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Personal

Born: May 22, 1971. Citizenship: U.S.A.

Education

- 9/91 – 6/96 **Harvard University**, Cambridge, MA.
Ph.D. in Physics.
Research area: string theory and quantum field theory.
Advisor: Prof. Cumrun Vafa.
- 9/91 – 6/92 **Harvard University**, Cambridge, MA.
M.A. in physics.
- 9/87 – 6/91 **Cornell University**, Ithaca, NY.
B.S. Applied and Engineering Physics.
B.A. Mathematics in the College Scholar Program.

Experience

- 1/14 – present A professor of Physics at the University of Chicago.
- 7/06 – 1/14 An associate professor of Physics at the University of Chicago.
- 5/00 – 7/06 An assistant professor of Physics at the University of Chicago.
- 9/98 – 5/00 A long term member of the Institute for Advanced Study in the School of Natural Sciences.
- 9/96 – 8/98 A member of the Institute for Advanced Study in the School of Natural Sciences.
- 6/91 – 7/91 Teaching assistant for an accelerated course on intermediate electromagnetism at Cornell University.
- 6/90 – 8/90 S.P.U.R. (Summer Program for Undergraduate Research) 1990 at the Cornell National Supercomputer Facility.
- 4/90 – 7/91 Research in plasma physics at the Laboratory of Plasma Physics, Cornell University.
Research project: multi-fluid simulation of a radiating X-pinch implosion.

Research in heavy ion physics at Argonne National Laboratory.
Research project: to design a detector mounting for the ATLAS project, and study its cooling properties.

Honors

FACCTS grant (2014-15).
Van der Waals Professor of Physics at the University of Amsterdam (2010).
Alfred P. Sloan Fellow (2001-2003).
NSF CAREER Grant Recipient.
Hertz Fellowship (1991-1996).
Beinecke Memorial Fellowship (1990-1994).
Trevor R. Cuykendall Memorial Award.
McMullen's Deans Prize.
Tau Beta Pi, Phi Beta Kappa.

Publications

- [1] Travis Maxfield, Jock McOrist, Daniel Robbins, and Savdeep Sethi, *New Examples of Flux Vacua*, JHEP **1312** (2013) 032, [arXiv:1309.2577 \[hep-th\]](#).
- [2] Savdeep Sethi, *A New String in Ten Dimensions?*, JHEP **1309** (2013) 149, [arXiv:1304.1551 \[hep-th\]](#).
- [3] Ilarion V. Melnikov, Callum Quigley, Savdeep Sethi, and Mark Stern, *Target Spaces from Chiral Gauge Theories*, JHEP **1302** (2013) 111, [arXiv:1212.1212 \[hep-th\]](#).
- [4] Ilarion V. Melnikov, Savdeep Sethi, and Eric Sharpe, *Recent Developments in (0,2) Mirror Symmetry*, SIGMA **8** (2012) 068, [arXiv:1209.1134 \[hep-th\]](#).
- [5] Jock McOrist and Savdeep Sethi, *M-theory and Type IIA Flux Compactifications*, JHEP **1212** (2012) 122, [arXiv:1208.0261 \[hep-th\]](#).
- [6] Callum Quigley, Savdeep Sethi, and Mark Stern, *Novel Branches of (0,2) Theories*, JHEP **1209** (2012) 064, [arXiv:1206.3228 \[hep-th\]](#).
- [7] Travis Maxfield and Savdeep Sethi, *The Conformal Anomaly of M5-Branes*, JHEP **1206** (2012) 075, [arXiv:1204.2002 \[hep-th\]](#).
- [8] Stephen R. Green, Emil J. Martinec, Callum Quigley, and Savdeep Sethi, *Constraints on String Cosmology*, Class.Quant.Grav. **29** (2012) 075006, [arXiv:1110.0545 \[hep-th\]](#).
- [9] Callum Quigley and Savdeep Sethi, *Linear Sigma Models with Torsion*, JHEP **1111** (2011) 034, [arXiv:1107.0714 \[hep-th\]](#).
- [10] Lilia Anguelova, Callum Quigley, and Savdeep Sethi, *The Leading Quantum Corrections to Stringy Kahler Potentials*, JHEP **1010** (2010) 065, [arXiv:1007.4793 \[hep-th\]](#).

- [11] Jock McOrist, David R. Morrison, and Savdeep Sethi, *Geometries, Non-Geometries, and Fluxes*, Adv.Theor.Math.Phys. **14** (2010), arXiv:1004.5447 [hep-th].
- [12] Emil J. Martinec, Daniel Robbins, and Savdeep Sethi, *Non-Supersymmetric String Theory*, JHEP **1110** (2011) 078, arXiv:0904.3498 [hep-th].
- [13] K. Becker and S. Sethi, *Torsional Heterotic Geometries*, Nucl. Phys. B **820** (2009) 1–31, arXiv:0903.3769 [hep-th].
- [14] Anirban Basu and Savdeep Sethi, *Recursion Relations from Space-time Supersymmetry*, JHEP **09** (2008) 081, arXiv:0808.1250 [hep-th].
- [15] Ilarion V. Melnikov and Savdeep Sethi, *Half-Twisted (0,2) Landau-Ginzburg Models*, JHEP **0803** (2008) 040, arXiv:0712.1058 [hep-th].
- [16] S. Sethi, *A note on heterotic dualities via M-theory*, Phys. Lett. B **659** (2008) 385–387, arXiv:0707.0295 [hep-th].
- [17] Nick Halmagyi, Ilarion V. Melnikov, and Savdeep Sethi, *Instantons, hypermultiplets and the heterotic string*, JHEP **0707** (2007) 086, arXiv:0704.3308 [hep-th].
- [18] Emil J. Martinec, Daniel Robbins, and Savdeep Sethi, *Toward the end of time*, JHEP **0608** (2006) 025, arXiv:hep-th/0603104 [hep-th].
- [19] Ben Craps, Arvind Rajaraman, and Savdeep Sethi, *Effective dynamics of the matrix big bang*, Phys.Rev. **D73** (2006) 106005, arXiv:hep-th/0601062 [hep-th].
- [20] Daniel Robbins and Savdeep Sethi, *A Matrix model for the null-brane*, JHEP **0602** (2006) 052, arXiv:hep-th/0509204 [hep-th].
- [21] Ben Craps, Savdeep Sethi, and Erik P. Verlinde, *A Matrix big bang*, JHEP **0510** (2005) 005, arXiv:hep-th/0506180 [hep-th].
- [22] Anirban Basu, Michael B. Green, and Savdeep Sethi, *A Curious truncation of N=4 Yang-Mills*, Phys.Rev.Lett. **93** (2004) 261601, arXiv:hep-th/0406267 [hep-th].
- [23] ———, *Some systematics of the coupling constant dependence of N=4 Yang-Mills*, JHEP **0409** (2004) 045, arXiv:hep-th/0406231 [hep-th].
- [24] D. Robbins and S. Sethi, *A barren landscape*, Phys. Rev. D **71** (2005) 046008, arXiv:hep-th/0405011.
- [25] Savdeep Sethi, *Structure in supersymmetric yang-mills theory*, JHEP **10** (2004) 001, hep-th/0404056.
- [26] Allan Adams, Anirban Basu, and Savdeep Sethi, *(0,2) duality*, Adv. Theor. Math. Phys. **7** (2004) 865–950, hep-th/0309226.
- [27] Daniel Robbins and Savdeep Sethi, *The UV / IR interplay in theories with space-time varying noncommutativity*, JHEP **0307** (2003) 034, arXiv:hep-th/0306193 [hep-th].
- [28] Anirban Basu and Savdeep Sethi, *World-sheet stability of (0,2) linear sigma models*, Phys. Rev. **D68** (2003) 025003, arXiv:hep-th/0303066.

- [29] Keshav Dasgupta, Govindan Rajesh, Daniel Robbins, and Savdeep Sethi, *Time dependent warping, fluxes, and NCYM*, JHEP **0303** (2003) 041, [arXiv:hep-th/0302049](#) [hep-th].
- [30] Akikazu Hashimoto and Savdeep Sethi, *Holography and string dynamics in time dependent backgrounds*, Phys.Rev.Lett. **89** (2002) 261601, [arXiv:hep-th/0208126](#) [hep-th].
- [31] Arjan Keurentjes and Savdeep Sethi, *Twisting E8 five-branes*, Phys.Rev. **D66** (2002) 046001, [arXiv:hep-th/0205162](#) [hep-th].
- [32] Sonia Paban, Savdeep Sethi, and Mark Stern, *Noncommutativity and supersymmetry*, JHEP **0203** (2002) 012, [arXiv:hep-th/0201259](#) [hep-th].
- [33] David R. Morrison and Savdeep Sethi, *Novel type I compactifications*, JHEP **0201** (2002) 032, [arXiv:hep-th/0109197](#) [hep-th].
- [34] J. de Boer, R. Dijkgraaf, K. Hori, A. Keurentjes, J. Morgan, D. R. Morrison, and S. Sethi, *Triples, fluxes, and strings*, Adv. Theor. Math. Phys. **4** (2001) 995–1186, [arXiv:hep-th/0103170](#).
- [35] Jonathan L. Feng, John March-Russell, Savdeep Sethi, and Frank Wilczek, *Saltatory relaxation of the cosmological constant*, Nucl.Phys. **B602** (2001) 307–328, [arXiv:hep-th/0005276](#) [hep-th].
- [36] Ori J. Ganor, Govindan Rajesh, and Savdeep Sethi, *Duality and noncommutative gauge theory*, Phys.Rev. **D62** (2000) 125008, [arXiv:hep-th/0005046](#) [hep-th].
- [37] Savdeep Sethi and Mark Stern, *The Structure of the D0 - D4 bound state*, Nucl.Phys. **B578** (2000) 163–198, [arXiv:hep-th/0002131](#) [hep-th].
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- [39] K. Dasgupta, G. Rajesh, and S. Sethi, *M theory, orientifolds and G-flux*, JHEP **08** (1999) 023, [arXiv:hep-th/9908088](#).
- [40] Savdeep Sethi and Mark Stern, *Supersymmetry and the Yang-Mills effective action at finite N*, JHEP **9906** (1999) 004, [arXiv:hep-th/9903049](#) [hep-th].
- [41] Savdeep Sethi, *A Relation between N=8 gauge theories in three-dimensions*, JHEP **9811** (1998) 003, [arXiv:hep-th/9809162](#) [hep-th].
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- [43] Michael B. Green and Savdeep Sethi, *Supersymmetry constraints on type IIB supergravity*, Phys. Rev. **D59** (1999) 046006, [arXiv:hep-th/9808061](#).
- [44] Sonia Paban, Savdeep Sethi, and Mark Stern, *Supersymmetry and higher derivative terms in the effective action of Yang-Mills theories*, JHEP **9806** (1998) 012, [arXiv:hep-th/9806028](#) [hep-th].
- [45] ———, *Constraints from extended supersymmetry in quantum mechanics*, Nucl.Phys. **B534** (1998) 137–154, [arXiv:hep-th/9805018](#) [hep-th].

- [46] Anton Kapustin and Savdeep Sethi, *The Higgs branch of impurity theories*, Adv.Theor.Math.Phys. **2** (1998) 571–591, [arXiv:hep-th/9804027 \[hep-th\]](#).
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- [49] Savdeep Sethi, *The Matrix formulation of type IIB five-branes*, Nucl.Phys. **B523** (1998) 158–170, [arXiv:hep-th/9710005 \[hep-th\]](#).
- [50] Nathan Seiberg and Savdeep Sethi, *Comments on Neveu-Schwarz five-branes*, Adv.Theor.Math.Phys. **1** (1998) 259–270, [arXiv:hep-th/9708085 \[hep-th\]](#).
- [51] Savdeep Sethi and Mark Stern, *D-brane bound states redux*, Commun.Math.Phys. **194** (1998) 675–705, [arXiv:hep-th/9705046 \[hep-th\]](#).
- [52] Ashoke Sen and Savdeep Sethi, *The mirror transform of type I vacua in six dimensions*, Nucl. Phys. **B499** (1997) 45–54, [hep-th/9703157](#).
- [53] Savdeep Sethi and Leonard Susskind, *Rotational invariance in the M(atr ix) formulation of type IIB theory*, Phys.Lett. **B400** (1997) 265–268, [arXiv:hep-th/9702101 \[hep-th\]](#).
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- [55] S. Sethi and M. Stern, *A Comment on the spectrum of H monopoles*, Phys.Lett. **B398** (1997) 47–51, [arXiv:hep-th/9607145 \[hep-th\]](#).
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- [57] S. Sethi, M. Stern, and E. Zaslow, *Monopole and Dyon bound states in $N=2$ supersymmetric Yang-Mills theories*, Nucl.Phys. **B457** (1995) 484–512, [arXiv:hep-th/9508117 \[hep-th\]](#).
- [58] S. Sethi, *Supermanifolds, rigid manifolds and mirror symmetry*, Nucl.Phys. **B430** (1994) 31–50, [arXiv:hep-th/9404186 \[hep-th\]](#).

Synergistic Activities

Lecturer at the Banff workshop on “Modern Developments in M-theory” (2014),
 Lecturer at the workshop on “Generalized Geometry” in Costa Rica (2013),
 Speaker at the 22nd annual NETIP conference. Pillar Talk: “Dare to Ponder the Universe: String-Theory Demystified” (2013),
 Lecturer at the Summer REU Opportunities for Minorities and Women program at the University of Chicago (2009-2011, 2013),

Lecturer at the Michigan workshop on the “Geometry and Physics of Gauged Linear Sigma Model” (2013),
Lecturer at the Mitchell Institute for Fundamental Physics and Astronomy meeting on “Branes, Strings and Higher Derivatives” (2013),
Lecturer at the Montreal “ $N = 2$ Geometry And ApplicationZ workshop” (2012),
Lecturer at the Simons Center for Geometry and Physics workshop on “String Compactifications and Phenomenology” (2012),
Lecturer at the Newton Institute workshop on “Mathematics and Applications of Branes in String and M-theory” (2012),
Lecturer at the Purdue Great Lakes Strings meeting (2012),
Lecturer at “Supersymmetry 2011” held at Fermilab (2011),
Lecturer at Vienna workshop on “Topological Heterotic Strings and (0,2) Mirror Symmetry Workshop” (2011),
Organized the Great Lakes Strings Conference (2011),
Lecturer at the Paris workshop on “Advances in String Theory, Wall Crossing and Quaternion-Kahler Geometry” (2010),
Lecturer at the Amsterdam workshop on string theory (2010) and many prior years,
Lecturer at the Copenhagen workshop on topics in string theory (2010),
Lecturer at the Brandeis workshop on “Generalized Geometries” (2010),
Lecturer at “Strings 2010” held at the Mitchell Institute for Fundamental Physics and Astronomy,
Co-organized a Banff Center workshop on, “(0,2) Mirror Symmetry and Heterotic Gromov-Witten Invariants” (2010),
Co-organized a Max-Planck-Institut fur Gravitationsphysik, Potsdam workshop on, “(0,2) Mirror Symmetry and Quantum Sheaf Cohomology” (2009),
Lecturer at the GGI workshop on ”New Perspectives on String Theory” (2009),
Lecturer at the APC/Solvay conference on “Cosmological Frontiers in Fundamental Physics” held in Brussels (2009),
Lecturer at the KITP workshop on “Fundamental Aspects of Superstring Theory” (2009),
Lecturer at the Banff workshop on “Gauge Fields, Cosmology and Mathematical String Theory” (2009),
Lecturer for the Space Explorers Program (2004),
Lecturer at the Yerkes Winter Institute (2003),
Lecturer at the Clay Mathematics Institute School on Geometry and String Theory (2002),
Lecturer at the Park City Math Institute (2001),
Developed a modern course on “Supersymmetry and Supergravity,”
(see, <http://theory.uchicago.edu/~sethi/Teaching/P487/classes487.html>).
Lecturer for the Space Explorers Program (2004),
Lecturer at the Yerkes Winter Institute (2003),
Lecturer at the Clay Mathematics Institute School on Geometry and String Theory (2002),
Lecturer at the Park City Math Institute (2001).

Collaborators

A. Adams, M.I.T.
L. Anguelova, Perimeter Institute
A. Basu, Harish-Chandra Research Institute
K. Becker, Texas A&M
R. Blumenhagen, Max-Planck-Institut Munchen
J. de Boer, University of Amsterdam
B. Craps, Vrije Universiteit Brussel
K. Dasgupta, Stanford University
R. Dijkgraaf, University of Amsterdam
J. L. Feng, U.C. Irvine
O. J. Ganor, U.C. Berkeley
M. B. Green, Cambridge University
S. R. Green, University of Guelph
N. Halmagyi, University of Chicago
A. Hashimoto, University of Madison
K. Hori, University of Toronto
A. Kapustin, Caltech
A. Keurentjes, Ecole Normale Supérieure
J. March-Russell, C.E.R.N.
E. Martinec, University of Chicago
T. Maxfield, University of Chicago
J. McCorist, Cambridge University
I. Melnikov, Max-Planck-Institut Potsdam
J. McOrist, Cambridge University
A. Mikhailov, Caltech
J. Morgan, Columbia University
D. R. Morrison, U. C. Santa Barbara
N. Nekrasov, I.H.E.S.
J. Park, University of Chicago
S. Paban, University of Texas
C. Quigley, University of Chicago
A. Rajaraman, U.C. Irvine
G. Rajesh, University of Chicago
D. Robbins, University of Amsterdam
E. Sharpe, Virginia Tech
N. Seiberg, I.A.S.
A. Sen, Harish-Chandra Research Institute
M. Stern, Duke University
L. Susskind, Stanford University
E. Verlinde, University of Amsterdam
F. Wilczek, M.I.T.
E. Witten, I.A.S.
C. Vafa, Harvard University
E. Zaslow, Northwestern University

Doctoral Students

Travis Maxfield (current),
Callum Quigley (University of Alberta),
Jock McOrist (faculty at the University of Surrey, London),
Daniel Robbins (University of Amsterdam and a long term member of the Mitchell Institute for Fundamental Physics and Astronomy).