

Curriculum Vitae
Akikazu Hashimoto

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Positions Held:

- Professor, Department of Physics, University of Wisconsin-Madison, August 2013–Present.
- Associate Professor, Department of Physics, University of Wisconsin-Madison, August 2009–August 2013
- Assistant Professor, Department of Physics, University of Wisconsin-Madison, August 2003–August 2009
- Long Term Member, Institute for Advanced Study, Princeton, September 2001 – August 2003
- Member, Institute for Advanced Study, Princeton, September 2000 – September 2001
- Postdoctoral Researcher, Institute for Theoretical Physics, University of California, Santa Barbara, September 1997 – August 2000

Education:

PRINCETON UNIVERSITY, Princeton, NJ
September 1993 – 1997

Degree: Ph.D. Physics – May 1997

Thesis: Perturbative Dynamics of D-branes and Strings

Advisor: Prof. Igor Klebanov

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Boston, MA
September 1989 – May 1993

Degree: B.S. Physics, B.S. Mathematics

Thesis: Universality in Parametric Quantum Non-integrable Systems

Advisor: Prof. Boris L. Altshuler

Research Publications

1. “Comments on $T\bar{T}$ double trace deformations and boundary conditions,” W. Cottrell and A. Hashimoto, 1801.09708
2. “Stability and boundedness in AdS/CFT with double trace deformations II: Vector Fields”, W. Cottrell, A. Hashimoto, A. Loveridge, and D. Pettengill, arXiv:1711.01257.
3. “Stability and boundedness in AdS/CFT with double trace deformations,” S. Casper, W. Cottrell, A. Hashimoto, A. Loveridge and D. Pettengill, 1709.00445
4. “Resolved gravity duals of $\mathcal{N} = 4$ quiver field theories in 2+1 dimensions,” W. Cottrell, A. Hashimoto, *JHEP* **10** (2016) 057, 1602.04765
5. “Intersecting D3-D3’ system at finite temperature,” W. Cottrell, J. Hanson, A. Hashimoto, A. Loveridge and D. Pettengill, *Phys. Rev.* **D95** (2017) 044022, 1509.04750

6. “Dynamics of $\mathcal{N} = 4$ supersymmetric field theories in 2+1 dimensions and their gravity dual,” W. Cottrell, J. Hanson and A. Hashimoto, *JHEP* **07** (2016) 012, 1509.04749
7. “Comments on s -rule violating configurations in field theory,” W. Cottrell, A. Hashimoto and M. Pillai, *Phys. Lett.* **B746** (2015) 28, 1502.06949
8. W. Cottrell, A. Hashimoto, M. Pillai, and D. Pettengill “Solitons and intersecting 3-branes II, a holographic perspective,” *JHEP* **12**, 128 (2014) 1411.3679
9. W. Cottrell, A. Hashimoto, and M. Pillai, “Solitons and intersecting 3-branes,” *JHEP* **12**, 127 (2014) 1406.5872
10. A. Hashimoto, P. Ouyang, and M. Yamazaki, “Boundaries and Defects of $\mathcal{N} = 4$ SYM in 3+1 dimensions with 4 supercharges part II: Brane constructions and $3d \mathcal{N} = 2$ Field Theories, Accepted for publication in *JHEP*, 1406.5501
11. A. Hashimoto, P. Ouyang, and M. Yamazaki, “Boundaries and Defects of $\mathcal{N} = 4$ SYM in 3+1 dimensions with 4 supercharges part I: Boundary/Junction conditions,” *JHEP* **10** (2014) 107. 1404:5527
12. W. Cottrell, J. Gaillard, and A. Hashimoto “Gravity dual of dynamically broken supersymmetry,” *JHEP* **08** (2013) 105, arXiv:1303.2634
13. R. Gopakumar, A. Hashimoto, I. Klebanov, S. Sachdev, and K. Schoutens. “Strange Metals in One Spatial Dimension,” *Phys Rev.* **D86** (2012) 066003. arXiv:1206.4719
14. A. Hashimoto. “Comments on domain walls in holographic duals of mass deformed conformal field theories,” *JHEP* **07** (2011) 031, arXiv:1105.3687
15. A. Hashimoto and P. Ouyang. “Quantization of charges and fluxes in warped Stenzel geometry,” *JHEP* **06** (2011) 124, arXiv:1104.3517
16. A. Hashimoto, S. Hirano, and P. Ouyang. “Branes and fluxes in special holonomy manifolds and cascading field theories,” *JHEP* **06** (2011) 101, arXiv:1004.0903
17. O. Aharony, A. Hashimoto, S. Hirano, and P. Ouyang. “D-brane Charges in Gravitational Duals of 2+1 Dimensional Gauge Theories and Duality Cascades.” *JHEP* **01** (2010) 072 arXiv:0906.2390
18. S. S. Haque and A. Hashimoto, “Positronium-like states in strongly coupled $\mathcal{N} = 4$ supersymmetric Yang-Mills theory,” *Nucl. Phys.* **B829** (2010) 555-572. arXiv:0903.4841
19. A. Hashimoto, P. Ouyang, “Supergravity dual of Chern-Simons Yang-Mills theory with $\mathcal{N} = 6, 8$ superconformal IR fixed point,” *JHEP* **10** (2008) 057 arXiv:0807.1500
20. S. S. Haque and A. Hashimoto, “Microscopic Formulation of Puff Field Theory,” *JHEP* **05** (2008) 040, arXiv:0801.4354.
21. D. Dhokarh, S. S. Haque and A. Hashimoto, “Melvin Twists of global $AdS_5 \times S_5$ and their Non-Commutative Field Theory Dual,” *JHEP* **08** (2008) 084, arXiv:0801.3812.
22. A. Hashimoto, “A Note on Spontaneously Broken Lorentz Invariance,” *JHEP* **08** (2008) 040, arXiv:0801.3266.
23. “Non-commutativity and Open Strings Dynamics in Melvin Universes,” Danny Dhokrah, Akikazu Hashimoto, and Sheikh Shajidul Haque, *JHEP* **08** (2007) 027, arXiv:0704.1124
24. “Aspects of Puff Field Theory,” Ori J. Ganor, Akikazu Hashimoto, Sharon Jue, Bom Soo Kim, and Anthony Ndirango, *JHEP* **08** (2007) 035, hep-th/0702030.
25. “Effective descriptions of branes on non-geometric tori.” Ian Ellwood and Akikazu Hashimoto, *JHEP* **12** (2006) 025, hep-th/0607135
26. “Open/closed string duality for FZZT branes in $c = 1$,” Ian Ellwood and Akikazu Hashimoto, *JHEP* **02** (2006) 002, hep-th/0512217

27. “Non-commutative gauge theory on D-branes in Melvin Universes,” Akikazu Hashimoto and Keith Thomas, *JHEP* **01** (2006) 083, [hep-th/0511197](#)
28. “Open/closed String Duality for Topological Gravity with Matter,” Akikazu Hashimoto, Min-xin Huang, Albrecht Klemm, and David Shih, *JHEP* **05** (2005) 007, [hep-th/0501141](#)
29. “Dualities, Twists, and Gauge Theories with Non-Constant Non-Commutativity,” Akikazu Hashimoto and Keith Thomas, *JHEP* **01** (2005) 033, [hep-th/0401197](#)
30. “Correspondence Principle for Black Holes in Plane Waves,” Akikazu Hashimoto and Leopoldo Pando Zayas, *JHEP* **03** (2004) 014 [hep-th/0401197](#)
31. “Black strings in asymptotically plane wave geometries,” Eric Gimon, Akikazu Hashimoto, Veronika E. Hubeny, Oleg Lunin, and Mukund Rangamani, *JHEP* **08** (2003) 035, [hep-th/0306131](#)
32. “Black holes in Godel universes and pp-waves.” Eric Gimon and Akikazu Hashimoto, *Phys. Rev. Lett.* **91** (2003) 21601, [hep-th/0304181](#)
33. “Supergravity Solution of Intersecting Branes and AdS/CFT with Flavor,” S. Cherkis and A. Hashimoto, *JHEP* **11** (2002) 036, [hep-th/0210105](#)
34. “Holography and String Dynamics in Time-dependent Backgrounds,” A. Hashimoto and S. Sethi, *Phys. Rev. Lett.* **89** (2002) 261601, [hep-th/0208126](#)
35. “Observables of String Field Theory,” A. Hashimoto and N. Itzhaki, *JHEP* **01**(2002)028, [hep-th/0111092](#)
36. “Duality Cascade and Oblique Phases in Non-Commutative Open String Theory,” C. S. Chan, A. Hashimoto and H. Verlinde, *JHEP* **09**(2001)034, [hep-th/0107215](#)
37. “Traveling faster than the speed of light in non-commutative geometry,” A. Hashimoto and N. Itzhaki, *Phys. Rev.* **D63** (2001) 126004, [hep-th/0012093](#).
38. “Observables of Noncommutative Gauge Theories,,” D. Gross, A. Hashimoto, and N. Itzhaki, *Adv. Theor. Math. Phys.* **4** (2001) 893-928, [hep-th/0008075](#)
39. “Large Branes in AdS and their Field Theory Dual,” A. Hashimoto, S. Hirano, and N. Itzhaki, *JHEP* **08** (2000) 051, [hep-th/0008016](#)
40. “On the hierarchy between noncommutative and ordinary supersymmetric Yang-Mills,” A. Hashimoto and N. Itzhaki, *JHEP* **12** (1999) 007, [hep-th/9911057](#)
41. “Monopoles and Dyons in Non-commutative Geometry,” A. Hashimoto and K. Hashimoto, *JHEP* **11** (1999) 005, [hep-th/9909202](#)¹
42. “Noncommutative Yang-Mills and the AdS/CFT Correspondence,” A. Hashimoto and N. Itzhaki, *Phys. Lett.* **B465** (1999) 142-147, [hep-th/9907166](#)
43. “Can DLCQ Test the Maldacena Conjecture?” F. Antonuccio, A. Hashimoto, O. Lunin, and S. Pinsky, *JHEP* **07** (1999) 029, [hep-th/9906087](#)
44. “Holographic Description of D3-Branes in Flat Space,” A. Hashimoto, *Phys. Rev.* **D60** (1999) 127902, [hep-th/9903227](#)
45. “A Comment on the Zamolodchikov c-function and the Black String Entropy,” A. Hashimoto and N. Itzhaki, *Phys. Lett.* **B454** (1999) 235-239, [hep-th/9903067](#)
46. “Supergravity solutions for localized intersections of branes,” A. Hashimoto, *JHEP* **01** (1999) 018, [hep-th/9812159](#)
47. “Aspects of QCD dynamics from string theory,” A. Hashimoto and Y. Oz, *Nucl. Phys.* **B548** (1999) 167-179, [hep-th/9809106](#).

¹Awarded the 2006 Soryushi Medal Shorei Prize by the Soryushiron Group (Japan Elementary Particle Theory Group).

48. “Exact Absorption Probabilities for the D3-Brane,” S. S. Gubser and A. Hashimoto, *Comm. Math. Phys.* **203** (1999) 325-340, [hep-th/9805140](#)
49. “Scalar Absorption and the Breaking of the World Volume Conformal Invariance,” S. S. Gubser, A. Hashimoto, I. R. Klebanov, and M. Krasnitz, *Nucl. Phys.* **B526** (1998) 393-414, [hep-th/9803023](#)
50. “Shape of Branes Pulled by Strings,” A. Hashimoto, *Phys. Rev.* **D57** (1998) 6441-6451, [hep-th/9711097](#)
51. “Spectrum of a Large N Gauge Theory near Transition from Confinement to Screening,” D. J. Gross, A. Hashimoto, I. R. Klebanov, *Phys. Rev.* **D57** (1998) 6420-6428, [hep-th/9710240](#)
52. “Fluctuation Spectra of Tilted and Intersecting D-Branes from the Born-Infeld Action,” A. Hashimoto and W. Taylor, IV, *Nucl. Phys.* **B503** (1997) 193-219, [hep-th/9703217](#)
53. “Perturbative Dynamics of Fractional Strings on Multiply Wound D-strings,” A. Hashimoto *Int. J. Mod. Phys.* **A13** (1998) 903, [hep-th/9610250](#)
54. “Dynamics of Dirichlet-Neumann Open Strings on D-branes,” A. Hashimoto, *Nucl. Phys.* **B496** (1997) 243-258, [hep-th/9608127](#)
55. “Decay of Excited D-branes,” A. Hashimoto and I. R. Klebanov, *Phys. Lett.* **B381** (1996) 437-445, [hep-th/9604065](#)
56. “Gravitational lensing by p-branes,” S. S. Gubser, A. Hashimoto, I. R. Klebanov, and J. M. Maldacena, *Nucl. Phys.* **B472** (1996) 231-248, [hep-th/9601057](#)
57. “Matrix Model Approach to $d > 2$ Non-critical Superstrings,” A. Hashimoto and I. R. Klebanov, *Mod. Phys. Lett.* **A10** (1995) 2639-2649, [hep-th/9507062](#)
58. “Non-perturbative Solution of Matrix Models Modified by Trace-squared Terms,” I. R. Klebanov and A. Hashimoto, *Nucl. Phys.* **B434** (1995) 264-282, [hep-th/9409064](#)
59. “Crossover Driven by Time-reversal Symmetry Breaking in Quantum Chaos,” N. Taniguchi, A. Hashimoto, B. D. Simons and B. L. Altshuler, *Europhys. Lett.* **27** (1994) 335, [cond-mat/9404026](#)
60. “New Class of Universal Correlations in the Spectra of Hydrogen in a Magnetic Field,” B. D. Simons, A. Hashimoto, M. Courtney, D. Kleppner, and B. L. Altshuler, *Phys. Rev. Lett.* **71** (1993) 2899

Publications in Conference Proceedings

1. “Holography and Non-commutative Geometry,” A. Hashimoto, Proceedings of Summer Institute 1999, Japan
2. “Scattering of Strings from D-branes,” A. Hashimoto and I. R. Klebanov, *Nucl. Phys.* (Proc.Suppl) **55B** (1997) 118-133, [hep-th/9611214](#)
3. “Wormholes, Matrix Models, and Liouville Gravity,” I. R. Klebanov and A. Hashimoto, *Nucl. Phys.* (Proc. Suppl.) **45B,C** (1996) 135-148

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