Daniel Whiteson

Personal

Born June 17, 1975
Citizenship: USA, UK
Marital Status: Married
email: daniel@uci.edu, Homepage

Professional Appointments

2016-present **Professor**,Dept. of Physics and Astronomy, *University of California, Irvine*
2014-present **Joint Appt.**,Dept. of Logic and Philosophy of Science, *University of California, Irvine*
2011-2016 **Associate Professor**,Dept. of Physics and Astronomy, *University of California, Irvine*
2007-2011 **Assistant Professor**,Dept. of Physics and Astronomy, *University of California, Irvine*
2004-2007 **Postdoctoral Fellow**,Dept. of Physics, *University of Pennsylvania*

Education

1998-2003 **Ph.D.**, Department of Physics, *University of California at Berkeley*.
DZero Experiment, Advisor: Prof. Mark Strovink

1997–1998 **Fullbright Fellowship**, *Niels Bohr Institute*, Copenhagen, Denmark.
DELPHI experiment

1993–1997 **B.A.**, *Rice University*, Houston, Texas.
Majors: Physics and Computer Science
Presidential Honor Roll all eight semesters, Graduated *Magna Cum Laude*

Awards

2016 Fellow of the American Physical Society
2016 UC Irvine Chancellor's Award for Excellence in Fostering Undergraduate Research (supervisor)
2015 Webby Award for Experimental and Innovative App (CRAYFIS): `crayfis.io`
2013 UC Irvine Chancellor's Award for Excellence in Undergraduate Research (supervisor of awardee)
2010 Alfred P. Sloan Foundation Fellow
2007 DOE Outstanding Junior Investigator
1997 Fulbright Fellow
1997 *Magna Cum Laude* Graduation, Rice University
1993-1997 Max Roy Full-Tuition Scholarship, Rice University

Leadership and Service

2013-present Vice-chair of Department of Physics and Astronomy, UC Irvine

2012-13 Snowmass 2013, convenor Searches for New Particles

2013 Experimental Representative, Snowmass DPF Theory Panel

2012- Member, FNAL Tollestrup Award Committee, Chair (2013-)

2011- Reviewer, *Physics Letters B.*

2012- Reviewer, *Physical Review Letters*

2011,12 Review Panel, Dept of Energy Comparative Theory Review

2010-2011 Convenor, ATLAS Exotics Lepton+X group

2010-2013 Statistics Coordinator, ATLAS Exotic physics group

2008- Member, CDF Statistics Committee

2006-2007 Convenor, CDF Top Quark Mass group

Public Outreach

2018 Media appearances: Rice Magazine (link), Radio Live New Zealand (link)

2018 Presentation: "We Have No Idea", Cham and Whiteson, University of Virginia (Jan 24), NC Museum of Natural History (Jan 25 and Jan 27 and Jan 28), Secret Science Club of NYC (Jan 29), UT Austin (Feb 21), Texas A&M (Feb 22), Univ of Houston (Feb 24), Frontiers Lecture at Hayden Planetarium (Mar 12), Caveat NYC (Mar 14), Columbia Nevis (Mar 15), Aspen Center for Physics (Mar 28), Rutgers Univ (Apr 14), Arthur C Clarke Center at UCSD (May 8), San Diego State Univ (May 8)

2017 Popular Science Writing: Aeon (link), Scientific American (link), Physics World (link)

2017 Media appearances: Science Friday (link), Space.com (link), Chemistry World (link), Nature podcast (link), NPR's Here and Now (link), The Larry Meiller Show (link) , Progressive Spirit (link), Midnight in the Desert (link), Part-time Genius (link), Leonard Lopate Show (link), Unbound Worlds (link)

2017 Science Comics: SMBC (link), Wondermark (link)

2017 Video: "The Shape of Space", Reich, Cham, Whiteson (link)

2017 Video: "This Particle Breaks Time Symmetry", Muller, Cham, Whiteson (link)

2017 Video: "The Shape of Space", Reich, Cham, Whiteson (link)

2017 Video: "What We (Don't) Know About Dark Matter", Hanson, Cham, Whiteson (link)

2017 Video: "Strange Unexplained Cosmic Rays", Cowen, Cham, Whiteson (link)

2017 Book: Spanish "We have no idea", Cham and Whiteson, Oceano

2017 Book: Taiwanese "We have no idea", Cham and Whiteson, Commonwealth Publishing

2017 Book: Polish "We have no idea", Cham and Whiteson, Insignis

2017 Book: Dutch "We have no idea", Cham and Whiteson, Unieboek

2017 Book: UK "We have no idea", Cham and Whiteson, John Murray

2017 Book: "We have no idea", Cham and Whiteson, Riverhead (link)

2017 Presentation: "We have no idea", Cham and Whiteson, Caltech (May 9), Cellar Door Bookstore (May 11), JPL (May 15), Science on Tap (Portland, May 16), Quimby's Books (Chicago, May 18), Fermilab (Chicago, May 19), Town Hall (Seattle, May 20), Bristol (Jun 2), Hay Book Festival (Wales, Jun 3), Royal Institute of GB (London, Jun 5), How-To Academy (London, Jun 6), Blackwells of Edinburg (Jun 7), Univ of York (Jun 7), Blackwells of Oxford (Jun 8), Google Irvine (Jun 21), Google Mountainview (Jun 23), Politikens Boghallen of Copenhagen (Jul 17), Total Eclipse Festival (Aug 19), Science World of Vancouver BC (Sep 17), Univ of British Columbia (Sep 17), Vancouver Public Library (Sep 18), Brandeis (Sep 19), Boston Univ. (Sep 20), MIT (Sep 20), Northeastern (Sep 21), Harvard CfA (Sep 21), NIST (Sep 22), Dreamworks Animation (Sep 29), Univ. of Pittsburg (Oct 26), Ohio State (Oct 27), Univ of Illinois Chicago (Nov 1), Wisconsin Book Festival (Nov 2)

2016 Video: "Gravitational Waves Explained", Cham and Whiteson, (link)

2012 Video: "Higgs Boson Explained", Cham and Whiteson, (link)

2012 Video: "Extra Dimensions", Cham and Whiteson, (link)

2012 Video: "Dark Matter", Cham and Whiteson, (link)

Teaching

Fall 2007-8 Phys 234A: Elementary Particle Physics (Graduate)

Spring 2007-8 Phys 53: Introduction to C and Numerical Analysis

Fall 2009-10 Phys 7A: Classical Physics

Fall 2009-10 Phys 7LA: Classical Physics Lab

Fall 2010-11 Phys 7C: Classical Physics

Fall 2010-11 Phys 2: Math Methods for Physics

Winter 2010-11 Phys 7C: Classical Physics

Fall 2011-12 Phys 7C: Classical Physics

Fall 2011-12 Phys 2: Math Methods for Physics

Winter 2011-12 Phys 2: Math Methods for Physics

Spring 2011-12 Phys 223: Numerical Methods (Graduate)

Spring 2012-13 Phys 247: Experimental HEP Techniques (Graduate)

Fall 2013-14 Phys 7C: Classical Physics

Winter 2013-14 Phys 7C:Classical Physics

Spring 2013-14 Phys 247: Experimental HEP Techniques (Graduate)

Fall 2014-15 Phys 7C: Classical Physics

Spring 2014-15 Phys 247: Experimental HEP Techniques (Graduate)

Fall 2015-16 Phys 99: Freshman Seminar

Winter 2015-16 Phys 61a: Modern Physics

Spring 2015-16 Phys 61b: Modern Physics

Fall 2016-17 Phys 99: Freshman Seminar

Winter 2016-17 Phys 61a: Modern Physics

Postdoctoral Researchers

2017- Dr. Johanna Gramling, Co-supervisor
2015- Dr. Dan Guest, Supervisor
2010-2015 Dr. Ning Zhou, Supervisor
2011-2016 Dr. Andrew Nelson, Supervisor
2008-2011 Dr. Jianrong Deng
2008-2011 Dr. Mario Bondioli

Graduate Students, primary supervisor

2006-2011 Robert Porter (graduated)
2007-2012 Michael Werth (graduated)
2008-2013 Kanishka Rao (graduated)
2011-2016 Chase Shimmin (graduated)
2012-2017 Meghan Frate (graduated)
2013- Kevin Bauer
2016- Yvonne Ng
2016- Taylor Faucett
2016- Jeff Swaney
2017- Eric Albin

Graduate Students, other

2007-2012 Brokk Toggerson, Doctoral Committee
2008-2013 Stephen Farrell, Doctoral Committee
2009-2013 Matt Relich, Doctoral Committee

Undergraduate Students

2016- Derek Soeder
2015- Thomas Schmidt
2015- Edison Weik
2015- Luis Zagazeta
2015- Edward Goul
2014- Zepyour Khechadoorian
2014-15 Kyle Brodie
2014-16 Marcelo Autran
2014-15 Jamison Searles
2012-13 Michael Yen
2012-13 Mazin Khader
2012-13 Alan Truong
2012-14 Adam Johnstone
2011-13 Jared Vasquez

2011-12 Johnny Ho
2011 Matt Kelly
2011 John Naviaux
2010-11 Reza AmirArjomand
2008-10 Matthew Hickman
2008-10 Max Clark
2008-10 Eddie Quinlan

Conference Organization

Mar 2017 DM@LHC
Feb 2015 Aspen Winter Conf.
Aug 2012 SUSY2012, convenor Alternate/Exotics session
Feb 2012 Aspen Winter Conf.

Grants

2017-2022 Co-PI, NSF NRT for Machine Learning, $3M total
2016-2019 Co-PI, DOE Office of Science, $897k annually among 3 PIs
2012-2015 Co-PI, DOE Office of Science, $773k annually among 3 PIs
2012 PI, UCI Research Council, $3k
2007-2012 PI, DOE Outstanding Junior Investigator, $82k annually
2007-2012 Co-PI, DOE Office of Science, $588k annually among 3 PIs
2010-2011 PI, Alfred P. Sloan Foundation, $25k annually
2008 PI, UCI Research Council, $7k

References

Paul Tipton, Prof. of Physics, Yale University, paul.tipton@yale.edu
John Conway, Prof. of Physics, UC Davis, conway@physics.ucdavis.edu
Marumi Kado, LAL-Orsay, kado@lal.in2p3.fr
Stephane Willocq, Prof. of Physics, Amherst, stephane.willocq@cern.ch
Andrew Lankford, Prof. of Physics, UC Irvine, ajlankfo@uci.edu

Scientific Presentations

Feb 2018 Seminar, Rice University
Feb 2018 Seminar, Texas A&M University
Feb 2018 Colloquium, Texas A&M University
Feb 2018 Seminar, UT Austin
Jan 2018 Seminar, Univ of Virginia
Jan 2018 Seminar, Duke
Nov 2017 Colloquium, University of Illinois, Chicago

Jun 2017 Seminar, Oxford Physics
Jun 2017 Seminar, Imperial College London
May 2017 Colloquium, UC Riverside
Apr 2017 Colloquium, NYU
Oct 2016 Colloquium, Univ of Nijmegen
Jul 2016 Lecturer,iSTEP Physics Summer School, Beijing
May 2016 Invited Speaker, KITP UCSB
Apr 2016 Colloquium, CP3, University of South Denmark
Mar 2016 Colloquium, Univ. of Oregon
Mar 2016 Seminar, Univ. of Oregon
Mar 2016 Seminar, UC Santa Barbara
Jan 2016 Colloquium, The Ohio State University
Dec 2015 Invited Speaker, NIPS 2014
Oct 2015 Colloquium, UC Santa Cruz
Oct 2015 Colloquium, UC Irvine
Aug 2015 Public lecture, Aspen Center for Physics
Jul 2015 Wine and Cheese, Fermilab
Jul 2015 Seminar, LHC Physics Center, FermiLab
Mar 2015 Colloquium, Rutgers
Mar 2015 Seminar, NYU
Mar 2015 Seminar, Princeton
Mar 2015 Seminar, Brookhaven
Mar 2015 Seminar, Columbia Nevis Labs
Dec 2014 Invited Speaker, NIPS 2014
Oct 2014 Invited Speaker, UCI Datascience Kick-off Symposium
Oct 2014 Colloquium, UC Riverside
Sep 2014 Colloquium, San Diego State University
Aug 2014 Invited Plenary Speaker, Next steps in the Energy Frontier, FNAL (declined)
Aug 2014 Invited Plenary Speaker, Nature Guiding Theory Worksop, FNAL
Aug 2014 Invited Lecturer (Statistics), FNAL-CERN Hadron Collider Physics Summer School
Aug 2014 Invited Lecturer (Dark Matter), SLAC Summer Institute
Aug 2014 Invited Plenary Speaker, US ATLAS Physics Workshop, Univ. Washington (declined)
May 2014 Invited Plenary Speaker, Debates on the Nature of Dark Matter, Harvard
May 2014 Seminar, UC Davis
Apr 2014 Seminar, UC Irvine
Dec 2013 UBC theory workshop, invited
June 2013 Snowmass Energy Frontier Workshop, Univ of Washington
May 2013 KITP dark matter workshop, UC Santa Barbara
May 2013 KITP dark matter conference, UC Santa Barbara
Apr 2013 Invited Plenary Speaker, INPAC-MPRI
Apr 2013 Seminar, UCLA

Apr 2013 Seminar, UC Irvine
Mar 2013 Seminar, Univ of Zurich
Feb 2013 Seminar, FNAL
Jan 2013 Aspen Winter Conference, Invited Plenary Speaker (Fermi)
Jan 2013 Aspen Winter Conference, Invited Plenary Speaker (ATLAS)
Jan 2013 Theory Seminar, SLAC
Jan 2013 Keynote Speaker, Partners in Science Conference, San Diego
Jan 2013 Seminar, UC Santa Cruz
Jan 2013 DaMaSC, Caltech, Invited Plenary Speaker
Jan 2013 DaMaSC, Caltech, Invited Panel Member
Dec 2012 Seminar, UC San Diego
Nov 2012 Seminar, Caltech
Nov 2012 Artificial Intelligence/Machine Learning Seminar, UC Irvine
Sep 2012 Invited Panel Member, SAMSI Big Data meeting, Research Triangle Park, NC
Aug 2012 Aspen, invited seminar
Jul 2012 IDM conference, invited plenary presentation
May 2012 Seminar, Caltech
May 2012 Public Talk, Sigma Xi
Feb 2012 Seminar, UC Davis
Dec 2011 Heidelberg NP, invited plenary presentation
Dec 2011 NIPS 2011, invited plenary presentation
Oct 2011 Seminar, Univ. of Michigan
Oct 2011 Seminar, UC Irvine
Sep 2011 BLV conference, Gatlinberg TN, invited plenary presentation
Jul 2011 Colloquium, Aspen Center for Physics, invited
Apr 2011 Public Lecture, MIT Alumni of SoCal
Apr 2011 SUSY Recast Workshop UC Davis, invited presentation
Mar 2011 Seminar, Univ. of Pennsylvania
Mar 2011 Seminar, Princeton University
Dec 2010 West-Coast Theory Meeting, UC Irvine, invited presentation
Nov 2010 Colloquium, CSU Long Beach
Oct 2010 Colloquium, UC Irvine
Oct 2010 Public Lecture, Super-sized Science Initiative
Sep 2010 Seminar, ATLAS West-coast Forum, SLAC
Aug 2010 ICHEP conference, invited parallel presentation, *declined*
Jun 2010 Terascale workshop, University of Washington, invited plenary presentation
Jun 2010 PLANCK conference, invited plenary presentation
May 2010 BNL Forum, invited parallel presentation, session chair
Apr 2010 MC4BSM conference, Copenhagen, invited plenary presentation
Mar 2010 HEP Seminar, LAL Orsay
Mar 2010 Seminar, ATLAS West-coast Forum, SLAC

Feb 2010	HEP seminar, Rutherford Appleton Labs
Feb 2010	HEP seminar, Oxford University
Jan 2010	Beyond the 3rd Generation, NTU Taiwan, invited plenary presentation (CDF)
Jan 2010	Beyond the 3rd Generation, NTU Taiwan, invited plenary presentation (ATLAS)
Nov 2009	Top At Tevatron Workshop, UC Davis, invited plenary presentation
Nov 2009	HEP seminar, UC Davis
Nov 2009	HEP seminar, CalTech
Oct 2009	HEP seminar, UC Irvine
Mar 2009	CalTech Multivariate Workshop, invited plenary presentation
Feb 2009	Heidelberg Workshop, invited plenary presentation
Jun 2008	LHCb Collab Meeting, Invited plenary presentation
May 2008	HEP seminar, UCLA
Apr 2008	HEP seminar, Rice U.
Feb 2008	La Thuile conference, invited plenary presentation
Sep 2007	HEP seminar, UC Irvine
Mar 2006	Moriond-QCD conference, invited plenary presentation
Oct 2005	HEP seminar, CERN
Aug 2005	FNAL Wine and Cheese
Sep 2005	HEP Seminar, U. of Pennsylvania
Oct 2004	IEEE, Rome, invited parallel presentation
Nov 2003	HEP Seminar, U. of Chicago
Oct 2003	HEP Seminar, Purdue Univ.
Oct 2003	HEP Seminar, U. of Pennsylvania
May 2003	DPF conference, Philadelphia, invited parallel presentation
May 2003	APS conference, Philadelphia, parallel presentation
May 2002	APS conference, Albuquerque, parallel presentation
Jul 2001	Snowmass conference, parallel presentation

Publications

This is a partial list. For papers in large experimental collaborations, I only include those where I made a significant contribution.
A complete list of publications is available here

Journal Articles (Experimental Collaborations)

[1] V.M. Abazov et al. Measurement of the $t\bar{t}$ production cross section in $p\bar{p}$ collisions at $\sqrt{s}$ = 1.96-TeV in dilepton final states. *Phys.Lett.*, B626:55–64, 2005.

[2] K. Anikeev et al. CDF level 2 trigger upgrade. *IEEE Trans. Nucl. Sci.*, 53:653–658, 2006.

[3] A. Abulencia et al. Top quark mass measurement from dilepton events at CDF II. *Phys.Rev.Lett.*, 96:152002, 2006.

[4] A. Abulencia et al. Top quark mass measurement from dilepton events at CDF II with the matrix-element method. *Phys.Rev.*, D74:032009, 2006.

[5] A. Abulencia et al. Precision measurement of the top quark mass from dilepton events at CDF II. *Phys.Rev.*, D75:031105, 2007.

[6] T. Aaltonen et al. Search for Maximal Flavor Violating Scalars in Same-Charge Lepton Pairs in $p\bar{p}$ Collisions at $\sqrt{s}$ = 1.96-TeV. *Phys.Rev.Lett.*, 102:041801, 2009.

[7] T. Aaltonen et al. A Search for the Higgs Boson Produced in Association with $Z \to \ell^+\ell^-$ Using the Matrix Element Method at CDF II. *Phys.Rev.*, D80:071101, 2009.

[8] T. Aaltonen et al. A Search for the Associated Production of the Standard-Model Higgs Boson in the All-Hadronic Channel. *Phys.Rev.Lett.*, 103:221801, 2009.

[9] T. Aaltonen et al. Measurement of the top quark mass with dilepton events selected using neuroevolution at CDF. *Phys. Rev. Lett.*, 102:152001, 2009.

[10] T. Aaltonen et al. Search for New Bottomlike Quark Pair Decays Q Q-bar —> (t W-+) (t-bar W+-) in Same-Charge Dilepton Events. *Phys.Rev.Lett.*, 104:091801, 2010.

[11] T. Aaltonen et al. Search for heavy bottom-like quarks decaying to an electron or muon and jets in $p\bar{p}$ collisions at $\sqrt{s} = 1.96$ TeV. *Phys.Rev.Lett.*, 106:141803, 2011.

[12] T. Aaltonen et al. Search for High Mass Resonances Decaying to Muon Pairs in $\sqrt{s} = 1.96$ TeV $p\bar{p}$ Collisions. *Phys.Rev.Lett.*, 106:121801, 2011.

[13] T. Aaltonen et al. Search for new physics in high p_T like-sign dilepton events at CDF II. *Phys.Rev.Lett.*, 107:181801, 2011.

[14] T. Aaltonen et al. Search for Production of Heavy Particles Decaying to Top Quarks and Invisible Particles in $p\bar{p}$ collisions at $\sqrt{s} = 1.96$ TeV. *Phys.Rev.Lett.*, 106:191801, 2011.

[15] Georges Aad et al. Measurement of the top quark-pair production cross section with ATLAS in pp collisions at $\sqrt{s} = 7$ TeV. *Eur.Phys.J.*, C71:1577, 2011.

[16] Georges Aad et al. Inclusive search for same-sign dilepton signatures in pp collisions at sqrt(s) = 7 TeV with the ATLAS detector. *JHEP*, 1110:107, 2011.

[17] T. Aaltonen et al. Search for new phenomena in events with two Z bosons and missing transverse momentum in $p\bar{p}$ collisions at $\sqrt{s} = 1.96$ TeV. *Phys.Rev.*, D85:011104, 2012.

[18] Georges Aad et al. Search for pair-produced heavy quarks decaying to Wq in the two-lepton channel at $\sqrt{s} = 7$ TeV with the ATLAS detector. *Phys.Rev.*, D86:012007, 2012.

[19] Georges Aad et al. Search for same-sign top-quark production and fourth-generation down-type quarks in pp collisions at sqrt(s) = 7 TeV with the ATLAS detector. *JHEP*, 1204:069, 2012.

[20] Georges Aad et al. Search for down-type fourth generation quarks with the ATLAS detector in events with one lepton and hadronically decaying W bosons. *Phys.Rev.Lett.*, 109:032001, 2012.

[21] Georges Aad et al. Search for new particles decaying to ZZ using final states with leptons and jets with the ATLAS detector in $\sqrt{s} = 7$ TeV proton-proton collisions. *Phys.Lett.*, B712:331–350, 2012.

[22] T. Aaltonen et al. Search for a heavy particle decaying to a top quark and a light quark in $p\bar{p}$ collisions at $\sqrt{s} = 1.96$ TeV. *Phys.Rev.Lett.*, 108:211805, 2012.

[23] Georges Aad et al. Search for resonant top plus jet production in $t\bar{t}$ + jets events with the ATLAS detector in pp collisions at $\sqrt{s} = 7$ TeV. *Phys.Rev.*, D86:091103, 2012.

[24] T. Aaltonen et al. Search for a heavy vector boson decaying to two gluons in $p\bar{p}$ collisions at $\sqrt{s} = 1.96$ TeV. *Phys.Rev.*, D86:112002, 2012.

[25] Georges Aad et al. Search for dark matter candidates and large extra dimensions in events with a photon and missing transverse momentum in pp collision data at $\sqrt{s} = 7$ TeV with the ATLAS detector. *Phys.Rev.Lett.*, 110:011802, 2013.

[26] Georges Aad et al. Measurement of the ZZ production cross section and limits on anomalous neutral triple gauge couplings in proton-proton collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector. *Phys.Rev.Lett.*, 108:041804, 2012.

[27] Georges Aad et al. Measurement of ZZ production in pp collisions at $\sqrt{s} = 7$ TeV and limits on anomalous ZZZ and $ZZ\gamma$ couplings with the ATLAS detector. *JHEP*, 1303:128, 2013.

[28] T. Aaltonen et al. Search for a two-Higgs-boson doublet using a simplified model in $p\bar{p}$ collisions at $\sqrt{s} = 1.96$ TeV. *Phys.Rev.Lett.*, 110(12):121801, 2013.

[29] T. Aaltonen et al. Search for Pair Production of Strongly Interacting Particles Decaying to Pairs of Jets in $p\bar{p}$ Collisions at $\sqrt{s} = 1.96$ TeV. *Phys.Rev.Lett.*, 111(3):031802, 2013.

[30] Georges Aad et al. Search for dark matter in events with a hadronically decaying W or Z boson and missing transverse momentum in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector. *Phys.Rev.Lett.*, 112(4):041802, 2014.

[31] Georges Aad et al. Search for a Multi-Higgs Boson Cascade in $WWbb$ events with the ATLAS detector in pp collisions at $sqrts = 8$ TeV. *Phys.Rev.*, D89:032002, 2014.

[32] Georges Aad et al. Search for Invisible Decays of a Higgs Boson Produced in Association with a Z Boson in ATLAS. *Phys.Rev.Lett.*, 112:201802, 2014.

[33] Georges Aad et al. Search for dark matter in events with a Z boson and missing transverse momentum in pp collisions at $\sqrt{s}$=8 TeV with the ATLAS detector. *Phys.Rev.*, D90:012004, 2014.

[34] Georges Aad et al. Search for new particles in events with one lepton and missing transverse momentum in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector. 2014.

[35] Georges Aad et al. Search for new phenomena in events with a photon and missing transverse momentum in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector. *Phys. Rev.*, D91(1):012008, 2015. [Erratum: Phys. Rev.D92,no.5,059903(2015)].

[36] Georges Aad et al. Search for New Phenomena in Dijet Angular Distributions in Proton-Proton Collisions at $\sqrt{s} = 8$ TeV Measured with the ATLAS Detector. *Phys. Rev. Lett.*, 114(22):221802, 2015.

[37] Georges Aad et al. Search for Dark Matter in Events with Missing Transverse Momentum and a Higgs Boson Decaying to Two Photons in pp Collisions at $\sqrt{s} = 8$ TeV with the ATLAS Detector. *Phys. Rev. Lett.*, 115(13):131801, 2015.

[38] Georges Aad et al. Search for new phenomena in dijet mass and angular distributions from pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. *Phys. Lett.*, B754:302–322, 2016.

[39] Morad Aaboud et al. Search for dark matter produced in association with a hadronically decaying vector boson in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. *Phys. Lett.*, B763:251–268, 2016.

[40] Morad Aaboud et al. Search for new phenomena in dijet events using 37 fb^{-1} of pp collision data collected at $\sqrt{s}$ =13 TeV with the ATLAS detector. 2017.

[41] Morad Aaboud et al. Jet energy scale measurements and their systematic uncertainties in proton-proton collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. 2017.

Journal Articles (Phenomenology)

[42] Christian J. Flacco, Daniel Whiteson, and Matthew Kelly. Fourth generation quark mass limits in CKM-element space. *Phys.Rev.*, D83:114048, 2011.

[43] Shaouly Bar-Shalom, Arvind Rajaraman, Daniel Whiteson, and Felix Yu. Collider Signals of Maximal Flavor Violation: Same-Sign Leptons from Same-Sign Tops at the Tevatron. *Phys.Rev.*, D78:033003, 2008.

[44] Arvind Rajaraman and Daniel Whiteson. Discovering Majorana neutrinos produced via a Z boson at hadron colliders. *Phys.Rev.*, D81:071301, 2010.

[45] Christian J. Flacco, Daniel Whiteson, Tim M.P. Tait, and Shaouly Bar-Shalom. Direct Mass Limits for Chiral Fourth-Generation Quarks in All Mixing Scenarios. *Phys.Rev.Lett.*, 105:111801, 2010.

[46] Jared A. Evans, Ben Kilminster, Markus Luty, Daniel Whiteson, Ben Kilminster, et al. Searching For Resonances inside Top-like Events. *Phys.Rev.*, D85:055009, 2012.

[47] Johan Alwall, Mazin Khader, Arvind Rajaraman, Daniel Whiteson, and Michael Yen. Searching for Z' bosons decaying to gluons. *Phys.Rev.*, D85:115011, 2012.

[48] Ning Zhou, Daniel Whiteson, and Tim M.P. Tait. Limits on Four-Top Production from the ATLAS Same-sign Top-quark Search. *Phys.Rev.*, D85:091501, 2012.

[49] Kanishka Rao and Daniel Whiteson. Triangulating an exotic T quark. *Phys.Rev.*, D86:015008, 2012.

[50] Linda M. Carpenter, Andrew Nelson, Chase Shimmin, Tim M.P. Tait, and Daniel Whiteson. Collider searches for dark matter in events with a Z boson and missing energy. *Phys.Rev.*, D87(7):074005, 2013.

[51] Ning Zhou, David Berge, and Daniel Whiteson. Mono-everything: combined limits on dark matter production at colliders from multiple final states. *Phys.Rev.*, D87(9):095013, 2013.

[52] Ning Zhou, David Berge, LianTao Wang, Daniel Whiteson, and Tim Tait. Sensitivity of future collider facilities to WIMP pair production via effective operators and light mediators. 2013.

[53] Leonard Apanasevich, Suneet Upadhyay, Nikos Varelas, Daniel Whiteson, and Felix Yu. Sensitivity of potential future pp colliders to quark compositeness. 2013.

[54] Andy Nelson, Linda M. Carpenter, Randel Cotta, Adam Johnstone, and Daniel Whiteson. Confronting the Fermi Line with LHC data: an Effective Theory of Dark Matter Interaction with Photons. *Phys.Rev.*, D89:056011, 2014.

[55] Linda Carpenter, Anthony DiFranzo, Michael Mulhearn, Chase Shimmin, Sean Tulin, et al. Mono-Higgs: a new collider probe of dark matter. *Phys.Rev.*, D89:075017, 2014.

[56] Mohammad Abdullah, Eric Albin, Anthony DiFranzo, Meghan Frate, Craig Pitcher, et al. Systematically Searching for New Resonances at the Energy Frontier using Topological Models. *Phys.Rev.*, D89:095002, 2014.

[57] Nicolas Lopez, Linda M. Carpenter, Randel Cotta, Meghan Frate, Ning Zhou, et al. Collider Bounds on Indirect Dark Matter Searches: The WW Final State. *Phys.Rev.*, D89:115013, 2014.

[58] Ning Zhou, Zepyoor Khechadoorian, Daniel Whiteson, and Tim Tait. Bounds on Invisible Higgs boson Decays from $t\bar{t}H$ Production. 2014.

[59] Marcelo Autran, Kevin Bauer, Tongyan Lin, and Daniel Whiteson. Searches for dark matter in events with a resonance and missing transverse energy. *Phys. Rev.*, D92(3):035007, 2015.

[60] A. Nelson, P. Tanedo, and D. Whiteson. Limiting SUSY compressed spectra scenarios. *Phys. Rev.*, D93(11):115029, 2016.

[61] Chase Shimmin and Daniel Whiteson. Boosting low-mass hadronic resonances. *Phys. Rev.*, D94(5):055001, 2016.

[62] Mohammed Abdullah, Kevin Bauer, Luis Gutierrez, John Sandy, and Daniel Whiteson. Searching for spin-3/2 leptons. *Phys. Rev.*, D95(3):035008, 2017.

[63] Nathaniel Craig, Patrick Draper, Kyoungchul Kong, Yvonne Ng, and Daniel Whiteson. The unexplored landscape of two-body resonances. 2016.

Journal Articles (Astro)

[64] Daniel Whiteson, Michael Mulhearn, Chase Shimmin, Kyle Cranmer, Kyle Brodie, and Dustin Burns. Observing Ultra-High Energy Cosmic Rays with Smartphones. 2014.

[65] Arvind Rajaraman, Tim M.P. Tait, and Daniel Whiteson. Two Lines or Not Two Lines? That is the Question of Gamma Ray Spectra. *JCAP, accepted*, 2012.

[66] Daniel Whiteson. Disentangling Instrumental Features of the 130 GeV Fermi Line. *JCAP*, 1211:008, 2012.

[67] Kanishka Rao and Daniel Whiteson. Where are the Fermi Lines Coming From? *JCAP*, 1303:035, 2013.

[68] Daniel Whiteson. Searching for Spurious Solar and Sky Lines in the Fermi-LAT Spectrum. *Phys.Rev.*, D88(2):023530, 2013.

Journal Articles (Machine Learning)

[69] D Whiteson and N.A Naumann. Support vector regression as a signal discriminator in high energy physics. *Neurocomputing*, 55:251–264, 2003.

[70] S. Whiteson and D. Whiteson. Stochastic optimization for collision selection in high energy physics. *Association for the Advancement of Artificial Intelligence*, 292, 2007.

[71] S. Whiteson and D. Whiteson. Machine learning for event selection in high energy physics. *Engineering Appl. of Artificial Int.*, 2008.

[72] Pierre Baldi, Peter Sadowski, and Daniel Whiteson. Searching for Exotic Particles in High-Energy Physics with Deep Learning. *Nature Communications*, 2014.

[73] Pierre Baldi, Peter Sadowski, and Daniel Whiteson. Enhanced Higgs Boson to $\tau^+\tau^-$ Search with Deep Learning. *Phys.Rev.Lett.*, 114(11):111801, 2015.

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