

Theodore J. Allen

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Education	Ph.D.	California Institute of Technology <i>Theoretical Physics</i>	1988
	M.S.	California Institute of Technology <i>Physics</i>	1984
	B.S.	University of Wisconsin-Madison <i>Applied Mathematics, Engineering and Physics</i>	1982
Positions	Associate Professor	Hobart & William Smith Colleges	2005-Present
	Assistant Professor	Hobart & William Smith Colleges	2000-2005
	Assistant Professor	SUNY Institute of Technology	1999-2000
	Assistant Professor	Hobart & William Smith Colleges	1998-1999
	Lecturer in Physics	University of Wisconsin-Madison	1997
	Faculty Assistant	University of Wisconsin-Madison	1994-1998
	Assistant Scientist	University of Wisconsin-Madison	1993-1995
	Lecturer in Physics	University of Wisconsin-Madison	1992-1993
	Research Associate	University of Wisconsin-Madison	1991-1993
	Research Associate	Syracuse University	1988-1991
Research Associate	California Institute of Technology	1988	
Ph.D. Student	Dennis B. Crossley, Ph.D. UW-Madison 1994 Thesis: <i>BRST Quantization and Self-dual Gravity</i>		
Service	Referee: <i>Physical Review Letters & Physical Review, Journal of Physics, Modern Physics Letters & International Journal of Modern Physics</i>		
	Faculty Parliamentarian	HWS	2002-2019
	Department Chair	HWS	2013 S-2019 S
	Department Chair	HWS	2008 F-2009 S
	Department Chair	HWS	2004 F-2006 S
	Committee on the Library	HWS	2010-2013
	Health Professions Advisory Committee	HWS	2001-2019
	APS Career & Professional Development Liaison	HWS	2001-Present
	Grievance Committee	HWS	2004 & 2015
	Faculty Representative to Investment Board	HWS	2000-01
	Academic Computing Systems Committee	SUNY-IT	1999-2000
	Assessment Committee	SUNY-IT	1999-2000
	Laser Safety Committee	SUNY-IT	1999-2000
	Elementary Laboratories Committee	UW-Madison	1996-97
	Physics Mentor	UW-Madison	1996-98
	Junior Year Physics Majors Advisor	UW-Madison	1995-96
	University Physical Society Advisor	UW-Madison	1994-97
	Graduate Theoretical Physics Advisor	UW-Madison	1994-96
	Awards Committee	UW-Madison	1994-95
	Professional Societies	American Physical Society	1979-Present

Honors	National Science Foundation Graduate Fellow	Caltech	1982-85
	University Academic Excellence Award	UW-Madison	1982
	Elected Phi Beta Kappa		1981
	Elected Phi Kappa Phi		1981
	Elected Tau Beta Pi, National Engineering Honor Society		1981
	University Academic Excellence Award	UW-Madison	1981
	Radtke Prize Scholarship in Physics	UW-Madison	1981
	Frank D. Cady Scholarship in Mathematics	UW-Madison	1979 & 1980
	National Merit Scholar		1978-1982
Seminars Courses & Talks	Hamilton College <i>Colloquium</i>		September 2006
	Syracuse University		October 2003
	University of Wisconsin-Madison		September 2003
	Montreal-Rochester-Syracuse-Toronto Meeting		May 2001
	Syracuse University		December 1998
	Duke University		August 1995
	Illinois State University		March 1995
	Amherst College		February 1995
	Division of Particles and Fields, UNM-Albuquerque		August 1994
	Division of Particles and Fields, Fermilab		November 1992
	University of Wisconsin-Milwaukee <i>Colloquium</i>		March 1992
	University of Rochester		February 1991
	University of New Hampshire <i>Minicourse on Symplectic Geometry</i>		November 1990
	Montreal-Rochester-Syracuse-Toronto Meeting		May 1989
	University of Rochester		September 1988
University of California-Davis		January 1988	
Conferences Attended	<i>Pheno 2007</i> , Madison		May 2007
	<i>Montreal-Rochester-Syracuse-Toronto Meeting</i> , Montreal		May 2004
	<i>Montreal-Rochester-Syracuse-Toronto Meeting</i> , Syracuse		May 2003
	<i>Montreal-Rochester-Syracuse-Toronto Meeting</i> , Perimeter Institute		May 2002
	<i>Montreal-Rochester-Syracuse-Toronto Meeting</i> , U. Western Ontario		May 2001
	<i>Confinement III</i> , Jefferson Labs		June 1998
	<i>S-Duality and Mirror Symmetry</i> , ICTP Trieste		June 1995
	<i>DPF Meeting</i> , UNM-Albuquerque		August 1994
	<i>Physics Doesn't Stop</i> , Madison		April 1994
	<i>SSC Symposium</i> , Madison		April 1993
	<i>DPF Meeting</i> , Fermilab		November 1992
	<i>SSC Symposium</i> , Madison		April 1992
	<i>Symposium on Blackholes, Membranes and Strings</i> , Houston		January 1992
	<i>Montreal-Rochester-Syracuse-Toronto Meeting</i> , Rochester		May 1991
	<i>Montreal-Rochester-Syracuse-Toronto Meeting</i> , Montreal		May 1990
	<i>Montreal-Rochester-Syracuse-Toronto Meeting</i> , Syracuse		May 1989
	<i>Mathematical Aspects of String Theory</i> , San Diego		August 1986
String Workshop, Santa Barbara		August 1985	
<i>Geometry, Anomalies and Topology</i> , Argonne		March 1985	
<i>Second Jerusalem Winter School</i> , Hebrew University		December 1984	

Publications in Refereed Journals

1. "Inequivalence of the Brink-Schwarz and Siegel superparticles," *Mod. Phys. Lett.* **A2**, 209 (1987).
2. "Non-Gaussian density perturbations in inflationary cosmologies," with B. Grinstein and M.B. Wise, *Phys. Lett.* **B197**, 66 (1987).
3. "The Dirac propagator from pseudoclassical mechanics," *Phys. Lett.* **B214**, 87 (1988).
4. "The canonical structure of the manifestly supersymmetric string," *Int. J. Mod. Phys.* **A4**, 2811 (1989).
5. "Axionic black holes from massive axions," with M.J. Bowick and A. Lahiri[†], *Phys. Lett.* **B237**, 47 (1990).
6. "BRST quantization and coadjoint orbit theories," *Phys. Rev. D* **43**, 3442 (1991).
7. "Topological mass generation in 3+1 dimensions," with M.J. Bowick and A. Lahiri[†], *Mod. Phys. Lett.* **A6**, 559 (1991).
8. "Particle statistics in topologically nontrivial two dimensional magnetic systems," *Nucl. Phys.* **B360**, 409 (1991).
9. "Simpson's neutrino and the singular see-saw," with R. Johnson, S. Ranfone[†], J. Schechter and J.W.F. Valle, *Mod. Phys. Lett.* **A6**, 1967 (1991).
10. "Duality and the vacuum," *Nucl. Phys.* **B395**, 185 (1993).
11. "Collective coordinate action for charged sigma-model vortices in finite geometries," *Mod. Phys. Lett.* **A8**, 1815 (1993).
12. "Harmonic BRST quantization of systems with irreducible holomorphic Boson and Fermion constraints," with D.B. Crossley[†], *Phys. Rev. D* **47**, 5494 (1993).
13. "Phase space reduction and vortex statistics: An anyon quantization ambiguity," with A.J. Bordner[†] and D.B. Crossley[†], *Phys. Rev. D* **49**, 6907 (1994).
14. "Charged vortex dynamics in Ginzburg-Landau theory of the fractional quantum Hall effect," with A.J. Bordner[†], *Int. J. Mod. Phys.* **A10**, 645 (1995).
15. "Reality conditions, reducibility and ghosts," with D.B. Crossley[†], *Phys. Rev. D* **52**, 1102 (1995).
16. "Quark confinement dynamics," with M.G. Olsson, S. Veseli[†], and K. Williams[†], *Phys. Rev. D* **55**, 5408 (1997).

[†] Student

17. "Excited glue and the vibrating flux tube," with M.G. Olsson and S. Veseli, *Phys. Lett.* **B434**, 110 (1998).
18. "Vibrational modes of a rotating string," with J.R. Schmidt, *Can. J. Phys.* **76**, 965 (1998).
19. "Flux tube vibrations and the excited glue spectroscopy," with M.G. Olsson and S. Veseli, *Nucl. Phys. Proc. Suppl.* **B75**, 299 (1999).
20. "Adiabatic string shape for non-uniform rotation," with M.G. Olsson and S. Veseli, *Phys. Rev. D* **59**, 094011 (1999).
21. "Curved QCD string dynamics," with M.G. Olsson and S. Veseli, *Phys. Rev. D* **60**, 074026 (1999).
22. "A note on the computation of mode sums," with M.G. Olsson and J.R. Schmidt, *Phys. Rev. D* **62**, 066006 (2000).
23. "From scalar to string confinement," with M.G. Olsson and S. Veseli, *Phys. Rev. D* **62**, 094021 (2000).
24. "Analytic quantization of the QCD string," with C. Goebel, M.G. Olsson and S. Veseli, *Phys. Rev. D* **64**, 094011 (2001).
25. "QCD string structure in vector confinement," with T. Coleman[†], M.G. Olsson and S. Veseli, *Phys. Rev. D* **67**, 054016 (2003).
26. "Reduction of the QCD string to a time component vector potential," with M.G. Olsson, *Phys. Rev. D* **68**, 054022 (2003).
27. "QCD strings with spinning quarks," with M.G. Olsson and J. R. Schmidt, *Phys. Rev. D* **69**, 054013 (2004).
28. "Universal light quark mass dependence and heavy light meson spectroscopy," with T. Coleman, M.G. Olsson, and S. Veseli, *Phys. Rev. D* **69**, 074010 (2004).
29. "Direct experimental test of scalar confinement," with M. G. Olsson, Yu Yuan[†], J. R. Schmidt, and S. Veseli, *Phys. Rev. D* **70**, 054012 (2004).
30. "Quantization of Pseudoclassical Systems in the Schrödinger Realization," with D. A. Spector and C. W. Wilson[†], *J. Math. Phys.* **61**, 052106 (2020).
31. "Spin in Schrödinger-quantized Pseudoclassical Systems," *J. Math. Phys.* **62**, 102101 (2021); quant-ph/2105.12187.

[†] Student

Unpublished Articles

32. "BRST quantization and gravity in self-dual variables," with D.B. Crossley[†], UW-Madison Preprint MAD/TH-94-11.
33. "A mechanism for charge quantization," with C. J. Efthimiou, and D. A. Spector, hep-th/0209204.

Contributed Articles

34. "Lectures on superstring theory," given by J. H. Schwarz, at the Second Jerusalem Winter School, notes by T. J. Allen, in *Physics in Higher Dimensions*, Eds., T. Piran and S. Weinberg, (World Scientific Publishers, Singapore, 1986).
35. "Axionic black holes," with A. Lahiri[†] and M.J. Bowick, in *Proceedings of the Eleventh Annual MRST Meeting*, Eds. C. Rosenzweig and K.C. Wali, 1989.
36. "Mass generation without symmetry breaking," with M.J. Bowick and A. Lahiri[†], in *Proceedings of Twelfth Annual MRST meeting*, Eds. B. Margolis and P. Valin, 1990.
37. "Charged vortex dynamics in a Ginzburg-Landau theory of a 2+1 Dimensional Charged Scalar Field," with A.J. Bordner[†], in *The Fermilab Meeting DPF92*, C.H. Albright, P.H. Kasper, R. Raja and J. Yoh, eds., (World Scientific, Singapore, 1993) p. 1537.
38. "Vortex statistics: an anyon quantization ambiguity," with A.J. Bordner[†] and D.B. Crossley[†], *The Albuquerque Meeting, Proceedings of the 8th Meeting of the Division of Particles and Fields*, Sally Seidel, Ed. (World Scientific, Singapore, 1995) p. 1430.
39. "Relativistic strings and hybrid mesons," with M.G. Olsson and S. Veseli, *Proceedings of the Third International Conference on Quark Confinement*, (World Scientific, Singapore, 2000) p. 149.
40. "Scalar and QCD string confinement," with M.G. Olsson and S. Veseli, *Proceedings of the 7th Conference on Intersections Between Particle and Nuclear Physics (CIPANP 2000)*, 22-28 May 2000, Quebec City, Quebec, Canada. AIP Conf. Proc. **549**, 283 (2002).
41. "Analytic semi-classical quantization of a QCD string with light quarks," with C. Goebel, M.G. Olsson and S. Veseli, *Theoretical High Energy Physics, MRST 2001: A Tribute to Roger Migneron*. Eds. V. Elias, D.G.C. McKeon, and V.A. Miransky. (American Institute of Physics, Melville, New York, 2001) p. 277.

[†] Student

42. "Confinement Dynamics," with M.G. Olsson,
*Proceedings of the 8th Conference on Intersections Between Particle
and Nuclear Physics (CIPANP 2003), 19-24 May 2003, New York, NY (USA).*
AIP Conf. Proc. **698** 562-565, (2004).