Curriculum Vitae

Takemichi Okui
(he, him, his)

Professor of Physics

CONTACT INFORMATION

Department of Physics
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EDUCATION

05/2003: Ph.D. in Physics, University of California, Berkeley.
Thesis Advisor: Lawrence J. Hall.
Thesis Title: "Physics beyond the Standard Model from extra dimensions."
03/1998: B.Sc. in Physics, Hokkaido University, Japan.

ACADEMIC POSITIONS

2020–present	Professor, Department of Physics, Florida State University.
2018–present	Associate Researcher, Theory Group, KEK, Japan.
2015–2020	Associate Professor, Department of Physics, Florida State University.
2009–2015	Assistant Professor, Department of Physics, Florida State University.
2006–2009	Research Associate, Department of Physics, jointly appointed by Johns Hopkins University and University of Maryland, College Park.
2003–2006	Research Associate, Department of Physics, Boston University.
2001–2003	Graduate Student Research Assistant, Particle Theory Group, Department of Physics, University of California, Berkeley.
1998–2001	Graduate Student Instructor, Department of Physics, University of California, Berkeley.

HONORS and AWARDS

04/2017	Developing Scholar Award, Florida State University.
04/2016	University Teaching Award, Florida State University.
04/2016	PAI Award for Excellence in Research and Teaching, Department of Physics, Florida State University.
1998–1999	Block Grant Fellowship, University of California, Berkeley.

GRANTS AWARDED

01/01/2023–05/31/2025	$21,000 as supplement to the DOE grant DE-SC0010102 below.
07/01/2022–05/31/2025	The DOE grant (DE-SC0010102) renewed with 3-year total = $2,720,000, of which $960,000 for the theory group ($\approx \$80,000$ per year per (co-)PI).
04/01/2021–03/31/2025	A Japan Society for the Promotion of Science (JSPS) grant, 4-year total = JPY 12,000,000, shared with 3 other (co-)PIs.
09/01/2019–03/31/2022	The DOE grant (DE-SC0010102) renewed with 3-year total = $2,247,000, of which $732,000 for the theory group ($\approx \$98,000$ per year for myself).
07/01/2017–06/30/2018	FSU Developing Scholar Award, $10,000.
04/01/2016–03/31/2019	A DOE grant (DE-SC0010102), 3-year total = $1,810,000, of which $630,000 for the theory group ($\approx \$105,000$ per year for myself).
05/01/2013–03/31/2016	A DOE grant (DE-FG02-13ER41942), 3-year total = $2,071,000, of which $790,000 is for the theory group ($\approx \$75,000$ per year for myself).
10/01/2011–09/01/2012	NSF LHC Theory Initiative Award, $40,000.
07/01/2011–04/31/2013	A single-PI DOE grant ("Physics Beyond the Standard Model in the LHC Era") approved for $80,000 per year on April 28, 2011. The grant was subsequently rolled over to the umbrella grant (DE-FG02-97ER41022) on July 1, 2011.
05/10/2010–08/06/2010	FSU First Year Assistant Professor Award, $17,000.

GRADUATE STUDENTS SUPERVISED

Kevin Liguori,	2023–present
Vazha Loladze,	2018–2023, Ph.D., 05/2023.
Arash Yunesi,	2014–2019, Ph.D., 07/2019.
Karoline Köpp,	2009–2013, Ph.D., 03/2013.

POSTDOCS MENTORED

Mitrajyoti Ghosh,	08/2023–present
Taehyun Jung,	10/2019–08/2022.
Sabyasachi Chakraborty,	10/2018–08/2021.
Prerit Jaiswal,	09/2012–08/2014.
Alejandro Jenkins,	09/2009–08/2012.

TEACHING EXPERIENCES

At Florida State University:

Spring,	2023–present	PHZ 5354, High Energy Physics I (graduate).
Fall,	2022–2024	PHZ 4601/5606, Special and General Relativity (undergrad physics majors/graduate).
Spring,	2018–2020, 2022	PHY 5347, Electrodynamics B (graduate).
Fall,	2017–2019, 2021	PHY 5346, Electrodynamics A (graduate).
Spring,	2021	PHY4513/5515, Thermal and Statistical Physics (undergrad physics majors).
Fall,	2020	PHY 6938, Special Topics in Physics (graduate).
Spring,	2015–2017	PHY 4605/5608, Quantum Theory of Matter B (undergrad physics majors).
Fall,	2014–2016	PHY 4604/5607, Quantum Theory of Matter A (undergrad physics majors).
Spring,	2012–2014	PHY 5669, Quantum Field Theory B (graduate).
Fall,	2010–2013	PHY 5667, Quantum Field Theory A (graduate).
Spring	2011	PHZ 5355, High Energy Physics II, (topics in physics beyond the standard model, graduate).
Spring	2010	PHY 2048C, General Physics A, (calculus-based introductory mechanics).
Fall	2009	PHY 2049C, General Physics B, (calculus-based introductory electromagnetism).

As a Graduate Student Instructor at the University of California, Berkeley:

Spring 2001	Physics 231, General Relativity (graduate).
Fall 2000	Physics 110A, Electromagnetism and Optics (upper-division).
Fall 1999–Spring 2000	Physics H7C, Physics for Scientists and Engineers (honors' introductory modern physics).
Fall 1998	Physics 8A, Introductory Physics (non-calculus-based mechanics).

OUTREACH ACTIVITIES

- *Saturday Morning Physics*, Florida State U., Fall 2012, 2013, 2015–2018,
  Public lectures on particle physics for local middle and high school students.
- *Introduction to Gravitational Waves*, QuarkNet Workshop, Tallahassee, FL, July 25, 2016,
  A lecture on gravitational waves for high school physics instructors.
- *Introduction to Cosmology*, Rickards High School, Tallahassee, Florida, March 10, 2014,
  A lecture on cosmology for high school students.
- *Science Salon*, Waterworks Cafe, Tallahassee, Florida, September 11, 2013,
  A public lecture on cosmology and particle physics.
- *Introduction to Cosmology*, Lincoln High School, Tallahassee, Florida, February 18, 2010,
  A lecture on cosmology to high school students.

- *Flying Circus of Physics*, Florida State University, October 17, 2009; October 1, 2011, Mechanics demonstrations for departmental open house events.

SYNERGISTIC ACTIVITIES

- Co-organizer, *Japan-US-Taiwan (JUST) Workshop on Particle Physics,* National Taiwan University, Taipei, Taiwan, June 2024.
- Co-organizer, *KEK Annual Theory Meeting on Particle Physics Phenomenology,* Tsukuba, Japan, February 2020.

SERVICES

Fall 2024	FSU Quantum Initiative Senior Theory Hiring Committee.
Fall 2021–present	Graduate Affairs Committee.
Fall 2020–present	The Dirac Lectures organizing committee.
Fall 2018–present	Promotion&Tenure Committee for Kohsaku Tobioka.
Spring 2018–present	Promotion&Tenure Committee for Ted Kolberg.
Fall 2016–Spring 2021	Proficiency Exam Committee.
Fall 2018–Spring 2019	Physics Department Chair Search Committee.
Fall 2017–Spring 2018	High Energy Theory Search Committee.
Fall 2015–Spring 2016	High Energy Experiment Search Committee.
Fall 2013–Spring 2016	Colloquium Committee.
Fall 2009–Spring 2013	Graduate Affairs Committee.
Fall 2009, Fall 2010	Saturday Morning Physics Committee (Organizing outreach for local middle and high school students).
Spring 2010, Fall 2011, Spring 2016	Organizing *the Dirac Lectures.*

PROFESSIONAL SERVICES

Reviewer for the National Science Foundation (NSF) grants.
Reviewer for the US Department of Energy (DOE) grants.
Reviewer for the Belgium Fund for Scientific Research (FNRS) grants.
Reviewer for the Israel Science Foundation (ISF) grants.
Referee for *Physical Review Letters.*
Referee for *Physical Review D.*
Referee for *Journal of High Energy Physics.*
Referee for *Physics Letters B.*
Referee for *SciPost.*

COLLOQUIA

- "Searching for Matter-Antimatter Asymmetry in the Higgs Boson"
  - University of Oregon, February, 2014.
  - Florida State University, January, 2014.
- "The World as a Hologram"
  - Florida State University, October, 2015
  - Syracuse University, February, 2008.

INVITED LECTURES

- "Lectures on Soft Collinear Effective Theory," KEK High Energy Accelerator Research Organization, July 2017
- "Gravitational Waves," *Society of Physics Students,* Florida State University, April 2016
- "Lectures on Conformal Technicolor"
  - University of Rome, May 2011.
- "Lectures on AdS/CFT Correspondence with Applications in Condensed Matter Physics"
  - National High Magnetic Field Laboratory, November & December 2009.

INVITED CONFERENCE & WORKSHOP TALKS

- "New Physics Interpretation of Recent KOTO events"
  - *KEK Annual Theory Meeting on Particle Physics Phenomenology,* Tsukuba, Japan, February 2020.
- "Soft Collinear Effective Theory for Gravity"
  - *19th annual workshop on Soft-Collinear Effective Theory,* University of California, San Diego, March 2019.
  - *Blueprints Beyond the Standard Model,* Tata Institute of Fundamental Research, Mumbai, India, January 2018.
- "The Hierarchy Problem without/beyond the Lagrangian"
  - *Blueprints Beyond the Standard Model,* Tata Institute of Fundamental Research, Mumbai, India, January 2018.
- "Partially Acoustic Dark Matter"
  - *New Physics Forum,* University of Tokyo, Tokyo, Japan, July 2017.

- "CMB signals of a hidden dark-matter sector"
  - *Cosmological Probes of Fundamental Physics,* Weizmann Institute of Science, Rehovot, Israel, June 2016.
  - *Beyond the Standard Model 2016,* Okinawa Institute for Science and Technology (OIST), Okinawa, Japan, March 2016.
- "SCET for dummies and WW"
  - *Connecting Flavor Physics with Naturalness: from Theory to Experiment,* Aspen Summer Workshop, July, 2014.
- "A new variable for probing CP violation in $h \to \tau^+\tau^-$"
  - *Beyond the Standard Model 2014,* KEK High Energy Accelerator Research Organization, Tsukuba, Japan, March 2014.
- "Naturalness of electroweak symmetry breaking in the LHC era"
  - *APS Southeastern Section (SESAPS) Meeting,* Virginia Tech, October 2011.
- "Electroweak Symmetry Breaking and the Higgs Boson beyond the Standard Model"
  - *Division of Particles and Fields, APS Meeting,* Brown University, August 2011.
- "The LHC Phenomenology of Vectorlike Confinement."
  - *The Revolution in Particle Physics is Here,* Aspen, Co, January, 2010
- "Colored Resonances at the Tevatron: Phenomenology and Discovery Potential in Multijets."
  - *LHC: Beyond the Standard Model Signals in a QCD Environment*, Aspen Summer Workshop, July, 2008.
  - *LHC from data to discovery*, Santa Fe Summer Workshop, July, 2008.
  - *Focus week on LHC physics*, IPMU, Kashiwa, Japan, June, 2008.
- "Probing Composite Gravity in Colliders."
  - *New Ideas Beyond the Standard Model,* College of William and Mary, Oct, 2005.

OTHER CONFERENCE & WORKSHOP TALKS

- "A Common Origin for Neutrino Anarchy and Charged Hierarchies."
  - *Supersymmetry and Unification of Fundamental Interactions,* Boston, MA, June, 2009.
- "New Strong Dynamics at the TeV Scale: from Multijet Resonances at the Tevatron to di-CHAMPs at the LHC"

  - *Supersymmetry and Unification of Fundamental Interactions,* Boston, MA, June, 2009.

- "QCD as a Hologram."
  - *Beyond the Standard Model at the Dawn of the LHC Era,* Eotvos-Cornell Workshop, Budapest, Hungary, June, 2007.

- "CMB Signals of Neutrino Mass Generation"
  - *Supersymmetry and Unification of Fundamental Interactions,* Tsukuba, Japan, June, 2004.

INVITED TECHNICAL SEMINAR TALKS

- "Monopole-fermion scattering and the solution to the semiton/unitarity puzzle"
  - Center for Theoretical Physics of the Universe, Institute for Basic Science, Daejeon, Korea, June, 2025
  - Yukawa Institute for Theoretical Physics, Kyoto, Japan, May, 2025
  - Rutgers University, February, 2025.
  - University of California, Davis, October, 2024.
  - The *Hot Topic* seminar, National High Magnetic Field Laboratory, October, 2024.

- "Primordial black hole production from bubble collisions during a first-order phase transition"
  - University of Florida, January, 2024.
  - Osaka University, Osaka, Japan, December, 2021.

- "Composite neutrinos and the QCD axion: Baryogenesis, dark matter, small Dirac neutrino masses, and vanishing neutron electric dipole moment"
  - University of Maryland, College Park, May, 2022.

- "New Physics Interpretation of Recent KOTO events"
  - University of Maryland, College Park, June, 2020

- "Partially Acoustic Dark Matter"
  - Berkeley Center for Theoretical Physics, University of California, Berkeley, July, 2018
  - KEK High Energy Accelerator Research Organization, Tsukuba, Japan, July, 2017

- "Soft Collinear Effective Theory for Gravity",
  - Weinberg Theory Group, University of Texas, Austin, May, 2018

- "An Explanation of the WW Excess at the LHC by Jet-veto Resummation"

  - CMS LPC Seminar, Fermilab, December, 2014
  - The Institute for Advanced Study, October, 2014
  - SLAC National Accelerator Laboratory, September, 2014
  - University of California, Davis, September, 2014
  - Lawrence Berkeley National Laboratory, September, 2014
- "Shades of dark(er) matter on the earth and in the sky"
  - University of Oregon, February, 2014
- "CP-violating $h \to \tau^+\tau^-$"
  - University of Maryland, College Park, May, 2013
- "Heavy superpartners without too much fine-tuning in gauge mediation."
  - Michigan State University, December, 2012
- "Gyroscopic Inflation."
  - Fermilab, June 2012
  - University of Texas, Austin, May 2012
- "LHC Implications of WIMP dark matter and grand unification."
  - University of Washington, Seattle, March 2011
- "Viable Gravity Mediation."
  - Brandeis University, September 2011
  - University of Rome, May 2011
  - Tohoku University, December, 2010
  - Harvard University, November, 2010
  - Massachusetts Institute of Technology, November, 2010
  - Fermilab, November, 2010
  - University of Chicago, November, 2010
- "Flavorful Gravity Mediation."
  - SLAC National Accelerator Laboratory, May, 2010
  - University of California, Davis, May, 2010
  - University of Maryland, College Park, March, 2010
- "Vectorlike Confinement at the Tevatron and LHC."

  - Lawrence Berkeley National Laboratory, August, 2009.

- "New Strong Dynamics at the TeV Scale: from Multijet Resonances at the Tevatron to di-CHAMPs at the LHC."
  - University of California, Davis, May, 2009.
  - University of Oregon, Eugene, May, 2009.
  - Rutgers University, April, 2009.
  - Stony Brook University, March, 2009.
  - Florida State University, February, 2009.

- "A Common Origin for Neutrino Anarchy and Charged Hierarchies."
  - Harvard University, October, 2008.

- "Colored Resonances at the Tevatron: Phenomenology and Discovery Potential in Multijets."
  - CDF collaboration, Fermilab, April, 2008.
  - Cornell University, February, 2008.
  - Syracuse University, February, 2008.

- "Light Colored Resonances at the Tevatron and the (Very Early) LHC."
  - University of California, Davis, November, 2007.

- "The 't Hooft Model as a Hologram."
  - University of Minnesota, September, 2007.

- "QCD as a Hologram."
  - McGill University, November, 2006.
  - SLAC National Accelerator Laboratory, October, 2006.

- "Probing Composite Gravity in Colliders."
  - University of Arizona, March, 2006.
  - Yale University, October, 2005.
  - University of Delaware, October, 2005.

- "Limits on Gravitino Mass from Soft Graviton Effective Theory."
  - University of Maryland, College Park, May, 2005.
  - SLAC National Accelerator Laboratory, April, 2005.
  - Lawrence Berkeley National Laboratory, April, 2005.

- "Conformal Technicolor."
  - Harvard University, Winter, 2005.
  - University of Washington, Seattle, January, 2005.
  - New York University, December, 2004.
  - Columbia University, November, 2004.
  - Brandeis University, November, 2004.
- "CMB Signals of Neutrino Mass Generation."
  - SLAC National Accelerator Laboratory, Spring, 2004.
  - Harvard University, Winter, 2004.
- "Explicit Supersymmetry Breaking on Boundaries of Warped Extra Dimensions."
  - Harvard University, Fall, 2003.
  - Cornell University, Fall, 2003.
  - University of Washington, Seattle, Spring, 2003.
  - Boston University, February, 2003.

PUBLICATIONS

1. M. Ghosh, K. Liguori, T. Okui and K. Tobioka, "Neutrino properties from muonium-antimuonium mixing," [arXiv:2504.05378 [hep-ph]].
2. V. Loladze and T. Okui, "Monopole-Fermion Scattering and the Solution to the Semiton/Unitarity Puzzle," Phys. Rev. Lett. **134**, no.5, 051602 (2025) [arXiv:2408.04577 [hep-th]].
3. T. H. Jung and T. Okui, T. H. Jung and T. Okui, "Primordial black holes from bubble collisions during a first-order phase transition," Phys. Rev. D **110**, no.11, 115014 (2024) [arXiv:2110.04271 [hep-ph]].
4. K. Fridell, M. Ghosh, T. Okui and K. Tobioka, "Decoding the $B \to K\nu\nu$ excess at Belle II: Kinematics, operators, and masses," Phys. Rev. D **109**, no.11, 115006 (2024) [arXiv:2312.12507 [hep-ph]].
5. E. Bertholet, S. Chakraborty, V. Loladze, T. Okui, A. Soffer and K. Tobioka, "Heavy QCD axion at Belle II: Displaced and prompt signals," Phys. Rev. D **105**, no.7, L071701 (2022) [arXiv:2108.10331 [hep-ph]].
6. S. Chakraborty, T. H. Jung and T. Okui, "Composite neutrinos and the QCD axion: Baryogenesis, dark matter, small Dirac neutrino masses, and vanishing neutron electric dipole moment," Phys. Rev. D **105**, no.1, 015024 (2022) [arXiv:2108.04293 [hep-ph]].

7. S. Chakraborty, M. Kraus, V. Loladze, T. Okui and K. Tobioka, "Heavy QCD axion in b→s transition: Enhanced limits and projections," Phys. Rev. D **104**, no.5, 055036 (2021) [erratum: Phys. Rev. D **108**, no.3, 039903 (2023)] [arXiv:2102.04474 [hep-ph]].

8. S. Chakraborty, T. H. Jung, V. Loladze, T. Okui and K. Tobioka, "Solar origin of the XENON1T excess without stellar cooling problems," Phys. Rev. D **102**, no.9, 095029 (2020) [arXiv:2008.10610 [hep-ph]].

9. S. Chakraborty, T. Okui and A. Yunesi, "Topics in soft collinear effective theory for gravity: The diffeomorphism invariant Wilson lines and reparametrization invariance," Phys. Rev. D **101**, no.6, 066019 (2020) [arXiv:1910.10738 [hep-th]].

10. T. Kitahara, T. Okui, G. Perez, Y. Soreq and K. Tobioka, "New physics implications of recent search for $K_L \to \pi^0 \nu\bar{\nu}$ at KOTO," Phys. Rev. Lett. **124**, no.7, 071801 (2020) [arXiv:1909.11111 [hep-ph]].

11. T. Okui, "Nonlinearly realized conformal invariance in scale invariant field theories," Phys. Rev. D **99**, no.6, 061701 [Rapid Communication] (2019) [arXiv:1812.10237 [hep-th]].

12. T. Okui and A. Yunesi, "Soft collinear effective theory for gravity," Phys. Rev. D **97**, no.6, 066011 (2018) [arXiv:1710.07685 [hep-th]].

13. Z. Chacko, Y. Cui, S. Hong, T. Okui and Y. Tsai, "Partially Acoustic Dark Matter, Interacting Dark Radiation, and Large Scale Structure," JHEP **12**, 108 (2016) [arXiv:1609.03569 [astro-ph.CO]].

14. Y. Cui, T. Okui and A. Yunesi, "LHC Signatures of WIMP-triggered Baryogenesis," Phys. Rev. D **94**, no.11, 115022 (2016) [arXiv:1605.08736 [hep-ph]].

15. P. Jaiswal and T. Okui, "Reemergence of rapidity-scale uncertainty in soft-collinear effective theory," Phys. Rev. D **92**, no.7, 074035 (2015) [arXiv:1506.07529 [hep-ph]].

16. Z. Chacko, Y. Cui, S. Hong and T. Okui, "Hidden dark matter sector, dark radiation, and the CMB," Phys. Rev. D **92**, 055033 (2015) [arXiv:1505.04192 [hep-ph]].

17. A. Askew, P. Jaiswal, T. Okui, H. B. Prosper and N. Sato, "Prospect for measuring the CP phase in the $h\tau\tau$ coupling at the LHC," Phys. Rev. D **91**, no.7, 075014 (2015) [arXiv:1501.03156 [hep-ph]].

18. P. Jaiswal and T. Okui, "Explanation of the WW excess at the LHC by jet-veto resummation," Phys. Rev. D **90**, no.7, 073009 (2014) [arXiv:1407.4537 [hep-ph]].

19. R. Harnik, A. Martin, T. Okui, R. Primulando and F. Yu, "Measuring CP Violation in $h \to \tau^+\tau^-$ at Colliders," Phys. Rev. D **88**, no.7, 076009 (2013) [arXiv:1308.1094 [hep-ph]].

20. P. Jaiswal, K. Kopp and T. Okui, "Higgs Production Amidst the LHC Detector," Phys. Rev. D **87**, no.11, 115017 (2013) [arXiv:1303.1181 [hep-ph]].

21. K. Kopp and T. Okui, "Effective Field Theory for a Heavy Majorana Fermion," Phys. Rev. D **84**, 093007 (2011) [arXiv:1108.2702 [hep-ph]].

22. D. Alves *et al.* [LHC New Physics Working Group], "Simplified Models for LHC New Physics Searches," J. Phys. G **39**, 105005 (2012) [arXiv:1105.2838 [hep-ph]].

23. S. Chang, C. Kilic and T. Okui, "Measuring Top Squark Interactions With The Standard Model Through Associated Production," Phys. Rev. D **84**, 035015 (2011) [arXiv:1105.1332 [hep-ph]].

24. A. E. Nelson, T. Okui and T. S. Roy, "A unified, flavor symmetric explanation for the t-tbar asymmetry and Wjj excess at CDF," Phys. Rev. D **84**, 094007 (2011) [arXiv:1104.2030 [hep-ph]].

25. C. Kilic, K. Kopp and T. Okui, "LHC Implications of the WIMP Miracle and Grand Unification," Phys. Rev. D **83**, 015006 (2011) [arXiv:1008.2763 [hep-ph]].

26. G. D. Kribs, T. Okui and T. S. Roy, "Viable Gravity-Mediated Supersymmetry Breaking," Phys. Rev. D **82**, 115010 (2010) [arXiv:1008.1798 [hep-ph]].

27. C. Kilic and T. Okui, "The LHC Phenomenology of Vectorlike Confinement," JHEP **04**, 128 (2010) [arXiv:1001.4526 [hep-ph]].

28. C. Kilic, T. Okui and R. Sundrum, "Vectorlike Confinement at the LHC," JHEP **02**, 018 (2010) [arXiv:0906.0577 [hep-ph]].

29. K. Agashe, T. Okui and R. Sundrum, "A Common Origin for Neutrino Anarchy and Charged Hierarchies," Phys. Rev. Lett. **102**, 101801 (2009) [arXiv:0810.1277 [hep-ph]].

30. Z. Chacko, C. A. Krenke and T. Okui, "Supersymmetry in Slow Motion," JHEP **01**, 050 (2009) [arXiv:0809.3820 [hep-ph]].

31. C. Kilic, T. Okui and R. Sundrum, "Colored Resonances at the Tevatron: Phenomenology and Discovery Potential in Multijets," JHEP **07**, 038 (2008) [arXiv:0802.2568 [hep-ph]].

32. E. Katz and T. Okui, "The 't Hooft model as a hologram," JHEP **01**, 013 (2009) [arXiv:0710.3402 [hep-th]].

33. T. Okui, "Probing composite gravity in colliders," Phys. Rev. D **73**, 075012 (2006) [arXiv:hep-ph/0511082 [hep-ph]].

34. M. A. Luty and T. Okui, "Conformal technicolor," JHEP **09**, 070 (2006) [arXiv:hep-ph/0409274 [hep-ph]].

35. T. Okui, "Searching for composite neutrinos in the cosmic microwave background," JHEP **09**, 017 (2005) [arXiv:hep-ph/0405083 [hep-ph]].

36. Z. Chacko, L. J. Hall, T. Okui and S. J. Oliver, "CMB signals of neutrino mass generation," Phys. Rev. D **70**, 085008 (2004) [arXiv:hep-ph/0312267 [hep-ph]].

37. L. J. Hall, Y. Nomura, T. Okui and S. J. Oliver, "Explicit Supersymmetry Breaking on Boundaries of Warped Extra Dimensions," Nucl. Phys. B **677**, 87-114 (2004) [arXiv:hep-th/0302192 [hep-th]].

38. R. Barbieri, L. J. Hall, G. Marandella, Y. Nomura, T. Okui, S. J. Oliver and M. Papucci, "Radiative electroweak symmetry breaking from a quasilocalized top quark," Nucl. Phys. B **663**, 141-162 (2003) [arXiv:hep-ph/0208153 [hep-ph]].

39. L. J. Hall, J. March-Russell, T. Okui and D. Tucker-Smith, "Towards a theory of flavor from orbifold GUTs," JHEP **09**, 026 (2004) [arXiv:hep-ph/0108161 [hep-ph]].

40. L. J. Hall, Y. Nomura, T. Okui and D. Tucker-Smith, "SO(10) unified theories in six-dimensions," Phys. Rev. D **65**, 035008 (2002) [arXiv:hep-ph/0108071 [hep-ph]].