Martin Schmaltz

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EDUCATION

Ph.D. in Physics, with Prof. D.B. Kaplan, University of California, San Diego, 1995.

M.S. in Physics, University of California, San Diego, 1991.

Vordiplom in Physics and Mathematics, Göttingen University, Germany, 1989.

ACADEMIC POSITIONS HELD

2001 - present: Professor, Boston University (Associate 2007, Full 2012).

2009 - 2011, 2013: Director of Undergraduate Studies, Boston University.

2008 - 2009: Visiting Professor, UC Berkeley.

2000 - 2001: Associate Scientist, Fermilab.

1998 - 2000: Research Associate, Stanford Linear Accelerator Center.

1995 - 1998: Research Associate, Physics Department, Boston University.

TEACHING EXPERIENCE

2013: Boston University GRS-PY731, General Relativity.

2012+14: Boston University CAS-PY105, Elementary Physics I.

2011/12+2013/14: Boston University GRS-PY751/752, Advanced Particle Physics I+II.

2008+10: Boston University CAS-PY355, Mathematical Methods for Physicists.

2005+07+09: Boston University CAS-PY408, Intermediate Mechanics.

2004+06+10: Boston University GRS-PY713, Quantum Field Theory I.

2005+07+11: Boston University GRS-PY714, Quantum Field Theory II.

2002-2004: Boston University CAS-PY212, Physics for Scientists and Engineers II.

AWARDS AND HONORS

2008-present: Member, Aspen Center for Physics.

2004: Alfred P Sloan Foundation Research Fellowship.

2002: DOE Outstanding Junior Investigator Award.

COMMUNITY SERVICE

2016: Schladming Winter School Lecturer, Schladming, Austria.

2013-2014: Winter Conference Committee, Aspen Center for Physics.

2012: Director, TASI school for advanced graduate students, June 3-28, Boulder CO.

2011-2012: Nominations Committee, Aspen Center for Physics.

2008-2010,2015: Program Committee (Chair in 2010), Aspen Center for Physics.

2000+03+07: Organizer, Aspen Summer Workshops.

2013+15: Summer School Lecturer CERN-Fermilab HCP, Geneva, Switzerland.

2011: Summer School Lecturer Graduiertenkolleg, Karlsruhe, Germany.

2008: Summer School Lecturer LNF, Frascati, Italy.

2007: Summer School Lecturer ICTP, Trieste, Italy and at TASI, Boulder, CO.

2006: Summer School Lecturer Ringberg, Munich, Germany; NEPPSR, Cape Cod, MA.

2004: Summer School Lecturer TASI, Boulder, CO.

2001: Summer School Lecturer, KIAS, Seoul, South Korea.

2005-2010: Steering Committee, US LHC Theory Initiative.

2006-2008: Executive Committee, US LHC Theory Initiative.

2001: Convener, Snowmass 2001 Conference.

PUBLICATIONS

1. M. Buen-Abad, A. G. Cohen and M. Schmaltz, "A model for the LHC diboson excess," arXiv:1604.03578 [hep-ph].

2. J. Lesgourgues, G. Marques-Tavares and M. Schmaltz, "Evidence for dark matter interactions in cosmological precision data?," JCAP **1602**, no. 02, 037 (2016) [arXiv:1507.04351 [astro-ph.CO]].

3. M. A. Buen-Abad, G. Marques-Tavares and M. Schmaltz, "Non-Abelian dark matter and dark radiation," Phys. Rev. D **92**, no. 2, 023531 (2015) [arXiv:1505.03542 [hep-ph]].

4. W. Altmannshofer, J. Brod and M. Schmaltz, "Experimental constraints on the coupling of the Higgs boson to electrons," JHEP **1505**, 125 (2015) [arXiv:1503.04830 [hep-ph]].

5. G. Hiller and M. Schmaltz, "Diagnosing lepton-nonuniversality in $b \to s\ell\ell$," JHEP **1502**, 055 (2015) [arXiv:1411.4773 [hep-ph]].

6. G. Hiller and M. Schmaltz, "R_K and future $b \to s\ell\ell$ BSM opportunities," Phys. Rev. D **90**, 054014 (2014) [arXiv:1408.1627 [hep-ph]].

7. G. Marques Tavares, M. Schmaltz and W. Skiba, "Higgs mass naturalness and scale invariance in the UV," Phys. Rev. D **89**, 015009 (2014) [arXiv:1308.0025 [hep-ph]].

8. C. Gross, G. Marques Tavares, M. Schmaltz and C. Spethmann, "Light axigluon explanation of the Tevatron ttbar asymmetry and multijet signals at the LHC," Phys. Rev. D **87**, 014004 (2013) [arXiv:1209.6375 [hep-ph]].

9. A. G. Cohen and M. Schmaltz, "New Charged Particles from Higgs Couplings," arXiv: 1207.3495 [hep-ph].

10. A. Falkowski, G. Perez and M. Schmaltz, "Spinning the Top," Phys. Rev. D **87**, 034041 (2013) [arXiv:1110.3796 [hep-ph]].

11. G. M. Tavares and M. Schmaltz, "Explaining the t-tbar asymmetry with a light axigluon," Phys. Rev. D **84**, 054008 (2011) [arXiv:1107.0978 [hep-ph]].

12. 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]].

13. Z. Ligeti, G.M. Tavares, M. Schmaltz, "Explaining the $t\bar{t}$ forward-backward asymmetry without dijet or flavor anomalies," JHEP **1106**, 109 (2011) [arXiv:1103.2757 [hep-ph]].

14. M. Schmaltz and C. Spethmann, "Two Simple W' Models for the Early LHC," JHEP **1107**, 046 (2011) [arXiv:1011.5918 [hep-ph]].

15. M. Schmaltz, D. Stolarski and J. Thaler, "The Bestest Little Higgs," JHEP **1009**, 018 (2010) [arXiv:1006.1356 [hep-ph]].

16. C. W. Bauer, Z. Ligeti, M. Schmaltz, J. Thaler and D. G. E. Walker, "Supermodels for early LHC," Phys. Lett. B **690**, 280 (2010) [arXiv:0909.5213 [hep-ph]].

17. M. Schmaltz and J. Thaler, "Collective Quartics and Dangerous Singlets in Little Higgs," JHEP **0903**, 137 (2009) [arXiv:0812.2477 [hep-ph]].

18. G. Perez, T. S. Roy and M. Schmaltz, "Phenomenology of SUSY with scalar sequestering," arXiv:0811.3206 [hep-ph].

19. A. De Simone, J. Fan, M. Schmaltz and W. Skiba, "Low-scale gaugino mediation, lots of leptons at the LHC," Phys. Rev. D **78**, 095010 (2008) [arXiv:0808.2052 [hep-ph]].

20. T. S. Roy and M. Schmaltz, "A hidden solution to the mu/B_{mu} problem in gauge mediation," Phys. Rev. D **77**, 095008 (2008) [arXiv:0708.3593 [hep-ph]].

21. A. G. Cohen, T. S. Roy and M. Schmaltz, "Hidden sector renormalization of MSSM scalar masses," JHEP **0702**, 027 (2007) [arXiv:hep-ph/0612100].

22. M. Schmaltz and R. Sundrum, "Conformal sequestering simplified," JHEP **0611**, 011 (2006) [arXiv:hep-th/0608051].

23. A. Falkowski, S. Pokorski and M. Schmaltz, "Twin SUSY," Phys. Rev. D **74**, 035003 (2006) [hep-ph/0604066].

24. T. Roy and M. Schmaltz, "Naturally heavy superpartners and a little Higgs," JHEP **0601**, 149 (2006) [hep-ph/0509357].

25. M. Schmaltz and D. Tucker-Smith, "Little Higgs review," Ann. Rev. Nucl. Part. Sci. **55**, 229 (2005) [hep-ph/0502182].

26. M. Schmaltz, "The simplest little Higgs," JHEP **0408**, 056 (2004) [hep-ph/0407143].

27. D. E. Kaplan, M. Schmaltz and W. Skiba, "Little Higgses and turtles," Phys. Rev. D **70**, 075009 (2004) [hep-ph/0405257].

28. D. E. Kaplan and M. Schmaltz, "The little Higgs from a simple group," JHEP **0310**, 039 (2003) [hep-ph/0302049].

29. M. Schmaltz, "Introducing the little Higgs," Phys. World **15N11**, 23 (2002).

30. M. Schmaltz, "Physics beyond the standard model (Theory): Introducing the little Higgs," Nucl. Phys. Proc. Suppl. **117**, 40 (2003) [hep-ph/0210415].

31. H. C. Cheng, K. T. Matchev and M. Schmaltz, "Bosonic supersymmetry? Getting fooled at the LHC," Phys. Rev. D **66**, 056006 (2002) [hep-ph/0205314].

32. H. C. Cheng, K. T. Matchev and M. Schmaltz, "Radiative corrections to Kaluza-Klein masses," Phys. Rev. D **66**, 036005 (2002) [hep-ph/0204342].

33. G. Hiller and M. Schmaltz, "Strong-weak CP hierarchy from non-renormalization theorems," Phys. Rev. D **65**, 096009 (2002) [hep-ph/0201251].

34. H. C. Cheng, D. E. Kaplan, M. Schmaltz and W. Skiba, "Deconstructing gaugino mediation," Phys. Lett. B **515**, 395 (2001) [hep-ph/0106098].

35. G. Hiller and M. Schmaltz, "Solving the strong CP problem with supersymmetry," Phys. Lett. B **514**, 263 (2001) [hep-ph/0105254].

36. M. Schmaltz and W. Skiba, "The superpartner spectrum of gaugino mediation," Phys. Rev. D **62**, 095004 (2000) [hep-ph/0004210].

37. D. B. Kaplan and M. Schmaltz, "Supersymmetric Yang-Mills theories from domain wall fermions," Chin. J. Phys. **38**, 543 (2000) [hep-lat/0002030].

38. M. Schmaltz and W. Skiba, "Minimal gaugino mediation," Phys. Rev. D **62**, 095005 (2000) [hep-ph/0001172].

39. E. A. Mirabelli and M. Schmaltz, "Yukawa hierarchies from split fermions in extra dimensions," Phys. Rev. D **61**, 113011 (2000) [hep-ph/9912265].

40. D. E. Kaplan, G. D. Kribs and M. Schmaltz, "Supersymmetry breaking through transparent extra dimensions," Phys. Rev. D **62**, 035010 (2000) [hep-ph/9911293].

41. N. Arkani-Hamed, Y. Grossman, M. Schmaltz, "Split fermions in extra dimensions and exponentially small cross-sections at Phys. Rev. D **61**, 115004 (2000) [hep-ph/9909411].

42. T. Appelquist, A. G. Cohen, M. Schmaltz and R. Shrock, "New constraints on chiral gauge theories," Phys. Lett. B **459**, 235 (1999) [hep-th/9904172].

43. N. Arkani-Hamed and M. Schmaltz, "Hierarchies without symmetries from extra dimensions," Phys. Rev. D **61**, 033005 (2000) [hep-ph/9903417].

44. T. Appelquist, A. G. Cohen and M. Schmaltz, "A new constraint on strongly coupled field theories," Phys. Rev. D **60**, 045003 (1999) [hep-th/9901109].

45. N. Arkani-Hamed and M. Schmaltz, "Field theoretic branes and tachyons of the QCD string," Phys. Lett. B **450**, 92 (1999) [hep-th/9812010].

46. M. Schmaltz, "Duality of non-supersymmetric large N gauge theories," Phys. Rev. D **59**, 105018 (1999) [hep-th/9805218].

47. C. Csaki, M. Schmaltz, W. Skiba and J. Terning, "Gauge theories with tensors from branes and orientifolds," Phys. Rev. D **57**, 7546 (1998) [hep-th/9801207].

48. M. Schmaltz and R. Sundrum, "N = 1 field theory duality from M-theory," Phys. Rev. D **57**, 6455 (1998) [hep-th/9708015].

49. D. B. Kaplan, F. Lepeintre and M. Schmaltz, "Flavor from strongly coupled supersymmetry," Phys. Rev. D **56**, 7193 (1997) [hep-ph/9705411].

50. C. Csaki, M. Schmaltz, W. Skiba and J. Terning, "Self-dual N = 1 SUSY gauge theories," Phys. Rev. D **56**, 1228 (1997) [hep-th/9701191].

51. C. Csaki, M. Schmaltz and W. Skiba, "Confinement in N = 1 SUSY gauge theories and model building tools," Phys. Rev. D **55**, 7840 (1997) [hep-th/9612207].

52. "Systematic approach to confinement in N = 1 supersymmetric gauge theories," Phys. Rev. Lett. **78**, 799 (1997) [hep-th/9610139].

53. N. J. Evans and M. Schmaltz, "A diagramatic analysis of duality in supersymmetric gauge theories," Phys. Rev. D **55**, 3776 (1997) [hep-th/9609183].

54. C. Csaki, W. Skiba and M. Schmaltz, "Exact results and duality for Sp(2N) SUSY gauge theories with an antisymmetric tensor," Nucl. Phys. B **487**, 128 (1997).

55. M. A. Luty, M. Schmaltz and J. Terning, "A Sequence of Duals for Sp(2N) Supersymmetric Gauge Theories with Adjoint Phys. Rev. D **54**, 7815 (1996) [hep-th/9603034].

56. D. B. Kaplan and M. Schmaltz, "Domain Wall Fermions and the Eta Invariant," Phys. Lett. B **368**, 44 (1996) [hep-th/9510197].

57. C. G. Boyd, F. J. Vegas, Z. Guralnik and M. Schmaltz, "Strong corrections to inclusive B $\rightarrow$ X tau anti-tau-neutrino decays," hep-ph/9412299.

58. M. Schmaltz, "Neutrino oscillations from discrete non-Abelian family symmetries," Phys. Rev. D **52**, 1643 (1995) [hep-ph/9411383].

59. D. B. Kaplan and M. Schmaltz, "Flavor unification and discrete non-Abelian symmetries," Phys. Rev. D **49**, 3741 (1994) [hep-ph/9311281].

60. K. Jansen and M. Schmaltz, "Critical momenta of lattice chiral fermions," Phys. Lett. B **296**, 374 (1992) [hep-lat/9209002].