

Publications

Brooks Thomas

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1. K. R. Dienes, J. Kumar, and B. Thomas, “Direct Detection of Dynamical Dark Matter,” *Phys. Rev. D* **86**, 055016 (2012) [arXiv:1208.0336].
2. K. R. Dienes, S. Su, and B. Thomas, “Distinguishing Dynamical Dark Matter at the LHC,” *Phys. Rev. D* **86**, 054008 (2012) [arXiv:1204.4183].
3. K. R. Dienes and B. Thomas, “Phenomenological Constraints on Axion Models of Dynamical Dark Matter,” *Phys. Rev. D* **86**, 055013 (2012) [arXiv:1203.1923].
4. J. Bramante, J. Kumar, and B. Thomas, “Large Jet Multiplicities and New Physics at the LHC,” *Phys. Rev. D* **86**, 015014 (2012) [arXiv:1109.6014].
5. J. Kumar, A. Rajaraman, and B. Thomas, “Higher Representations and Multi-Jet Resonances at the LHC,” *Phys. Rev. D* **84**, 115005 (2011) [arXiv:1108.3333].
6. K. R. Dienes and B. Thomas, “Dynamical Dark Matter: II. An Explicit Model,” *Phys. Rev. D* **85**, 083524 (2012) [arXiv:1107.0721].
7. K. R. Dienes and B. Thomas, “Dynamical Dark Matter: I. Theoretical Overview,” *Phys. Rev. D* **85**, 083523 (2012) [arXiv:1106.4546].
8. D. Alves *et al.* [LHC New Physics Working Group Collaboration], “Simplified Models for LHC New Physics Searches,” *J. Phys. G* **39**, 105005 (2012) [arXiv:1105.2838].
9. K. R. Dienes and B. Thomas, “Isospectral But Physically Distinct: Modular Symmetries and their Implications for Carbon Nanotori,” *Phys. Rev. B* **84**, 085444 (2011) [arXiv:1005.4413].
10. E. Dolle, X. Miao, S. Su, and B. Thomas, “Trilepton Signals in the Inert Doublet Model,” *Phys. Rev. D* **82**, 035009 (2010) [arXiv:1005.0090].
11. K. R. Dienes and B. Thomas, “On the Inconsistency of Fayet-Iliopoulos Terms in Supergravity Theories,” *Phys. Rev. D* **81**, 065023 (2010) [arXiv:0911.0677].
12. K. R. Dienes and B. Thomas, “Classical Metastable Supersymmetry Breaking with D -Terms: Tree-Level Nests and Vacuum Towers,” *Proceedings of the 17th International Conference on Supersymmetry and the Unification of Fundamental Interactions*, AIP Conf. Proc. **1200**, 185 (2010).
13. E. Dolle, X. Miao, S. Su, and B. Thomas, “Dilepton Signals in the Inert Doublet Model,” *Phys. Rev. D* **81**, 035003 (2010) [arXiv:0909.3094].
14. S. Su and B. Thomas, “The LHC Discovery Potential of a Leptophilic Higgs Boson,” *Phys. Rev. D* **79**, 095014 (2009) [arXiv:0903.0667].
15. K. R. Dienes and B. Thomas, “New Non-Trivial Vacuum Structures in Supersymmetric Field Theories,” *Proceedings of the XIII Mexican School of Particles and Fields*, AIP Conf. Proc. **1116**, 391 (2009) [arXiv:0812.3423].

16. K. R. Dienes and B. Thomas, “Cascades and Collapses, Great Walls and Forbidden Cities: Infinite Towers of Metastable Vacua in Supersymmetric Field Theories,” *Phys. Rev. D* **79**, 045001 (2009) [arXiv:0811.3335] (featured on the American Physical Society’s website *Physics: Spotlighting Exceptional Research*, <http://physics.aps.org>, February 2009).
17. K. R. Dienes and B. Thomas, “Building a Nest at Tree Level: Classical Metastability and Non-Trivial Vacuum Structure in Supersymmetric Field Theories,” *Phys. Rev. D* **78**, 106011 (2008) [arXiv:0806.3364].
18. S. Su and B. Thomas, “ $h \rightarrow \mu\mu$ via $t\bar{t}h$ Production at the LHC,” *Phys. Lett. B* **677**, 296 (2009) [arXiv:0812.1798].
19. D. Phalen, B. Thomas and J. D. Wells, “Model-Independent Description and Large Hadron Collider Implications of Suppressed Two-Photon Decay of a Light Higgs Boson,” *Phys. Rev. D* **75**, 117702 (2007) [hep-ph/0612219].
20. B. Thomas and M. Toharia, “Lepton Flavor Violation and Supersymmetric Dirac Leptogenesis,” *Phys. Rev. D* **75**, 013013 (2007) [hep-ph/0607285].
21. B. Thomas and M. Toharia, “Phenomenology of Dirac Leptogenesis in Split Supersymmetry,” *Phys. Rev. D* **73**, 063512 (2006) [hep-ph/0511206].
22. B. Thomas, “Requirements to Detect the Monoenergetic Photon Signature of Thermal Cold Dark Matter in PeV-Scale Split Supersymmetry,” *Phys. Rev. D* **72**, 023519 (2005) [hep-ph/0503248].

Papers in Progress

- S. de Alwis, K. R. Dienes, and B. Thomas, “Supergravity and Fayet-Iliopoulos Terms: Symmetries, Currents, and the Existence of a Non-Gravitational Limit.”
- K. R. Dienes, S. Su, and B. Thomas, “The Collider Kinematics of Non-Minimal Dark Sectors.”
- J. Bramante, J. Kumar, B. Thomas, and D. Yaylali, “A General Study of Strongly-Interacting Exotics at the LHC.”
- K. R. Dienes, J. Kumar, B. Thomas, and D. Yaylali, “Inelastic Scattering and Constraints on Dark-Sector Instability.”
- K. R. Dienes and B. Thomas, “Dynamical Dark Matter and Structure Formation.”
- K. R. Dienes, T. Gherghetta, and B. Thomas, “Composite Dynamical Dark Matter.”