests of Lepton Number Violation*,
12th LHC Physics Monthly Meeting, KIAS, Seoul, South Korea, July 25, 2014
9. *State-of-the-Art Tests of Lepton Number Violation and Seesaw Mechanisms*,
Durham University, England, September 4, 2014.
10. *State-of-the-Art Tests of Lepton Number Violation and Seesaw Mechanisms*,
University of Edinburgh, Scotland, September 9, 2014.
11. *State-of-the-Art Tests of Lepton Number Violation and Seesaw Mechanisms*,
University College London, England, September 11, 2014.
12. *State-of-the-Art Tests of Lepton Number Violation and Seesaw Mechanisms*,
University of Manchester, England, September 17, 2014.
13. *State-of-the-Art Tests of Lepton Number Violation and Seesaw Mechanisms*,
Cambridge University, England, September 19, 2014.
14. *State-of-the-Art Tests of Lepton Number Violation and Seesaw Mechanisms*,
University of Maryland, College Park, Md, USA December 05, 2014.
15. *QCD Corrections to Heavy Type III Seesaw Leptons at Hadron Colliders*,
Universidade Federal do ABC, Santo André, SP, Brazil, August 31, 2015.
16. *QCD Corrections to Heavy Type III Seesaw Leptons at Hadron Colliders*,
University of Pittsburgh, USA, September 16, 2015.
17. *QCD Corrections to Heavy Type III Seesaw Leptons at Hadron Colliders*,
University of Oxford, England, February 11, 2016.
18. *Neutrino Mass Models at Current and Future Colliders*,
Ghent University, Belgium, June 1, 2016
19. *Neutrino Mass Models at Current and Future Colliders*,
Université libre de Bruxelles, Belgium June 3, 2016
20. *Neutrino Jets from High-Mass W_R Bosons*,
Center for Future High Energy Physics, IHEP, Beijing, China, July 25, 2016
21. *Neutrino Jets from High-Mass W_R Bosons*,
University of Genova, Italy, September 20, 2016
22. *Neutrino Jets from High-Mass W_R Bosons*,
KEK, Tsukuba, Japan, November 08, 2016
23. *Neutrino Jets from High-Mass W_R Bosons*,
DESY, Hamburg, Germany, December 21, 2016
24. *Neutrino Jets from High-Mass W_R Bosons*,
King's College London, London, UK, March 08, 2017
25. *QCD Resummation for BSM*,
Universität Bern, Bern, Switzerland, March 31, 2017
26. *Neutrino Phenomenology for New Collider Era*,
Michigan State University, Lansing, Mi., USA, April 27, 2017
27. *Neutrino Phenomenology for New Collider Era*,
Northwestern University, Evanston, Il., USA, May 1, 2017

28. *Neutrino Phenomenology for New Collider Era*,
Fermilab, Batavia, IL., USA, May 2, 2017
29. *QCD Resummation for BSM*,
Center for Future High Energy Physics, IHEP, Beijing, China, July 21, 2017
30. *QCD Resummation for BSM*,
Institute for Theoretical Physics, Chinese Academy of Sciences, Beijing, China, July 27, 2017
31. *Left-Right Symmetry: At the Edges of Phase Space and Beyond*,
Seoul National University, Seoul, South Korea, September 7, 2017
32. *QCD Resummation for BSM*,
Korea University, Seoul, South Korea, September 11, 2017
33. *QCD Resummation for BSM*,
Korea Institute for Advanced Study (KIAS), Seoul, South Korea, September 14, 2017
34. *QCD Resummation for BSM*,
NIKHEF, Amsterdam, Netherlands, October 22, 2017
35. *Left-Right Symmetry: At the Edges of Phase Space and Beyond*,
University of Massachusetts - Amherst, Amherst, Massachusetts, USA, October 6, 2017
36. *QCD Resummation for BSM*,
SUNY Buffalo, Buffalo, USA, October 9, 2017
37. *Left-Right Symmetry: At the Edges of Phase Space and Beyond*,
Universität Basel, Basel, Switzerland, November 2, 2017
38. *Left-Right Symmetry: At the Edges of Phase Space and Beyond*,
Institut für Physik, Universität Mainz, Mainz, Germany, November 11, 2017
39. *Seesaw Mimicry at Colliders*,
Neils Bohr Institute, Copenhagen, December 5, 2017
40. *QCD Resummation for BSM*,
University of Edinburgh, Edinburgh, Scotland, December 6, 2017
41. *QCD Resummation for BSM*,
University of Oslo, Oslo, Norway, January 17, 2018
42. *Jet Vetoes for BSM*,
University of Pittsburgh, USA, February 01, 2018
43. *QCD Resummation for BSM*,
Lawrence Berkeley National Laboratory, Berkeley, California, USA, February 14, 2018
44. *Left-Right Symmetry: At the Edges of Phase Space and Beyond*,
Case Western Reserve University, Cleveland, Ohio, USA, February 20, 2018
45. *QCD Resummation for BSM*,
Manchester University, Manchester, England, March 9, 2018
46. *Left-Right Symmetric Models at the LHC*,
DESY, Hamburg, Germany, April 10, 2018
47. *Heavy Neutrinos and Jet Vetoes*,
University of Birmingham, Birmingham, UK June 13, 2018
48. *Heavy Neutrinos and Jet Vetoes*,
Ghent University, Ghent, Belgium, June 28, 2018

Conferences & Workshops Talks

1. *Improving the Electron Energy Resolution at CMS* [BAPS.2010.APR.B9.1],
On behalf of CMS Collaboration, APS April Meeting, Washington, DC, February, 2010
2. *Lepton Number Violation and Chiral W' Couplings at the LHC*,
Phenomenology 2012 Symposium, U. Pittsburgh, May 2012
3. *Higgs from the Top*,
Snowmass Energy Frontier Workshop, Brookhaven National Laboratory, April, 2013
4. *Collider Signatures of Neutrino Models*,
Particles Physics at the Intensity Frontier, Argonne National Laboratory, April 26 2013
5. *Higgs from the Top*,
Phenomenology 2013 Symposium, U. Pittsburgh, May 2013
6. *New Tests of Neutrino Mass-Generating Mechanisms at the LHC*,
Phenomenology 2014 Symposium, U. Pittsburgh, May 2014
7. *$W\gamma$ Fusion at Super-TeV Hadron Colliders*,
DIS 2015 Workshop, Southern Methodist U, April 2015
8. *Heavy Type III Seesaw Leptons at NLO in QCD*,
Phenomenology 2015 Symposium, U. Pittsburgh, May 2015
9. *Tests of Seesaw Leptons at Current and Future Colliders*,
 ν @Fermilab, Fermi National Accelerator Laboratory, July 21-25, 2015
10. *QCD Corrections to Heavy Type III Seesaw Leptons at Hadron Colliders*,
CAM 2015, Oaxaca, Mexico, September 9-12, 2015
11. *Neutrino mass models at Colliders* [Plenary],
NuPhys 2015, London, UK, December 16-18, 2015
12. *Modeling Heavy Neutrino Production Mechanisms at Hadron Colliders
(and with fully automated QCD corrections!)*,
Phenomenology 2016 Symposium, U. Pittsburgh, May 9-11, 2016
13. *Neutrino Mass Models at Current and Future Colliders*,
KITPC Workshop: New Physics at the LHC Run 2, Beijing, China, July 26-28, 2016
14. *Heavy Neutrinos from VBF*,
IPPP Workshop: Future of VBF measurements, Durham, UK, September 21-23, 2016
15. *Monte Carlo Techniques for BSM at NLO and Beyond* [Plenary],
GDR Terascale@Paris, Paris, France, November 23-25, 2016
16. *Status for theoretical calculations for collider searches*,
Neutrinos: Quest for a New Physics Scale, CERN, Geneva, Switzerland March 27-31, 2017
17. *Colorful Production of Heavy Neutrinos at Hadron Colliders*,
Phenomenology 2017 Symposium, U. Pittsburgh, US, May 8-10, 2017
18. *Left-Right Symmetry: At the Edges of Phase Space and Beyond* [Plenary],
Invisibles17 Workshop, U. Zürich, Zürich, Switzerland, June 12-16, 2017
19. *Left-Right Symmetry: At the Edges of Phase Space and Beyond*,
12th TeV Workshop, Zhengzhou U., Zhengzhou, China, June 22-24, 2017
20. *Left-Right Symmetry: At the Edges of Phase Space and Beyond*,
Brookhaven Forum 2017, Brookhaven National Laboratory, Brookhaven, NY, USA, October 11-13, 2017
21. *Neutrino Physics and Future Experiments*,
Out of the Higgs Era into the Dark, KIAS-IPMU-IPPP Workshop, Durham, UK, November 20-24, 2017
22. *Collider Tests of Neutrino Mass Models*,
Workshop on the physics of HL-LHC, CERN, Geneva, Switzerland, Oct 30 - Nov 1, 2017

23. *Monte Carlo Tools for BSM at NLO and Beyond*, [Review]
Phenomenology 2018 Symposium, U. Pittsburgh, May 7-9, 2018

Topical Lectures and Schools

1. *Collider Tests of Seesaw Mechanisms*, [Lecturer - 4 Hours]
Center for Future High Energy Physics, Inst. for High Energy Physics (IHEP), Beijing, China, July 10, 2014
2. *British Universities Summer School in Theoretical Elementary Particle Physics (BUSSTEPP) 2016*, [Tutor]
University of Manchester, Manchester, UK, Aug. 22-Sept. 02, 2016
3. *Monte Carlo and pQCD as Tools for BSM Discovery*, [Lecturer - 4.5 Hours + 3 Hour MadGraph Tutorial]
Institute for Physics and Mathematics of the Universe (IPMU), Kashiwanoha, Japan, November 11-14, 2016
4. *British Universities Summer School in Theoretical Elementary Particle Physics (BUSSTEPP) 2017*, [Tutor]
University College London, London, UK, Aug. 20-Sept. 01, 2017
5. *British Universities Summer School in Theoretical Elementary Particle Physics (BUSSTEPP) 2018*, [Tutor]
Oxford University, Oxford, UK, Aug. 19-Sept. 31, 2018

Attended Conferences & Workshops

1. *APS April / AAPT Winter Joint Meeting*, Washington, DC, February 13-17, 2010
2. *RosnerFest*, U. Chicago, Chicago, IL, March 31-April 1, 2011
3. *Phenomenology Symposium 2011*, UW-Madison, Madison, WI, May 9-11, 2011
4. *Phenomenology Symposium 2012*, U. Pittsburgh, Pittsburgh, PA, May 7-9, 2012
5. *LoopFest XI*, U. Pittsburgh, Pittsburgh, PA, May 10-12, 2012
6. *The Higgs Boson and the Next Discovery Workshop*, U. Pittsburgh, Pittsburgh, PA, October 19-21, 2012
7. *Flux Measurement and Determination in the Intensity Frontier Era Neutrino Beams Workshop*,
U. Pittsburgh, Pittsburgh, PA, December 6-8, 2012
8. *Beyond θ_{13} Workshop*, U. Pittsburgh, Pittsburgh, PA, February 11-13, 2013
9. *Snowmass Energy Frontier Workshop*, BNL, Upton, NY, April 3-6, 2013
10. *Intensity Frontier Workshop*, ANL, Lemont, IL, April 25-27, 2013
11. *Phenomenology Symposium 2013*, U. Pittsburgh, Pittsburgh, PA, May 6-8, 2013
12. *Tohoku Workshop on Higgs and Beyond*, Tohoku U., Sendai, Japan, June 5-9, 2013
13. *International Workshop on "RENO-50" toward Neutrino Mass Hierarchy*,
Seoul National University, Korea, June 13-14 2013
14. *Determining the Next Scale in HEP Workshop*, U. Pittsburgh, Pittsburgh, PA, November 18-19, 2013
15. *Neutrino 2012*, Kyoto U., Kyoto, Japan, June 3-9, 2012
16. *US-JSPS Fellows Alumni Assoc. MSF and General Assembly*, Washington, DC, February 21-22, 2014
17. *Phenomenology Symposium 2014*, U. Pittsburgh, Pittsburgh, PA, May 5-7, 2014
18. *Probing Non-Minimal Dark Sectors Workshop*, U. Pittsburgh, Pittsburgh, PA, June 8-10, 2014
19. *2nd Center for Future HEP Symposium on Circular Collider Physics*,
IHEP Beijing, China, August 11-15, 2014
20. *QCD and Beyond at Colliders Workshop*, U. Pittsburgh, Pittsburgh, November 13-14, 2014
21. *Deeply Inelastic Scattering 2015*, Southern Methodist U., Dallas, TX, April 27 - May 1, 2015
22. *Phenomenology Symposium 2015*, U. Pittsburgh, Pittsburgh, PA, May 4-6, 2015
23. *ν @Fermilab*, Fermi National Accelerator Laboratory, Batavia, IL, USA, July, 21-25, 2015
24. *Canadian-American-Mexican (CAM) Physics Graduate Student Conference 2015*, [Co-organizer]
Oaxaca, Mexico, September 9 - 12, 2015

25. *NuAtmospheres*, Royal Society, London, UK, December 15, 2015
26. *NuPhys 2015*, London, UK, December 16-18, 2015
27. *Annual Theory Meeting*, Inst. for Particle Physics Pheno. , Durham, UK, December 20-22, 2015
28. *Higgs-Maxwell Particle Physics Workshop*, Royal Society, Edinburgh, Scotland, February 17, 2016
29. *Heavy Flavour Production at the LHC Workshop*, IPPP, Durham, UK, April 20-22, 2016
30. *Phenomenology Symposium 2015*, U. Pittsburgh, Pittsburgh, PA, May 9-11, 2016
31. *MC4BSM Workshop*, IHEP/UCAS, Beijing, China, July 20-24, 2016
32. *Hints of New Physics at the LHC Run 2 Workshop*, KITPC Beijing, July 26-28, 2016
33. *Invisibles16 Workshop*, University of Padova, Padova, Italy, September 12-16, 2016
34. *Future of VBF measurements*, Inst. for Particle Physics Pheno. , Durham, UK, September 21-23, 2016
35. *Future challenges for precision QCD*, Inst. for Particle Physics Pheno. , Durham, UK, October 25-28, 2016
36. *UK HEP Forum 2016*, Cosener's House, Abingdon, UK, November 3-4, 2016
37. *GDR Terascale@Paris*, Paris, France, November 23-25, 2016
38. *NuPhys 2016*, London, UK, December 12-14, 2016
39. *Annual Theory Meeting*, Inst. for Particle Physics Pheno. , Durham, UK, December 19-21, 2016
40. *Phenomenology Symposium 2017*, U. Pittsburgh, Pittsburgh, PA, May 9-10, 2017
41. *Neutrinos: Quest for a New Physics Scale*, CERN, Geneva, Switzerland March 27-31, 2017
42. *Invisibles17 Workshop*, University of Zürich, Zürich , Switzerland, June 12-16, 2017
43. *12th TeV Workshop*, Zengzhou U., Zhengzhou, China, June 22-24, 2017
44. *Brookhaven Forum 2017*, Brookhaven National Laboratory, Brookhaven, NY, USA, October 11-13, 2017
45. *Out of the Higgs Era into the Dark*, Inst. for Particle Physics Pheno. , Durham, UK, November 20-24, 2017
46. *Workshop on the physics of HL-LHC*, CERN, Geneva, Switzerland, Oct 30 - Nov 1, 2017
47. *Higgs plus dijets at the LHC*, Inst. for Particle Physics Pheno. , Durham, UK, January 10-12, 2018
48. *2nd FCC Workshop*, CERN, Geneva, Switzerland, January 15-19, 2018
49. *Phenomenology Symposium 2018*, U. Pittsburgh, Pittsburgh, PA, May 7-9, 2018

University Teaching

- **Durham University**, Durham, UK

Tutor (Teaching Assistant in USA): MSc Particle Theory,	Academic Year 2017-18
(Note: One of four tutors for entire year-long Masters of Science degree program.)	
Tutor: Phys 1122: General Physics (Physics Majors),	Academic Year 2016-17
Co-Lecturer: MATH51260: Elementary Particle Theory II (Special Topics),	Easter Term 2016, 2017, 2018
- **University of Pittsburgh**, Pittsburgh, PA, USA

Grader: Phys 1370: Intro. to Quantum Mechanics I (Undergraduate; Text: D.J. Griffiths),	Fall 2013
Teaching Assistant: Phys 1100: General Physics (Mechanics; Non-Calculus Based),	Fall 2013
- **University of Wisconsin - Madison**, Madison, WI, USA

Grader: Phys 322: Electromagnetic Fields (Undergraduate; Text: D.J. Griffiths)	Fall 2011
Teaching Assistant: Phys 103: General Physics (Mechanics; Non-Calculus Based),	Fall 2011

Service Work and University Activities

Referee:

Europhysics Letters, Institute of Physics (IoP) Publishing	May 2014- Present
Journal of High Energy Physics (JHEP)	October 2017- Present
Physics Review D (PRD), American Physical Society	March 2015- Present
Physics Review Letters (PRL), American Physical Society	July 2015- Present

Member, American Physical Society

Fall 2009 - **Present**

Member-at-Large (Elected), APS Forum on Graduate Student Affairs (FGSA)

March 2014-Oct 2015

FGSA Travel Award Review Committee (Quarterly)

March 2014-Oct 2015

Panel Judge, University of Pittsburgh Dietrich School of A & S Graduate Expo

Spring 2013, 2014, 2015

Public Outreach

Quantum Diaries Columnist

July 2011 - July 2017

List of articles (45 total) can be found at quantumdiaries.org/author/richard-ruiz/

Science Outreach Twitter:

[@BraveLittleMuon](https://twitter.com/BraveLittleMuon)

May 2011 - **Present**

[@IPPP_Durham](https://twitter.com/IPPP_Durham) (Co-Moderator)

June 2017 - **Present**

Wonders of Physics Demonstration Show, U. Wisconsin - Madison, Madison, WI, USA

December 2011

Modelling Invisible Exhibit, by IPPP at Royal Society Summer Exhibition, London, UK,

July 2017

Ask a Scientist, moderator for modellinginvisible.org

July 2017 - **Present**

Adopt-a-Physicist, program for US high schools operated by American Institute of Physics

Fall 2017 - **Present**

Media

1. *How to make a Higgs boson*, Symmetry Magazine, 10 April 2018
2. *Whats really happening during an LHC collision?*, Symmetry Magazine, 30 June 2017
3. *LHC swings back into action*, Symmetry Magazine, 23 May 2017
4. *The mystery of particle generations*, Symmetry Magazine, 05 Aug 2015
5. *#FollowFriday IV: Physicists to follow on Twitter*, Symmetry Magazine, 07 February 2014
6. *5 Unanswered Questions that Will Keep Physicists Awake at Night*, Scientific American, 25 Oct 2013
7. *Unanswered questions*, Symmetry Magazine, 22 Oct 2013
8. *Higgs particle could be found by Christmas*, BBC News, 1 Sept 2011