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Curriculum Vita

Nima Arkani-Hamed
School of Natural Sciences, Institute for Advanced Study,
1 Einstein Drive, Princeton, NJ 08540 USA,
(609) 734-8078, arkani@ias.edu
Citizenship**:** USA and Canada, D.O.B. April 5, 1972

Education

Ph.D., Physics	U.C. Berkeley	1997
B.Sc., Mathematics and Physics	University of Toronto	1993

Academic Positions

Professor, School of Natural Sciences	Institute for Advanced Study	2008-
Professor of Physics	Harvard University	2002 -2007
Visiting Professor of Physics	Harvard University	2001 - 2002
Associate Professor of Physics	U.C. Berkeley	2001
Assistant Professor of Physics	U.C. Berkeley	1999 - 2001
Postdoctoral Fellow	SLAC	1997 - 1999
Graduate Student Researcher	U.C. Berkeley	1995 - 1997
Graduate Student Instructor	U.C. Berkeley	1993 - 1995

Awards and Honors

Biard Lecture	Caltech	2014
Dashen Memorial Lecture	U.C. San Diego	2013
Fundamental Physics Prize	The Milner Foundation	2012
Chandrasekhar Lecture	ICTS, Bangalore	2012
Leigh Page Prize Lectures	Yale University	2012
Salam Lectures	ICTP Trieste, Italy	2012
BSA Distinguished Lecture	Brookhaven National Lab	2011
Messenger Lectures	Cornell University	2010
Sackler Prize	Tel Aviv University	2008
Iron's Lecture	Rutgers University	2008
Phi Beta Kappa teaching award	Harvard University	2005
Gribov Medal	European Physical Society	2003
Packard Fellowship	U.C. Berkeley	2000 - 2005
Sloan Fellowship	U.C. Berkeley	2000 - 2002
INFN-Pisa Gamberini Prize	U.C. Berkeley	1997
NSERC 1967 Fellowship	U.C. Berkeley	1993 - 1997
National Scholarship	University of Toronto	1989 - 1993

Graduate Students Supervised (2003-2014)

	Current Position	**Graduated**
Jaroslav Trnka	Post-doc at Caltech	2014
Matt Baumgart	Post-doc at CMU	2014
Jacob Bourjaily	Assist. Prof. of Physics, Niels Bohr Inst.	2011
Josh Ruderman	Junior Faculty at NYU	2011
Clifford Cheung	Junior faculty at Caltech	2009
Matt Baumgart	Post-doc at Johns Hopkins Univ.	2009
Jared Kaplan	Post-Doc at SLAC	2009
Philip Schuster	Junior faculty at Perimeter Inst.	2007
Natalia Toro	Junior faculty at Perimeter Inst.	2007

	Current Position	Graduated
Can Kilic	Junior faculty at UT-Austin	2006
Rakhi Mahbubani	Post-doc at EPFL, Lausanne	2006
Leonardo Senatore	Junior faculty at Stanford	2006
Jesse Thaler	Junior faculty at MIT	2006
Devin Walker	Post-doc at Harvard/Berkeley	2006
Itay Yavin	Junior faculty at Perimeter Inst./McMaster	2006
Thomas Gregoire	Junior faculty at Carleton Univ.	2003
Jay Wacker	Quora Ontology Architecht	2003

Publications

1. Nima Arkani-Hamed, T. Han, M. Mangano and L.-T. Wang, "Physics Opportunities of a 100 TeV Proton-Proton Collider", (2015), hep-ph/1411-06495.

2. Nima Arkani-Hamed and J. Maldacena, "Cosmological Collider Physics", (2015), hep-th/1503.08043.

3. Nima Arkani-Hamed, A. Hodges and J. Trnka, "Positive Amplitudes In the Amplituhedron", (2014), hep-th/1412.8478

4. Nima Arkani-Hamed, J. L. Bourjaily, F. Cachazo, A. Postnikov and J. Trnka, "On-Shell Structures of MHV Amplitudes Beyond the Planar Limit", (2014), hep-th/1412.8475.

5. Nima Arkani-Hamed, J.L. Bourjaily, F. Cachazo and J. Trnka, "Singularity Structure of Maximally Supersymmetric Scattering Amplitudes", (2014), *Phys. Rev. Lett*. **113,** 261603, hep-th/1410.0354.

6. Nima Arkani-Hamed, and J. Trnka, "Into the Amplituhedron", (2015), *JHEP* **1506,** 182; hep-th/1312.7878.

7. Nima Arkani-Hamed, "Beyond the Standard Model", (2013), *Phys. Scr.* **T158,** 014023.

8. Nima Arkani-Hamed, and J. Trnka, "The Amplituhedron", (2014), *JHEP* **1410,** 030; hep-th/1312.2007.

9. Nima Arkani-Hamed *et al.,* "Report of the Quark Flavor Physics Working Group", (2013), hep-ex/1311.1076.

10. Nima Arkani-Hamed, A. Gupta, D. E. Kaplan, N. Weiner, and T. Zorawski, "Simply Unnatural Supersymmetry ", (2012), hep-ph/1212.6971.

11. Nima Arkani-Hamed, J. L. Bourjaily, F. Cachazo, A.B. Goncharov, A. Postnikov, and J. Trnka, "Scattering Amplitudes and the Positive Grassmannian", (2012), hep-th/1212.5605.

12. Nima Arkani-Hamed, K. Blum, R.T. D'Agnolo and J.J. Fan, "2:1 for Naturalness at the LHC? ", *JHEP* **1301;** 149 (2013) hep-ph/1207-4482.

13. Nima Arkani-Hamed, *et al*, "Fundamental Physics at the Intensity Frontier", (2012), hep-ex/1205.2671.

14. Nima Arkani-Hamed, *et al,* "Simplified Models for LHC New Physics Searches", *Journal of Physics G,* **39;** 105005 (2012), hep-ph/1105.2838.

15. Nima Arkani-Hamed, J. Bourjaily, F. Cachazo, A. Hodges and J. Trnka, "A Note on Polytopes for Scattering Amplitudes", *JHEP* **1204;** 081 (2012), hep-th/1012.6030.

16. Nima Arkani-Hamed, J. Bourjaily, F. Cachazo and J. Trnka, "Local Integrals for Planar Scattering Amplitudes", *JHEP* **1206;** 125 (2012), hep-th/1012.6032.

17. Nima Arkani-Hamed, J. Bourjaily, F. Cachazo, S. Caron-Huot and J. Trnka, "The All-Loop Integrand for Scattering Amplitudes in Planar $N = 4$ SYM", *JHEP* **1101;** 041 (2011) hep-th/1008.2958.

18. Nima Arkani-Hamed, F. Cachazo, and C. Cheung, "The Grassmannian Origin Of Dual Superconformal Invariance", *JHEP* **1003;**036 (2010), hep-th/0909.0483.

19. Nima Arkani-Hamed, F. Cachazo, C. Cheung and J. Kaplan, "A Duality for the S Matrix", *JHEP* **1003**;020 (2010), hep-th/0907.5418.

20. Nima Arkani-Hamed, J. Bourjaily, F. Cachazo and J. Trnka, "Local Spacetime Physics from the Grassmannian", *JHEP* **1101;** 108 (2011), hep-th/0912.3249.

21. Nima Arkani-Hamed, J. Bourjaily, F. Cachazo and J. Trnka, "Unification of Residues and Grassmannian Dualities", *JHEP* **1101;** 049 (2011), hep-th/0912.4912.

22. Nima Arkani-Hamed, F. Cachazo, C. Cheung and J. Kaplan, "The S-Matrix in Twistor Space", *JHEP* **1003**;110 (2010). hep-th/0903.2110.

23. Nima Arkani-Hamed, D.P. Finkbeiner, T. Slatyer and N..Weiner, "A Theory of Dark Matter" *Phys.Rev.D***79**:015014, (2009). hep-ph/0810.0713

24. Nima Arkani-Hamed and N. Weiner, "LHC Signals for a SuperUnified Theory of Dark Matter" *JHEP* **0812**;104 (2008), doi: 10.1088/1126-6708/2008/12/104.

25. Nima Arkani-Hamed, F. Cachazo and J. Kaplan, "What is the Simplest Quantum Field Theory?" *JHEP* **1009;016,** (2010). hep-th/0808.1446.

26. Nima Arkani-Hamed and J. Kaplan, "On Tree Amplitudes in Gauge Theory and Gravity" *JHEP* **0801;076**, (2008), doi: 10.1088/1126-6708/2008/04/076. hep-th/0801.2385.

27. Nima Arkani-Hamed, A. Gupta, D.E. Kaplan, N. Weiner, and T. Zorawski, "Simply Unnatural Supersymmetry," (2012) hep-ph/1212.6971.

28. Nima Arkani-Hamed, J.L. Bourjaily, F. Cachazo, A.B. Goncharov, A. Posnikov, and J. Trnka, "Scattering Amplitudes and the Positive Grassmannian," (2012) hep-th/1212.5605.

29. Nima Arkani-Hamed, S. Dubovsky, L. Senatore, and G. Villadoro, "(No) Eternal Inflation and Precision Higgs Physics," *JHEP* **03;**075 (2008), doi: 10.1088/1126-6708/2008/03/075. hep-th/0801.2399.

30. Nima Arkani-Hamed, J. Orgera and J. Polchinski, "Euclidean Wormholes in String Theory," *JHEP* **0712**;018 (2007) hep-th/0705.2768.

31. Nima Arkani-Hamed, S. Dubovsky, A. Nicolis, E. Trincherini and G.Villadoro, "A Measure of deSitter entropy and eternal inflation", *JHEP* **0705**;055, (2007) hep-ph/0704:1814.

32. Nima Arkani-Hamed, S. Dubovsky, A. Nicolis and G. Villadoro, "Quantum Horizons of the Standard Model Landscape," *JHEP* **0706**; 078, (2007**)** hep-th/0703067.

33. Nima Arkani-Hamed, B. Knuteson, S. Mrenna, P. Schuster, J. Thaler, N. Toro and L.-T. Wang, "MARMOSET: The Path from LHC Data to the New Standard Model via On-Shell Effective Theories," (2007) hep-ph/0703088.

34. Adams, Nima Arkani-Hamed, S. Dubovsky, A. Nicolis and R. Rattazzi, "Causality, analyticity and an IR obstruction to UV completion," *JHEP* **0610**; 014 (2006).

35. Nima Arkani-Hamed, A. Delgado and G.F. Giudice, "The Well-tempered neutralino," *Nucl. Phys. B* **741**; 108-130 (2006), hep-ph/0601041.

36. Nima Arkani-Hamed, L. Motl, A. Nicolis and C. Vafa, "The String landscape, black holes and gravity as the weakest force," (2006) hep-th/0601001.

37. Nima Arkani-Hamed, G.L. Kane, J. Thaler and L-T. Wang, "Supersymmetry and the LHC inverse problem," *JHEP* **0608**;070 (2006). hep-ph/0512190.

38. Nima Arkani-Hamed, H-C. Cheng, M.A. Luty, S. Mukohyama and T. Wiseman, "Dynamics of gravity in a Higgs phase," *JHEP* **0701**; 036 (2007). hep-ph/0507120.

39. Nima Arkani-Hamed, S. Dimopoulos and S. Kachru, "Predictive landscapes and new physics at a TeV," (2005) hep-th/0501082.

40. P. Creminelli, H. Georgi, and Nima Arkani-Hamed, "A larger than naive cut-off in a simple model," In Shifman, M. (ed.) et al.: "From fields to strings," **Vol. 3**, 2095-2107, (2005).

41. Nima Arkani-Hamed, S. Dimopoulos, G.F. Giudice and A. Romanino, "Aspects of split supersymmetry," *Nucl. Phys. B***709**;3-46 (2005). hep-ph/0409232.

42. Nima Arkani-Hamed, H-C Cheng, M.A. Luty and J. Thaler, "Universal dynamics of spontaneous Lorentz violation and a new spin-dependent inverse-square law force," *JHEP* **0507**;029 (2005). hep-ph/0407034.

43. Nima Arkani-Hamed and S. Dimopoulos, "Supersymmetric unification without low energy supersymmetry and signatures for fine-tuning at the LHC," *JHEP* **0506**; 073 (2005).

44. Nima Arkani-Hamed, P. Creminelli, S. Mukohyama and M. Zaldarriaga, "Ghost inflation," *JCAP* **0404:001** (2004). hep-th/0312100.

45. Nima Arkani-Hamed, H-C. Cheng, M.A. Luty and S. Mukohyama, "Ghost condensation and a consistent infrared modification of gravity," *JHEP* **0405**;**074** (2004). hep-th/0312099.

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47. Nima Arkani-Hamed, H-C. Cheng, P. Creminelli and L. Randall, "Pseudonatural inflation," *JCAP* **0307**;003 (2003). hep-th/0302034.

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50. Nima Arkani-Hamed, S. Dimopoulos, G. Dvali and G. Gabadadze, "Nonlocal modification of gravity and the cosmological constant problem," (2002). hep-th/0209227.

51. Nima Arkani-Hamed, A.G. Cohen, E. Katz and A.E. Nelson, "The Littlest Higgs," *JHEP* **0207;**034 (2002). hep-ph/0206021.

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53. Nima Arkani-Hamed, S. Dimopoulos and G. Dvali, "Large extra dimensions: A new arena for particle physics," 2002. *Phys.Today* **55N2**:35-40 (2002).

54. Nima Arkani-Hamed, A.G. Cohen, T. Gregoire and J.G. Wacker, "Phenomenology of electroweak symmetry breaking from theory space," *JHEP* **0208**;020 (2002). hep-ph/0202089.

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60. Nima Arkani-Hamed, A.G. Cohen and H. Georgi, "Anomalies on orbifolds," *Phys. Lett. B* **516**; 395-402 (2001). hep-th/0103135.

61. Nima Arkani-Hamed, L.J. Hall, Y. Nomura, D. R. Smith and N. Weiner, "Finite radiative electroweak symmetry breaking from the bulk," *Nucl. Phys. B* **605;** 81-115 (2001). hep-ph/0102090.

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63. Nima Arkani-Hamed, M. Porrati and L. Randall, "Holography and phenomenology, " *JHEP* **0108**;017 (2001). hep-th/0012148.

64. Nima Arkani-Hamed, D.E. Kaplan, H. Murayama and Y. Nomura, "Viable ultraviolet insensitive supersymmetry breaking." *JHEP* **0102**;041 (2001). hep-ph/0012103.

65. Nima Arkani-Hamed, S. Dimopoulos and G.R. Dvali, "The universe's unseen dimensions," Scientific American, August 2000.

66. Nima Arkani-Hamed, L.J. Hall, H. Murayama, D.R. Smith and N. Weiner, "Neutrino masses at v**(3/2)," hep-ph/0007001.

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69. Nima Arkani-Hamed, et al, "A New perspective on cosmic coincidence problems," Phys. *Rev Lett* **85**; 4434-4437 (2000). astro-ph/0005111.

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71. Nima Arkani-Hamed et al, "Solving the hierarchy problem with exponentially large dimensions," *Phys. Rev. D* **62**;105002 (2000). hep-ph/9912453.

72. Nima Arkani-Hamed et al, "Exponentially small supersymmetry breaking from extra dimensions," *Phys. Rev. D* **63;** 056003 (2001). hep-ph/9911421.

73. Nima Arkani-Hamed, S. Dimopoulos, G.R. Dvali and N. Kaloper, "Many fold universe," *JHEP* **0012;** 010 (2000). hep-ph/9911386.

74. Nima Arkani-Hamed, Y. Grossman and M. Schmaltz, "Split fermions in extra dimensions and exponentially small cross-sections at future colliders," *Phys. Rev. D* **61**; 115004 (2000). hep-ph/9909411.

75. Nima Arkani-Hamed, L.J. Hall and D.R. Smith, "Flavor at the TeV scale with extra dimensions," *Phys Rev. D* **61**;116003 (2000). hep-ph/9909326.

76. Nima Arkani-Hamed, S. Dimopoulos and J. March-Russell, "Logarithmic unification from symmetries enhanced in the submillimeter infrared," in Shifman, M.A. (ed.): "The many faces of the superworld," 627-648. hep-th/9908146.

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