

Tim M.P. Tait

(Updated: 10/1/2020)

Dept of Physics & Astronomy
UC Irvine
Mail Code: 4576
Irvine, CA 92697 USA

Phone: (949) 824-8304
Fax: (949) 824-2174
Email: ttait@uci.edu
Citizenship: dual Canada/U.S.

Academic Faculty Positions:

- 7/2019–present: Chair, Department of Physics & Astronomy, UC Irvine
- 7/2017–9/2019: Vice-Chair of Graduate Studies, Physics & Astronomy, UC Irvine
- 5/2013–present: Professor, Department of Physics & Astronomy, UC Irvine
- 7/2011–5/2013: Associate Professor, Dept. of Physics & Astronomy, UC Irvine
- 7/2009–7/2011: Assistant Professor, Dept. of Physics & Astronomy, UC Irvine
- 9/2007–6/2009: Assistant Professor, Department of Physics & Astronomy, Northwestern University (joint with ANL)
- 10/2004–6/2009: Assistant Physicist, HEP Division, Argonne National Laboratory

Post-doctoral Positions:

- 9/2002–9/2004: Research Associate, Theoretical Physics group, Fermi National Accelerator Laboratory
- 6/1999–8/2002: Research Associate, HEP Division, Argonne National Laboratory

Education:

- 1999: Ph.D. Physics, Michigan State University
Advisor: C.-P. Yuan
- 1995: M.Sc.. Physics, Michigan State University
- 1993: B.Sc. Physics, with honors, Summa cum laude,
University of California, San Diego

Awards and Fellowships:

- 2019: Distinguished Mid-Career Faculty Award for Research, UC Irvine.
- 2019: Mentorship Award, Division of Particles and Fields of the American Physical Society.
- 2017: Van der Waals Professor, University of Amsterdam
- 2017: Kavli Frontier Fellow, National Academy of Sciences.
- 2016: Friedrich Wilhelm Bessel Fellow, Alexander von Humboldt Foundation
- 2013: Fellow, American Physical Society
- 2013 – 2016: Chancellor’s Fellow Professor, UC Irvine
- 1999: Degree Completion Fellowship, Michigan State University
- 1993-1996: Michigan State University, Herbert T. Graham Scholar
- 1989: University of California, Regents, Merit, and Elizabeth Irvine Memorial Scholar

Grants Awarded:

- 2009: *Unravelling the Nature of EWSB and Dark Matter at Colliders*
\$50,000 (one year) funded by the DOE Outstanding Junior Investigator program. (Award relinquished upon leaving Northwestern).
- 2010-2013: *Unravelling the Nature of Dark Matter and EWSB at Colliders*
\$150,000 + \$ 30,000 (3 years) funded by the NSF as PY-0970171.
- 2013-2016: *Particle Physics and Cosmology in the LHC Era*
\$1,485,000 (3 years for 5 PIs + 1 year for 2 PI’s) funded by the NSF as PHY-1316792.
- 2016-2019: *Particle Physics and Cosmology in the LHC Era*
\$1,900,000 (7 PIs) funded by the NSF as PHY-1620638.
- 2019-2022: *Theoretical Particle Physics and Cosmology at UC Irvine*
\$2,130,000 (3 years for 7 PIs + 2 years for 1 PI) funded by the NSF as PHY-1915005.

Media and Public References:

38. *Commentary: On the (Ab)use of Comparisons in Recommendation Letters* published in *Physics Today*, October 1, 2020.
37. *Breaking New Ground in the Search for Dark Matter* CERN News, August, 2020.
36. *The Fifth Force* (in German) *Spektrum der Wissenschaft*, July, 2020.
35. *Strike4BlackLives* (<https://www.particlesforjustice.org>)
Covered in CBC News, Fox News, New York Times, Chicago Tribune, Nature, Science, Scientific American, Physics Today, Gizmodo, Symmetry Magazine, June, 2020.
34. *A Huge Cloud of Invisible Particles seems to be Missing from the Milky Way*, *Livescience.com*, April 13, 2020.
33. *A Zen-like Journey through the Mysteries of Physics*,
Book review of “Cosmic Koans”, published in *Physics Today*, November 5, 2019.
32. *How Close are We to Finding Dark Matter?*, *seeker.com*, March 28, 2019.
31. *Secrets of Dark Matter* (in Polish), *Urania - Postepy Astronomii*, February 25, 2019.
30. *Particle Physics is Doing Just Fine*
(coauthored with C. Prescod-Weinstein) *Slate Magazine*, January 31, 2019.
29. *Particles for Justice* (<https://www.particlesforjustice.org>)
Covered in CBC News, The Guardian, BBC, Wired, New Scientist, Gizmodo, The Wire, The Independent, La Repubblica (Italian), de Volksrant (Dutch), October, 2018.
28. *Physiker beleidigt Kolleginnen und wird suspendiert* (in German)
Der Spiegel, October 2, 2018.
27. *WIMP Alternatives Come Out of the Shadows* *APS Physics*, 2018.
26. *Dark Matter Recipe Calls for One Part Superfluid* *Quanta Magazine*, 2017.
25. *In Search for Unseen Dark Matter, Physicists turn to Shadow Realm* *Science*, 2017.
24. *Answers to the Biggest Mysteries May Lie Well Outside Traditional Paradigms*,
Nautilus Magazine, 2017.
23. *Evidence for a Fifth Force of Nature?* Radio interviews on: NPR Take Two, The Bill Kelly Show, Sputnik News, 2016.
22. *Has a Hungarian Physics Lab Found a Fifth Force of Nature?* *LA Times*, *Nature News*, *Scientific American*, *Popular Science*, *Rai Scienze*, *Quanta Magazine*, *Nautilus Magazine*, *National Post*, *Mother Jones*, *weather.com*, *IFLScience*, 2016–2017.
21. *Last Call: Will WIMPs Show Their Faces in the Latest Dark Matter Experiment?*
Scientific American, February 1, 2016.
20. *LHC Might Soon See Hints of a New Quark Dark Matter Particle*, *New Scientist*, December, 2015.

Media and Public References, continued:

19. *One Higgs is the Loneliest Number*, Symmetry Magazine, July 30, 2015.
18. *Miraculous WIMPs*, Symmetry Magazine, July 15, 2015.
17. *How the Experiment that Claimed to Detect Dark Matter Fooled Itself*, Medium.com, July 17, 2014.
16. *Searching High and Low for Dark Matter*, The Kavli Foundation, Scientific Computing, The Daily Galaxy, and Space.com, April 8, 2014.
15. *Science of the Big Bang Theory*, ASUCI Event, February 20, 2014.
14. *Four things you might not know about Dark Matter*, Symmetry Magazine, December 17, 2013.
13. *Bravo UCI: Eight Professors Celebrate Collaboration for the Nobel Prize*, OC Register, October 25, 2013.
12. *Chapman University Affiliate wins Physics Nobel Prize*, OC Register and OC Weekly, October 8, 2013.
11. *Scientists Celebrate their Roles in Physics Nobel* UCIrvine News, October 8, 2013.
10. *Hunting for the Dark Universe*, Physics Slam on Ice, Minneapolis, August 2, 2013.
9. *Hard Times for Theorists in a Post-Higgs World*, ScienceNews.org, June 29, 2013.
8. *Why Look for the Higgs?*, Public Lecture at SLAC/Youtube video/SLAC Today, June 18 2012 .
7. *Recontres de Moriond QCD 2012: Searches for Dark Matter, SUSY and other exotic particles*, CERN bulletin, March 5 2012.
6. *Dark Matter from a Fourth Dimension*, Through the Wormhole with Morgan Freeman (Science Channel), aired June 2011.
5. *Kuka Pyydyttää Higgsin?* (in Finnish), Tähdet Ja Avaruus Magazine, May 2010.
4. *Higgs in Space: Orbiting telescope could beat LHC*, New Scientist, issue 2738, December 2009 .
3. *Big Ideas, Small particles*, Science in Society Online Magazine, November 2008.
2. *The Truth about the Top Quark*, Interactions.org and Fermilab Today, September 9, 2004.
1. *It's an Echo from the Fifth Dimension*, New Scientist, issue 2350, July 2002 .

Academic Service:

- Chair, UC Irvine Department of Physics and Astronomy, 2019 - present.
- Vice-chair of Graduate Studies, UC Irvine Department of Physics and Astronomy, 2017 - 2019.
- Council on Academic Personnel, UC Irvine, 2018.
- UC Systemwide Assembly, 2015-2017.
- Reviewer, UC Presidential Postdoc Fellowships, 2017-2020.

Professional Service:

- Cosmic Frontier Convener, Snowmass 2021 Community Study, 2020-2021.
- Advisory Board Member, Kavli Institute for Theoretical Physics, 2019 - present.
- Department of Energy: Dark Sector Basic Research Needs Panel Core Member, 2018.
- General Member, Aspen Center for Physics, 2018 - present.
- Member-at-Large, American Association for the Advancement of Science, 2018 - 2022.
- Program Committee, Division of Particles & Fields, American Physical Society, 2018 - 2021.
- Fellow Selection Committee, Division of Particles & Fields, American Physical Society, 2017.
- Sakurai Dissertation Prize Selection Committee, Division of Particles & Fields, American Physical Society, 2014 - 2016.
- Department of Energy, High Energy Physics Committee of Visitors, September 2016.
- Convener, Dark Matter at the LHC Working Group, 2016 - present.
- International Advisory Board, Mainz Institute for Theoretical Physics, 2018 - present.
- Scientific Advisory Board, Theoretical Advanced Study Institute (TASI), 2017 - 2023.
- External Scientific Advisory Committee, VERITAS Experiment, 2013 - present.
- External Chair for Faculty Search Committee, TRIUMF, Canada, 2017.
- External grant reviewer for the NSF, DOE, NSERC (Canada), ISF (Israel), Humboldt (Germany), KAW (Sweden), and ERC (EU).

Service to Professional Journals:

- Editorial Fellow, Scipost, 2019–present.
- Editor-in-Chief, “Physics of the Dark Universe” Journal, 2017 – 2019.
- Editor, “Physics of the Dark Universe” Journal, 2012 – 2017.
- Referee for *Science Communications*, EPJC, JPG, PRD, PRL, PLB, JHEP, JCAP, and NPB.

Conference Organization:

- Co-organizer, “Progress After Impasse: New Frontiers in Dark Matter”, Aspen Center for Physics 2019.
- Co-Director, TASI-2011: The Dark Secrets of the Terrascale.
- Primary Organizer, DM@LHC, 2017.
- Organizer, TeV Particle Astrophysics Conference, August 25 - 28, 2013.
- Co-organizer, MITP Workshop “LHC First Results”, June 27 - July 27, 2016.
- Co-convenor : “Experimental Challenges for the LHC Run II : Exotic Physics”, Kavli Institute for Theoretical Physics, May 8 - 21, 2016.
- Co-organizer, MITP Workshop “Effective Theories and Dark Matter”, March 16-27, 2015.
- International Program Advisory Committee for the International Conference on Cosmic Rays (ICRC), DM@LHC, and TeV Particle Astrophysics conferences.
- Co-convenor, Dark Matter Session of CIPANP, May 19 - 24, 2015.
- Organizer, “Snowmass on the Pacific” Meeting, KITP, 2013.
- Co-convenor, Snowmass Cosmic Frontier subgroup 1: Direct Detection, 2012-2013.
- Co-organizer, “The LHC Shows the Way”, Aspen Center for Physics 2012.
- Organizer, Argonne Theory Institute 2000, 2001, 2002, 2005, 2006, and 2009.
- Working Group Convener: TeV4LHC, Snowmass 05, ALCW 2006, DPF 2006, and ILCW 06, 07, & 12 Workshops.
- Co-organizer, CERN-Fermilab Summer School for Hadron Collider Physics 2008.
- Organizer, Workshop on Topologies for Early LHC Searches, SLAC 2010.

Journal Publications:

- 116.** *Dynamical Evidence For a Fifth Force Explanation of the ATOMKI Nuclear Anomalies*
(with J. Feng and C. Verhaaren), Accepted by PRD [arXiv:2006.01151].
- 115.** *Dark Matter Freeze Out during an Early Period of QCD Confinement*
(with D. Berger, S. Ipek, and M. Waterbury) JHEP **07** 192 (2020) [arXiv:2004.06727].
- 114.** *QCD Baryogenesis*
(with D. Croon, J. Howard, and S. Ipek)
Phys. Rev. **D101** 055042 (2020) [arXiv:1911.01432].
- 113.** *Multi-scale Mining of Kinematic Distributions with Wavelets*
(with B. Lillard, T. Plehn, and A. Romero)
SciPost Physics 8, 043 (2020) [arXiv:1906.10890].
- 112.** *An Emergent Solution to the Strong CP Problem*
(with J. Arakawa and A. Rajaraman)
Phys. Rev. Lett. **123** no.16, 161602 (2019) [arXiv:1903.08820].
- 111.** *Direct Detection and LHC Constraints on a t -Channel Model of Majorana Dark Matter at One Loop*
(with K. Mohan, D. Sengupta, B. Yan, and C.-P. Yuan)
JHEP **1905** 115 (2019) [arXiv:1903.05650].
- 110.** *Six Top Messages of New Physics at the LHC*
(with H. Han, L. Huang, T. Ma, J. Shu, and Y. Wu) JHEP **1910** 008 (2019) [arXiv:1812.11286].
- 109.** *A High Quality Composite Axion*
(with B. Lillard) JHEP **1811** 199 (2018) [arXiv:1811.03089].
- 108.** *An Early Cosmological Period of QCD Confinement*
(with S. Ipek) Phys. Rev. Lett. **122** no.11, 112001 (2019) [arXiv:1811.00559].
- 107.** *The τ Magnetic Dipole Moment at Future Lepton Colliders*
(with J. Howard, R. Riley, and A. Rajaraman) LHEP **2** no.5 (2019) [arXiv:1810.09570].
- 106.** *A New Era in the Search for Dark Matter*
(with G. Bertone) Nature **562**, 51 (2018) [arXiv:1810.01668].

Journal Publications, Continued:

- 105.** *The Flavor of Cosmology*
(with B. Lillard, M. Ratz, and S. Trojanowski)
JCAP **1807**, 056 (2018) [arXiv:1804.03662].
- 104.** *Better Higgs-CP Tests Through Information Geometry*
(with J. Brehmer, F. Kling, and T. Plehn)
Phys. Rev. **D97** 095017 (2018) [arXiv:1712.02350].
- 103.** *A Composite Axion from a Supersymmetric Product Group*
(with B. Lillard) JHEP **11** 2017:05 (2017) [arXiv:1707.04261].
- 102.** *Asymmetric Dark Matter and Leptogenesis from $SU(2)$ -Lepton*
(with B. Fornal, Y. Shirman, and J. West)
Phys. Rev. **D96**, 035001 (2017) [arXiv:1703.00199].
- 101.** *Saving the MSSM from the Galactic Center Excess*
(with A. Butter, T. Plehn, and S. Murgia)
Phys. Rev. **D96**, 035036 (2017) [arXiv:1612.07115].
- 100.** *Dark Matter Interpretation of the Fermi-LAT Observation Toward the Galactic Center*
(with C. Karwin, T. Porter, S. Murgia, and P. Tanedo)
Phys. Rev. **D95**, 103005 (2017) [arXiv:1612.05687].
- 99.** *$H \rightarrow \tau^+\tau^-\gamma$ as a Probe of the τ Magnetic Dipole Moment*
(with I. Galon and A. Rajaraman) JHEP **1612** 111 (2016) [arXiv:1610.01601].
- 98.** *Light Weakly Coupled Axial Forces: Models, Constraints, and Projections*
(with Y. Kahn, G. Krnjaic, and S. Mishra-Sharma)
JHEP **1705** 002 (2017) [arXiv:1609.09072].
- 97.** *Particle Physics Models for the 17 MeV Anomaly in Beryllium Nuclear Decays*
(with J. Feng, B. Fornal, I. Galon, S. Gardner, J. Smolinsky, and P. Tanedo)
Phys. Rev. **D95**, 035017 (2017) [arXiv:1608.03591].
- 96.** *Mono-jet Signatures of Gluphilic Scalar Dark Matter*
(with R. Godbole, G. Mendiratta, and A. Shivaji)
Phys. Lett. **B772**, 93 (2017) [arXiv:1605.04756].
- 95.** *Evidence for a Protophobic Fifth Force from ^8Be Nuclear Transitions*
(with J. Feng, B. Fornal, I. Galon, S. Gardner, J. Smolinsky, and P. Tanedo)
Phys. Rev. Lett. **117**, 071803 (2016) [arXiv:1604.07411].
- 94.** *Effective Field Theory of Dark Matter: a Global Analysis*
(with S. Liem, G. Bertone, F. Calore, R. Ruiz de Austri, R. Trotta, and C. Weniger)
JHEP **1609** 077 (2016) [arXiv:1603.05994].

Publications (continued):

- 93.** *On Mono- W Signatures in Spin-1 Simplified Models*
(with U. Haisch and F. Kahlhoefer) Phys. Lett. **B760**, 207 (2016) [arXiv:1603.01267].
- 92.** *Kaluza-Klein Gluons at 100 TeV: NLO Corrections*
(with B. Lillard and P. Tanedo) Phys. Rev. **D94**, 054012 (2016) [arXiv:1602.08622].
- 91.** *Triplet-Quadruplet Dark Matter*
(with Z. Yu) JHEP **1603**, 204 (2016) [arXiv:1601.01354].
- 90.** *Vector Dark Matter through a Radiative Higgs Portal*
(with A. DiFranzo and P. Fox) JHEP **1604**, 135 (2016) [arXiv:1512.06853].
- 89.** *Dark Matter from Unification of Color and Baryon Number*
(with B. Fornal) Phys. Rev. **D93**, 075010 (2016) [arXiv:1511.07380].
- 88.** *Baryon Number as the Fourth Color*
(with B. Fornal and A. Rajaraman)
Phys. Rev. **D92**, 055022 (2015) [arXiv:1506.06131].
- 87.** *A Simplified Model for Dark Matter Interacting Primarily with Gluons*
(with R. Godbole and G. Mendiratta) JHEP **1508** 064 (2015) [arXiv:1506.01408].
- 86.** *Searching for Lepton Flavor Violation at a Future High Energy e^+e^- Collider*
(with B. Murakami) Phys. Rev. **D91**, 015002 (2015) [arXiv:1410.1485].
- 85.** *Strongly interacting dark matter: Self-interactions and keV lines*
(with K. Boddy, J. Feng, M. Kaplinghat, and Y. Shadmi)
Phys. Rev. **D90**, 095016 (2014) [arXiv:1408.6532].
- 84.** *Bounds on Invisible Higgs boson Decays from $t\bar{t}H$ Production*
(with N. Zhou, Z. Khechadorian, and D. Whiteson)
Phys. Rev. Lett. **113**, 151801 (2014) [arXiv:1408.0011]. **Editor's Choice Article.**
- 83.** *Scattering of Dark Particles with Light Mediators*
(with D. Soper, M. Spannowsky, and C. Wallace) Phys. Rev. **D90**, 115005 (2014)
[arXiv:1407.2623].
- 82.** *Hidden On-Shell Mediators for the Galactic Center Gamma-Ray Excess*
(with M. Abdullah, A. DiFranzo, A. Rajaraman, P. Tanedo, and A. Wijangco)
Phys. Rev. **D90**, 035004 (2014) [arXiv:1404.6528].
- 81.** *Tagging Boosted W s with Wavelets*
(with V. Rentala and W. Shepherd)
JHEP **1408**, 042 (2014) [arXiv:1404.1929].
- 80.** *Self-Interacting Dark Matter from a Non-Abelian Hidden Sector*
(with K. Boddy, J. Feng, and M. Kaplinghat)
Phys. Rev. **D89**, 115017 (2014) [arXiv:1402.3629].

Publications (continued):**79.** *Criteria for Natural Hierarchies*

(with A. De Gouvea and D. Hernandez)

Phys. Rev. **D89**, 115005 (2014) [arXiv:1402.2658].**78.** *Discoverability of a Z' at a Future High Energy e^+e^- Collider*(with D. Kapukchyan) J. Phys. **G41**, 075011 (2014) [arXiv:1312.3377]. [2014 Highlights Article.](#)**77.** *Simplified Models for Dark Matter Interacting with Quarks*

(with A. DiFranzo, K. Nagao, and A. Rajaraman)

JHEP **1311**, 014 (2013) [arXiv:1308.2679].**76.** *The Pitfalls of Dark Crossings*

(with S. Profumo and W. Shepherd)

Phys. Rev. **D88**, 056018 (2013) [arXiv:1307.6277].**75.** *Particle Physics Implications and Constraints on Dark Matter Interpretations of the CDMS Signal*

(with R. Cotta, A. Rajaraman, and A. Wijangco)

Phys. Rev. **D90**, 013020 (2014) [arXiv:1305.6609].**74.** *Dark Matter and Vector-like Leptons From Gauged Lepton Number*

(with P. Schwaller, and R. Vega-Morales)

Phys. Rev. **D88**, 035001 (2013) [arXiv:1305.1108].**73.** *Gamma Rays from Top-Mediated Dark Matter Annihilations*

(with C. Jackson, G. Servant, G. Shaughnessy, and M. Taoso)

JCAP **1307**, 021 (2013) 006 [arXiv:1303.14717].**72.** *Gamma-ray lines and One-Loop Continuum from s-channel Dark Matter Annihilations*

(with C. Jackson, G. Servant, G. Shaughnessy, and M. Taoso)

JCAP **1307**, 021 (2013) 021 [arXiv:1302.1802].**71.** *Collider searches for dark matter in events with a Z boson and missing energy*

(with L. Carpenter, A. Nelson, C. Shimmin, and D. Whiteson)

Phys. Rev. **D87**, 074005 (2013) [arXiv:1212.3352].**70.** *Effective Theories of Gamma-ray Lines from Dark Matter Annihilation*

(with A. Rajaraman and A. Wijangco),

Phys. Dark Univ. **2**, 17 (2013) [arXiv:1211.7061].**69.** *Strange Couplings to the Higgs*

(with Y. Meng, Z. Surujon, and A. Rajaraman),

JHEP **1302**, 138 (2013) [arXiv:1210.3373].

Publications (continued):

- 68.** *Searches with Mono-Leptons*
(with Y. Bai), Phys. Lett. **B723**, 384 (2013) [arXiv:1208.4361].
- 67.** *Two Lines or Not Two Lines? That is the Question of Gamma Ray Spectra*
(with A. Rajaraman, and D. Whiteson), JCAP **1209**, 003 (2012) [arXiv:1205.4723].
- 66.** *Limits on Four-Top Production from the ATLAS Same-sign Top-quark Search*
with N. Zhou and D. Whiteson) Phys. Rev. **D85**, 091501 (2012) [arXiv:1203.5862]
- 65.** *Magnetic Fluffy Dark Matter*
(with K. Kumar and A. Menon), JHEP **1202**, 131 (2012) [arXiv:1111.2336]
- 64.** *Inelastic Dark Matter at the LHC*
(with Y. Bai), Phys. Lett. **B710**, 335 (2012) [arXiv:1109.4144]
- 63.** *Collisions of Jets of Particles from Active Galactic Nuclei with Neutralino Dark Matter*
(with A. Rajaraman and J. Huang) JCAP **1205**, 027 (2012) [arXiv:1109.2587]
- 62.** *LHC Bounds on Interactions of Dark Matter*
(with A. Rajaraman, W. Shepherd, and A. Wijangco),
Phys. Rev. **D84**, 095013 (2011) [arXiv:1108.1196]
- 61.** *Asymmetric Leptons for Asymmetric Tops*
(with A. Rajaraman and Z. Surujon), [arXiv:1104.0947]
- 60.** *A_{FB}^t Meets LHC*
(with J. Hewett, J. Shelton, M. Spannowsky, and M. Takeuchi),
Phys. Rev. **D84**, 054005 (2011) [arXiv:1103.4618]
- 59.** *Collider Constraints on Dipole-Interacting Dark Matter*
(with J. Fortin), Phys. Rev. **D85**, 063506 (2012) [arXiv:1103.3289]
- 58.** *Interpreting Dark Matter Direct Detection Independently of the Local Velocity and Density Distribution*
(with P. Fox and G. Kribs), Phys. Rev. **D83**, 034007 (2011) [arXiv:1011.1910].
- 57.** *Particle Physics Implications for CoGeNT, DAMA and Fermi*
(with M. Buckley and D. Hooper),
Phys. Lett. **B702**, 216 (2011) [arXiv:1011.1499].
- 56.** *Gamma Ray Lines from a Universal Extra Dimension*
(with G. Bertone, C. Jackson, G. Shaughnessy, and A. Vallinotto),
JCAP **1203**, 020 (2012) [arXiv:1009.5107].
- 55.** *CoGeNT, DAMA and Light Neutralino Dark Matter*
(with A. Belikov, J. Gunion, and D. Hooper),
Phys. Lett. **B705**, 82 (2011) [arXiv:1009.0549].

Publications (continued):

- 54.** *Gamma Ray Line Constraints on Effective Theories of Dark Matter*
(with J. Goodman, M. Ibe, A. Rajaraman, W. Shepherd, and H. Yu),
Nucl. Phys. **B844**, 55 (2011) [arXiv:1009.0008].
- 53.** *Constraints on Dark Matter from Colliders*
(with J. Goodman, M. Ibe, A. Rajaraman, W. Shepherd, and H. Yu),
Phys. Rev. **D82** 116010 (2010), [arXiv:1008.1783].
- 52.** *Constraints on Light Majorana Dark Matter from Colliders*
(with J. Goodman, M. Ibe, A. Rajaraman, W. Shepherd, and H. Yu),
Phys. Lett. **B695** 185 (2011), [arXiv:1005.1286].
- 51.** *Direct Mass Limits for Chiral Fourth Generation Quarks in All Mixing Scenarios*
(with C. Flacco, D. Whiteson, and S. Bar-Shalom),
Phys. Rev. Lett. **105**, 111801 (2010) [arXiv:1005.1077].
- 50.** *Beautiful Mirrors at the LHC*
(with K. Kumar, W. Shepherd, and R. Vega-Morales),
JHEP **1008**, 052 (2010) [arXiv:1004.4895].
- 49.** *Maverick Dark Matter at Colliders*
(with M. Beltran, D. Hooper, E. Kolb, and Z. Krusberg),
JHEP **1009**, 037 (2010) [arXiv:1002.4137].
- 48.** *New Physics at the LHC*
(with D. Morrissey and T. Plehn), Phys. Rept. **515**, 1 (2012) [arXiv:0912.3259].
- 47.** *Higgs in Space!*
(with C. Jackson, G. Shaughnessy, G. Servant, and M. Taoso),
JCAP **1004**, 004 (2010) [arXiv:0912.0004].
- 46.** *Explorations of the Top Quark Forward-Backward Asymmetry at the Tevatron*
(with J. Shu and K. Wang), Phys. Rev. **D81**, 034012 (2010) [arXiv:0911.3237].
- 45.** *Neutralinos in extensions of the minimal supersymmetric standard model as the source of the PAMELA positron excess*
(with D. Hooper), Phys. Rev. **D80**, 055028 (2009) [arXiv:0906.0362].
- 44.** *The WIMP Forest: Indirect Detection of a Chiral Square*
(with G. Bertone, C. Jackson, G. Shaughnessy, and A. Vallinotto),
Phys. Rev. **D80**, 023512 (2009) [arXiv:0904.1442].
- 43.** *Manifestations of Top Compositeness*
(with K. Kumar and R. Vega-Morales), JHEP **0905**, 022 (2009) [arXiv:0901.3808].
- 42.** *WIMPonium*, (with W. Shepherd and G. Zaharijas),
Phys. Rev. **D79**, 055022 (2009) [arXiv:0901.2125].

Publications (continued):

- 41.** *Seeking Sgluons*
(with T. Plehn), J. Phys. **G36**, 075001 (2009) [arXiv:0810.3919].
- 40.** *Top Compositeness at the Tevatron and LHC*
(with B. Lillie and J. Shu), JHEP **0804**, 087 (2008) [arXiv:0712.3057].
- 39.** *Enhanced Rare Pion Decays from an MeV Model of Dark Matter*
(with Y. Kahn and M. Schmitt), Phys. Rev. **D78**, 115002 (2008) [arXiv:0712.0007].
- 38.** *Kaluza-Klein Gluons as a Diagnostic of Warped Models*
(with B. Lillie and J. Shu), Phys. Rev. **D76**, 115016 (2007), [arXiv:0706.3960].
- 37.** *Four Generations and Higgs Physics*
(with G. Kribs, T. Plehn, and M. Spannowsky), Phys. Rev. **D76**, 075016 (2007), [arXiv:0706.3718].
- 36.** *Testing Grand Unification at the (S)LHC*
(with D. Rainwater), Phys. Rev. **D75**, 115014 (2007), [hep-ph/0701093].
- 35.** *Baryogenesis from an Earlier Phase Transition*
(with J. Shu and C. Wagner), Phys. Rev. **D75**, 063510 (2007), [hep-ph/0610375].
- 34.** *Measuring the W - t - b Interaction at the ILC*
(with P. Batra), Phys. Rev. **D74**, 054021 (2006), [hep-ph/0606068].
- 33.** *Proton Lifetime and Baryon Number Violating Signatures at the LHC in Gauge Extended Models*
(with D.E. Morrissey, and C.E.M. Wagner), Phys. Rev. **D72**, 095003 (2005), [hep-ph/0508123].
- 32.** *A Fat Higgs with a Fat Top*
(with A. Delgado), JHEP **0507**, 023 (2005) [hep-ph/0504224].
- 31.** *Warped Fermions and Precision Tests*
(with M. Carena, A. Delgado, E. Ponton, and C.E.M. Wagner), Phys. Rev. **D71**, 015010 (2005) [hep-ph/0410344].
- 30.** *Z' Gauge Bosons at the Tevatron*
(with M. Carena, A. Daleo, and B. Dobrescu), Phys. Rev. **D70**, 093009 (2004) [hep-ph/0408098].
- 29.** *Running into New Territory in SUSY Parameter Space*
(with P. Batra, A. Delgado, and D.E. Kaplan), JHEP **0406**, 032 (2004) [hep-ph/0404251].
- 28.** *The Higgs Mass Bound in Gauge Extensions of the Minimal Supersymmetric Standard Model*
(with P. Batra, A. Delgado, and D.E. Kaplan), JHEP **0402**, 043 (2004) [hep-ph/0309149].

Publications (continued):

- 27.** *The Radionactive Universe*
(with E. Kolb and G. Servant), JCAP **07**, 008 (2003) [hep-ph/0306159].
- 26.** *Squark Mixing in Electron-Positron Reactions*
(with E. Berger and J. Lee), Phys. Rev. **D69**, 055003 (2004) [hep-ph/0306110].
- 25.** *Precision Electroweak Data and Unification of Couplings in Warped Extra Dimensions*
(with M. Carena, A. Delgado, E. Ponton, and C.E.M. Wagner),
Phys. Rev. **D68**, 035010 (2003) [hep-ph/0305188].
- 24.** *Opaque Branes in Warped Backgrounds*
(with M. Carena, E. Ponton, and C.E.M. Wagner), Phys. Rev. **D67**, 096006 (2003)
[hep-ph/0212307].
- 23.** *Elastic Scattering and Direct Detection of Kaluza-Klein Dark Matter*
(with G. Servant), New Journal of Physics **4**, 99 (2002) [hep-ph/0209262].
- 22.** *Branes and Orbifolds are Opaque*
(with M. Carena and C.E.M. Wagner), Acta Physica Polonica **B33 (9)**, 2355 (2002)
[hep-ph/0207056].
- 21.** *Is the Lightest Kaluza-Klein Particle a Viable Dark Matter Candidate?*
(with G. Servant), Nucl. Phys. **B650**, 391 (2003) [hep-ph/0206071].
- 20.** *Higgs Boson Decay into Hadronic Jets*
(with E. Berger, C.-W. Chiang, J. Jiang and C.E.M. Wagner), Phys. Rev. **D66**,
095001 (2002) [hep-ph/0205342].
- 19.** *Probing Heavy Higgs Boson Models with a TeV Linear Collider*
(with D. Choudhury and C.E.M. Wagner), Phys. Rev. **D65**, 115007 (2002) [hep-
ph/0110126].
- 18.** *New Tools for Fermion Masses from Extra Dimensions*
(with D.E. Kaplan), JHEP **0111**, 51 (2001) [hep-ph/0110126].
- 17.** *Beautiful Mirrors and Precision Electroweak Data*
(with D. Choudhury and C.E.M. Wagner), Phys. Rev. **D65**, 053002 (2002) [hep-
ph/0109097].
- 16.** *Top Quark Seesaw, Vacuum Structure, and Electroweak Precision Constraints*
(with H.-J. He and C.T. Hill), Phys. Rev. **D65**, 055006 (2002) [hep-ph/0108041].
- 15.** *Low Energy Supersymmetry and the Tevatron Bottom Quark Cross Section*
(with E.L. Berger, B.W. Harris, D.E. Kaplan, Z. Sullivan and C.E.M. Wagner),
Phys. Rev. Lett. **86**, 4231 (2001) [hep-ph/0012001].

Publications (continued):

- 14.** *Single Top Production as a Window to Physics Beyond the Standard Model*
(with C.-P. Yuan), Phys. Rev. **D63**, 014018 (2001) [hep-ph/0007298].
- 13.** *Next-to-Leading order SUSY QCD predictions for Associated Production of Gauginos and Gluinos*
(with E.L. Berger and M. Klasen), Phys. Rev. **D62**, 095014 (2000) [hep-ph/0005196].
- 12.** *Supersymmetry Breaking, Fermion Masses, and a Small Extra Dimension*
(with D.E. Kaplan), JHEP **0006**, 020 (2000) [hep-ph/0004200].
- 11.** *New Top-flavor Models with Seesaw Mechanism*
(with H.-J. He and C.-P. Yuan), Phys. Rev. **D62**, 011702 (2000) [hep-ph/9911266].
- 10.** *The tW^- Mode of Single Top Production*
Phys. Rev. **D61**, 034001 (2000) [hep-ph/9909352].
- 9.** *Associated Production of Gauginos and Gluinos at Hadron Colliders in Next-to-Leading Order SUSY-QCD*
(with E.L. Berger and M. Klasen), Phys. Lett. **B459**, 165 (1999) [hep-ph/9902350].
- 8.** *Probing Higgs Bosons with Large Bottom Yukawa Couplings at Hadron Colliders*
(with C. Balazs, J.L. Diaz-Cruz, H.-J. He, and C.-P. Yuan),
Phys. Rev. **D59**, 055016 (1999) [hep-ph/9807349].
- 7.** *Scale Dependence of Squark and Gluino Production Cross Sections*
(with E.L. Berger and M. Klasen), Phys. Rev. **D59**, 074024 (1999) [hep-ph/9807230].
- 6.** *Higgs Boson with Large Bottom Yukawa Coupling at the Tevatron and LHC,*
(with J.L. Diaz-Cruz, H.-J. He, and C.-P. Yuan), Phys. Rev. Lett. **80**, 4641 (1998)
[hep-ph/9802294].
- 5.** *The Phenomenology of Single Top Quark Production at the Fermilab Tevatron*
(with C.-P. Yuan), [hep-ph/9710372].
- 4.** *Anomalous $W^+W^-t\bar{t}$ Couplings at the e^+e^- Linear Collider*
(with F. Larios and C.-P. Yuan), Phys. Rev. **D57**, 3106 (1998) [hep-ph/9709316].
- 3.** *Anomalous t - c - g : The Connection between Single Top Production and Top Decay*
(with C.-P. Yuan), Phys. Rev. **D55**, 3106 (1998) [hep-ph/9709316].
- 2.** *A Model of Strong Flavor Dynamics for the Top Quark*
(with E. Malkawi and C.-P. Yuan), Phys. Lett. **B385**, 304 (1996) [hep-ph/9603349].
- 1.** *Top Quark-Charmed Quark Strong Flavor-Changing Neutral Currents at the Fermilab Tevatron*
(with E. Malkawi), Phys. Rev. **D54**, 5758 (1996) [hep-ph/9511337].