

Curriculum Vitæ

David Robert Morrison

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Education

A.B. summa cum laude, Princeton University, 1976
A.M. (mathematics), Harvard University, 1977
Ph.D. (mathematics), Harvard University, 1980
Dissertation advisor: Phillip A. Griffiths

Employment History

Instructor in Mathematics, Princeton University, 1980–82
Assistant Professor of Mathematics, Princeton University, 1982–86
Associate Professor of Mathematics, Duke University, 1986–92
Professor of Mathematics, Duke University, 1992–97
James B. Duke Professor of Mathematics and Physics, Duke University, 1997–2007
Mathematics Department Chair, 2002–04
Distinguished Professor of Mathematics and Physics, UC Santa Barbara, 2006–present
Mathematics Department Chair, 2011–15
Visiting Senior Scientist, Kavli Institute for the Physics and Mathematics of the
Universe, University of Tokyo, 2019 - 2023

Awards, Honors, and Prizes

Fannie and John Hertz Foundation Scholarship, 1973–76
Phi Beta Kappa, 1976
Sigma Xi, 1976
National Science Foundation Graduate Fellowship, 1977–80
National Science Foundation Postdoctoral Fellowship, 1982–84
Japan Society for the Promotion of Science Fellowship, 1984–85
American Mathematical Society Centennial Fellowship, 1992–94
Clay Mathematics Institute Senior Scholar, Fall 2005
John Simon Guggenheim Memorial Foundation Fellowship, 2005–06
Mathematical Sciences Research Institute Research Professorship, Spring 2006
Fellow of the American Mathematical Society, 2013
Fellow of the American Physical Society, 2014
Fellow, American Academy of Arts and Sciences, 2015
Simons Fellow in Theoretical Physics, 2018–19
Eisenbud Professor, Mathematical Sciences Research Institute, Spring 2019

Grants

National Science Foundation

Graduate Fellowship, 1977–80
MCS 81-00744 (Faculty Associate), 1981–82
MCS 82-11310 (Mathematical Sciences Postdoctoral Fellowship), \$29,000, 1982–84
DMS 84-01291 (Faculty Associate), 1984–87
DMS 87-02927 (Principal Investigator), \$42,200, 1987–89
DMS-9103827 (Principal Investigator), \$57,030, 1991–93
DMS-9304580 (Support at IAS), Fall 1993
DMS-9401447 (Principal Investigator), \$210,000, 1994–2000
DMS-0074072 (Principal Investigator), \$833,922, 2000–03
DMS-0301476 (Principal Investigator), \$741,000, 2003–06
DMS-0606578 (Principal Investigator), \$511,000, 2006–09
DMS-0801258 (substitute Principal Investigator),¹ \$246,080, 2008–12
DMS-1007414 (Principal Investigator), \$148,000 2010–14
DMS-1045292 (Senior Personnel), \$802,786, 2011–18
PHY-1307513 (Principal Investigator), \$353,999, 2013–16
PHY-1620842 (Principal Investigator), \$354,000, 2016–20
PHY-2014226 (Principal Investigator), \$210,000, 2020-23

Simons Foundation

#488629 (Principal Investigator), \$1,070,454,² 2016–23
#562580 (Principal Investigator), \$125,000, 2018–19

Publications

Books

1. (co-editor, with R. Friedman), *The birational geometry of degenerations*, Progress in Math., vol. 29, Birkhäuser, Boston, Basel, Stuttgart, 1983.
2. (co-editor, with J. A. Carlson and C. H. Clemens), *Complex geometry and Lie theory*, Proc. Symp. Pure Math., vol. 53, American Mathematical Society, Providence, 1991.
3. (co-editor, with J. Kollár and R. Lazarsfeld), *Algebraic geometry – Santa Cruz 1995*, Proc. Symp. Pure Math., vol. 62, American Mathematical Society, Providence, 1997.
4. (co-editor, with P. Deligne, P. Etingof, D. S. Freed, L. Jeffrey, D. Kazhdan, J. Morgan and E. Witten), *Quantum fields and strings: A course for mathematicians*, American Mathematical Society, Providence, 1999, two volumes.
5. (co-editor, with C. H. Clemens), *Selected works of Phillip A. Griffiths with commentary: Variations of Hodge structures*, American Mathematical Society and International Press, Providence, 2003.
6. (co-editor, with R. L. Bryant), *Selected works of Phillip A. Griffiths with commentary: Differential systems*, American Mathematical Society and International Press, Providence, 2003.
7. (co-editor, with D. S. Freed and I. Singer), *Quantum field theory, supersymmetry, and enumerative geometry*, IAS/Park City Mathematics Series, vol. 11, American Mathematical Society, Providence, 2006.

¹Morrison took this grant over after Paolo Cascini resigned from UCSB on June 30, 2010

²UCSB portion of \$14.5 million multi-institutional collaborative grant with 14 P.I.'s; originally awarded for four yerars (2016-20) at \$8.5 million with 10 P.I.'s, the UCSB portion of which was \$631,200

- (co-editor, with R. Donagi, S. Katz, and A. Klemm), *String-Math 2012*, Proc. Symp. Pure Math., vol. 90, American Mathematical Society, Providence, 2015.

Articles

- A Stolarsky array of Wythoff pairs*, A Collection of Manuscripts Related to the Fibonacci Sequence (V. E. Hoggatt Jr. and M. Bicknell-Johnson, eds.), The Fibonacci Association, Santa Clara, 1980, pp. 134–136.
- Semistable degenerations of Enriques' and hyperelliptic surfaces*, Duke Math. J. **48** (1981) 197–249.
- (with R. Friedman), *The birational geometry of degenerations: An overview*, The Birational Geometry of Degenerations (R. Friedman and D. R. Morrison, eds.), Progress in Math., vol. 29, Birkhäuser, Boston, Basel, Stuttgart, 1983, pp. 1–32.
- (with R. Miranda), *The minus one theorem*, The Birational Geometry of Degenerations (R. Friedman and D. R. Morrison, eds.), Progress in Math., vol. 29, Birkhäuser, Boston, Basel, Stuttgart, 1983, pp. 173–259.
- (with B. Crauder), *Triple-point-free degenerations of surfaces with Kodaira number zero*, The Birational Geometry of Degenerations (R. Friedman and D. R. Morrison, eds.), Progress in Math., vol. 29, Birkhäuser, Boston, Basel, Stuttgart, 1983, pp. 353–386.
- Some remarks on the moduli of K3 surfaces*, Classification of Algebraic and Analytic Manifolds (K. Ueno, ed.), Progress in Math., vol. 39, Birkhäuser, Boston, Basel, Stuttgart, 1983, pp. 303–332.
- (with G. Stevens), *Terminal quotient singularities in dimensions three and four*, Proc. Amer. Math. Soc. **90** (1984) 15–20.
- On K3 surfaces with large Picard number*, Invent. Math. **75** (1984) 105–121.
- The Clemens–Schmid exact sequence and applications*, Topics in Transcendental Algebraic Geometry (P. Griffiths, ed.), Annals of Math. Studies, vol. 106, Princeton University Press, Princeton, 1984, pp. 101–119.
- Algebraic cycles on products of surfaces*, Proc. Algebraic Geometry Symposium, Tôhoku University, 1984, pp. 194–210.
- The Kuga–Satake variety of an abelian surface*, J. Algebra **92** (1985) 454–476.
- Canonical quotient singularities in dimension three*, Proc. Amer. Math. Soc. **93** (1985) 393–396.
- The birational geometry of surfaces with rational double points*, Math. Ann. **271** (1985) 415–438.
- (with R. Miranda), *The number of embeddings of integral quadratic forms, I*, Proc. Japan Acad. Ser. A Math. Sci. **61** (1985) 317–320.
- (with R. Miranda), *The number of embeddings of integral quadratic forms, II*, Proc. Japan Acad. Ser. A Math. Sci. **62** (1986) 29–32.
- A remark on Kawamata's paper 'On the plurigenera of minimal algebraic 3-folds with $K \approx 0$ '*, Math. Ann. **275** (1986) 547–553.
- (with M.-H. Saito), *Cremona transformations and degrees of period maps for K3 surfaces with ordinary double points*, Algebraic Geometry, Sendai 1985 (T. Oda, ed.), Adv. Studies in Pure Math., vol. 10, North-Holland, Amsterdam, New York, Oxford, and Kinokuniya, Tokyo, 1987, pp. 477–513.
- Isogenies between algebraic surfaces with geometric genus one*, Tokyo J. Math. **10** (1987) 179–187.
- (with S. Mori and I. Morrison), *On four-dimensional terminal quotient singularities*, Math. Comp. **51** (1988) 769–786.

20. *On the moduli of Todorov surfaces*, Algebraic Geometry and Commutative Algebra in Honor of Masayoshi Nagata (H. Hijikata et al., eds.), vol. 1, Kinokuniya, Tokyo, 1988, pp. 313–355.
21. (with R. Donagi), *Linear systems on $K3$ -sections*, J. Differential Geom. **29** (1989) 49–64.
22. *Picard–Fuchs equations and mirror maps for hypersurfaces*, Essays on Mirror Manifolds (S.-T. Yau, ed.), International Press, Hong Kong, 1992, (reprinted in: Mirror Symmetry I (S.-T. Yau, ed.), International Press, Cambridge, 1998, pp. 185–199), pp. 241–264, [arXiv:hep-th/9111025](#).
23. (with S. Katz), *Gorenstein threefold singularities with small resolutions via invariant theory for Weyl groups*, J. Algebraic Geom. **1** (1992) 449–530, [arXiv:alg-geom/9202002](#).
24. *Complements on log surfaces*, Flips and Abundance for Algebraic Threefolds (J. Kollár, ed.), Astérisque, vol. 211, Société Mathématique de France, 1992, pp. 207–214.
25. *Mirror symmetry and rational curves on quintic threefolds: A guide for mathematicians*, J. Amer. Math. Soc. **6** (1993) 223–247, [arXiv:alg-geom/9202004](#).
26. (with P. S. Aspinwall), *Topological field theory and rational curves*, Comm. Math. Phys. **151** (1993) 245–262, [arXiv:hep-th/9110048](#).
27. (with P. S. Aspinwall and B. R. Greene), *Multiple mirror manifolds and topology change in string theory*, Phys. Lett. B **303** (1993) 249–259, [arXiv:hep-th/9301043](#).
28. (with A. Grassi), *Automorphisms and the Kähler cone of certain Calabi–Yau manifolds*, Duke Math. J. **71** (1993) 831–838, [arXiv:alg-geom/9212004](#).
29. (with P. S. Aspinwall and B. R. Greene), *The monomial-divisor mirror map*, Internat. Math. Res. Notices (1993) 319–337, [arXiv:alg-geom/9309007](#).
30. *Compactifications of moduli spaces inspired by mirror symmetry*, Journées de Géométrie Algébrique d’Orsay (Juillet 1992), Astérisque, vol. 218, Société Mathématique de France, 1993, pp. 243–271, [arXiv:alg-geom/9304007](#).
31. (with B. W. Jordan), *On the Néron models of abelian surfaces with quaternionic multiplication*, J. Reine Angew. Math. **447** (1994) 1–22.
32. (with P. S. Aspinwall and B. R. Greene), *Calabi–Yau moduli space, mirror manifolds and spacetime topology change in string theory*, Nuclear Phys. B **416** (1994) 414–480, [arXiv:hep-th/9309097](#).
33. (with P. Candelas, X. de la Ossa, A. Font and S. Katz), *Mirror symmetry for two parameter models – I*, Nuclear Phys. B **416** (1994) 481–562, [arXiv:hep-th/9308083](#).
34. (with B. Crauder), *Minimal models and degenerations of surfaces with Kodaira number zero*, Trans. Amer. Math. Soc. **343** (1994) 525–558.
35. (with P. S. Aspinwall and B. R. Greene), *Measuring small distances in $N=2$ sigma models*, Nuclear Phys. B **420** (1994) 184–242, [arXiv:hep-th/9311042](#).
36. (with P. S. Aspinwall), *Chiral rings do not suffice: $N=(2,2)$ theories with nonzero fundamental group*, Phys. Lett. B **334** (1994) 79–86, [arXiv:hep-th/9406032](#).
37. (with P. S. Aspinwall and B. R. Greene), *Space–time topology change and stringy geometry*, J. Math. Phys. **35** (1994) 5321–5337, (Also published in: Pascos ’94, Proceedings of the Fourth International Symposium on Particles, Strings and Cosmology, (K. C. Wali, ed.), World Scientific, 1995, pp. 201–222).
38. (with P. Candelas, A. Font and S. Katz), *Mirror symmetry for two parameter models – II*, Nuclear Phys. B **429** (1994) 626–674, [arXiv:hep-th/9403187](#).
39. (with M. R. Plesser), *Summing the instantons: Quantum cohomology and mirror symmetry in toric varieties*, Nuclear Phys. B **440** (1995) 279–354, [arXiv:hep-th/9412236](#).

40. (with P. S. Aspinwall and B. R. Greene), *Spacetime topology change: The physics of Calabi–Yau moduli space*, Strings '93 (M. B. Halpern, G. Rivlis, and A. Sevrin, eds.), World Scientific, Singapore, 1995, pp. 241–262, [arXiv:hep-th/9311186](#).
41. *Where is the large radius limit?*, Strings '93 (M. B. Halpern, G. Rivlis, and A. Sevrin, eds.), World Scientific, Singapore, 1995, pp. 311–315, [arXiv:hep-th/9311049](#).
42. (with P. S. Aspinwall), *U-duality and integral structures*, Phys. Lett. B **355** (1995) 141–149, [arXiv:hep-th/9505025](#).
43. (with B. R. Greene and A. Strominger), *Black hole condensation and the unification of string vacua*, Nuclear Phys. B **451** (1995) 109–120, [arXiv:hep-th/9504145](#).
44. (with B. R. Greene and M. R. Plesser), *Mirror manifolds in higher dimension*, Comm. Math. Phys. **173** (1995) 559–598, Reprinted in: *Mirror Symmetry II* (B. Greene and S.-T. Yau, eds.), International Press, Cambridge, 1997, pp. 745–784, [arXiv:hep-th/9402119](#).
45. *Mirror symmetry and moduli spaces of superconformal field theories*, Proc. Internat. Congr. Math. Zürich 1994 (S. D. Chatterji, ed.), vol. 2, Birkhäuser Verlag, Basel, Boston, Berlin, 1995, pp. 1304–1314, [arXiv:alg-geom/9411019](#).
46. *Beyond the Kähler cone*, Proc. of the Hirzebruch 65 Conference on Algebraic Geometry (M. Teicher, ed.), Israel Math. Conf. Proc., vol. 9, Bar-Ilan University, 1996, pp. 361–376, [arXiv:alg-geom/9407007](#).
47. *Mirror symmetry and the type II string*, Trieste Conference on S-Duality and Mirror Symmetry, Nuclear Phys. B Proc. Suppl., vol. 46, 1996, pp. 146–155, [arXiv:hep-th/9512016](#).
48. (with M. R. Plesser), *Towards mirror symmetry as duality for two-dimensional abelian gauge theories*, Trieste Conference on S-Duality and Mirror Symmetry, Nucl. Phys. B Proc. Suppl., vol. 46, 1996, (Also published in: *Strings '95, Future Perspectives in String Theory* (I. Bars et al., eds.), World Scientific, 1996, pp. 374–387), pp. 177–186, [arXiv:hep-th/9508107](#).
49. (with P. S. Aspinwall), *Stable singularities in string theory*, Comm. Math. Phys. **178** (1996) 115–134, (with an appendix by Mark Gross), [arXiv:hep-th/9503208](#).
50. (with C. Vafa), *Compactifications of F-theory on Calabi–Yau threefolds, I*, Nuclear Phys. B **473** (1996) 74–92, [hep-th/9602114](#).
51. ———, *Compactifications of F-theory on Calabi–Yau threefolds, II*, Nuclear Phys. B **476** (1996) 437–469, [hep-th/9603161](#).
52. (with S. Katz and M. R. Plesser), *Enhanced gauge symmetry in type II string theory*, Nuclear Phys. B **477** (1996) 105–140, [arXiv:hep-th/9601108](#).
53. (with K. Becker, M. Becker, H. Ooguri, Y. Oz, and Z. Yin), *Supersymmetric cycles in exceptional holonomy manifolds and Calabi–Yau 4-folds*, Nuclear Phys. B **480** (1996) 225–238, [arXiv:hep-th/9608116](#).
54. (with M. Bershadsky, K. Intriligator, S. Kachru, V. Sadov, and C. Vafa), *Geometric singularities and enhanced gauge symmetries*, Nuclear Phys. B **481** (1996) 215–252, [arXiv:hep-th/9605200](#).
55. (with J. Distler and B. R. Greene), *Resolving singularities in (0,2) models*, Nuclear Phys. B **481** (1996) 289–312, [arXiv:hep-th/9605222](#).
56. (with B. R. Greene and C. Vafa), *A geometric realization of confinement*, Nuclear Phys. B **481** (1996) 513–538, [arXiv:hep-th/9608039](#).
57. *Making enumerative predictions by means of mirror symmetry*, *Mirror Symmetry II* (B. Greene and S.-T. Yau, eds.), AMS/IP Stud. Adv. Math., vol. 1, International Press, Cambridge, 1997, pp. 457–482, [arXiv:alg-geom/9504013](#).
58. (with P. S. Aspinwall), *String theory on K3 surfaces*, *Mirror Symmetry II* (B. Greene and S.-T. Yau, eds.), International Press, Cambridge, 1997, pp. 703–716, [arXiv:hep-th/9404151](#).

59. *Mathematical aspects of mirror symmetry*, Complex Algebraic Geometry (J. Kollár, ed.), IAS/Park City Math. Series, vol. 3, 1997, pp. 265–340, [arXiv:alg-geom/9609021](#).
60. (with N. Seiberg), *Extremal transitions and five-dimensional supersymmetric field theories*, Nuclear Phys. B **483** (1997) 229–247, [arXiv:hep-th/9609070](#).
61. (with O. J. Ganor and N. Seiberg), *Branes, Calabi–Yau spaces, and toroidal compactification of the $N=1$ six-dimensional E_8 theory*, Nuclear Phys. B **487** (1997) 93–127, [arXiv:hep-th/9610251](#).
62. (with K. Intriligator and N. Seiberg), *Five-dimensional supersymmetric gauge theories and degenerations of Calabi–Yau spaces*, Nuclear Phys. B **497** (1997) 56–100, [arXiv:hep-th/9702198](#).
63. (with P. S. Aspinwall), *Point-like instantons on $K3$ orbifolds*, Nuclear Phys. B **503** (1997) 533–564, [arXiv:hep-th/9705104](#).
64. (with M. R. Douglas and B. R. Greene), *Orbifold resolution by D -branes*, Nuclear Phys. B **506** (1997) 84–106, [arXiv:hep-th/9704151](#).
65. (with P. S. Aspinwall), *Non-simply-connected gauge groups and rational points on elliptic curves*, J. High Energy Phys. **07** (1998) 012, [arXiv:hep-th/9805206](#).
66. (with B. R. Greene and J. Polchinski), *String theory*, Proc. Nat. Acad. Sci. U.S.A. **95** (1998) 11039–11040.
67. *Through the looking glass*, Mirror Symmetry III (D. H. Phong, L. Vinet, and S.-T. Yau, eds.), AMS/IP Stud. Adv. Math., vol. 10, International Press, Cambridge, 1999, pp. 263–277, [arXiv:alg-geom/9705028](#).
68. *The geometry underlying mirror symmetry*, New Trends in Algebraic Geometry (K. Hulek, F. Catanese, C. Peters, and M. Reid, eds.), London Math. Soc. Lecture Notes, vol. 264, Cambridge University Press, 1999, pp. 283–310, [arXiv:alg-geom/9608006](#).
69. (with M. R. Plesser), *Non-spherical horizons, I*, Adv. Theor. Math. Phys. **3** (1999) 1–81, [hep-th/9810201](#).
70. (with P. S. Aspinwall and S. Katz), *Lie groups, Calabi–Yau threefolds, and F -theory*, Adv. Theor. Math. Phys. **4** (2000) 95–126, [arXiv:hep-th/0002012](#).
71. *Geometric aspects of mirror symmetry*, Mathematics Unlimited – 2001 and Beyond (B. Enquist and W. Schmid, eds.), Springer-Verlag, 2001, pp. 899–918, [arXiv:math.AG/0007090](#).
72. (with J. de Boer, R. Dijkgraaf, K. Hori, A. Keurentjes, J. Morgan, and S. Sethi), *Triples, fluxes, and strings*, Adv. Theor. Math. Phys. **4** (2001) 995–1186, [hep-th/0103170](#).
73. *TASI lectures on compactification and duality*, Strings, Branes, and Gravity, TASI 99 (J. Harvey, S. Kachru, and E. Silverstein, eds.), World Scientific, 2001, pp. 653–719, [arXiv:hep-th/0411120](#).
74. (with S. Sethi), *Novel type I compactifications*, J. High Energy Phys. **01** (2002) 032, [arXiv:hep-th/0109197](#).
75. (with P. Candelas, D.-E. Diaconescu, B. Florea, and G. Rajesh), *Codimension-three bundle singularities in F -theory*, J. High Energy Phys. **06** (2002) 014, [arXiv:hep-th/0009228](#).
76. (with A. Grassi), *Group representations and the Euler characteristic of elliptically fibered Calabi–Yau threefolds*, J. Algebraic Geom. **12** (2003) 321–356, [arXiv:math.AG/0005196](#).
77. (with K. Narayan and M. R. Plesser), *Localized tachyons in $\mathbb{C}^3/\mathbb{Z}_N$* , J. High Energy Phys. **08** (2004) 047, [arXiv:hep-th/0406039](#).
78. (with K. Narayan), *On tachyons, gauged linear sigma models, and flip transitions*, J. High Energy Phys. **02** (2005) 062, [arXiv:hep-th/0412337](#).
79. (with M. Buican, D. Malyshev, H. Verlinde, and M. Wijnholt), *D -branes at singularities, compactification, and hypercharge*, J. High Energy Phys. **01** (2007) 107, [arXiv:hep-th/0610007](#).

80. (with D. Green, A. Lawrence, J. McGreevy, and E. Silverstein), *Dimensional duality*, Phys. Rev. D **76** (2007) 066004, [arXiv:0705.0550 \[hep-th\]](#).
81. (with J. Walcher), *D-branes and normal functions*, Adv. Theor. Math. Phys. **13** (2009) 553–598, [arXiv:0709.4028 \[hep-th\]](#).
82. (with N. Drukker and T. Okuda), *Loop operators and S-duality from curves on Riemann surfaces*, J. High Energy Phys. **09** (2009) 031, [arXiv:0907.2593 \[hep-th\]](#).
83. (with V. Kumar and W. Taylor), *Mapping 6D $N = 1$ supergravities to F-theory*, J. High Energy Phys. **02** (2010) 099, [arXiv:0911.3393 \[hep-th\]](#).
84. *On the structure of supersymmetric T^3 -fibrations*, Tropical Geometry and Mirror Symmetry (R. Castaño-Bernard, Y. Soibelman, and I. Zharkov, eds.), Contemp. Math., vol. 527, Amer. Math. Soc., Providence, RI, 2010, pp. 91–112, [arXiv:1002.4921 \[math.AG\]](#).
85. (with V. Kumar and W. Taylor), *Global aspects of the space of 6D $N = 1$ supergravities*, J. High Energy Phys. **11** (2010) 118, [arXiv:1008.1062 \[hep-th\]](#).
86. (with J. McOrist and S. Sethi), *Geometries, non-geometries, and fluxes*, Adv. Theor. Math. Phys. **14** (2010) 1515–1583, [arXiv:1004.5447 \[hep-th\]](#).
87. (with S. Katz, S. Schäfer-Nameki, and J. Sully), *Tate’s algorithm and F-theory*, J. High Energy Phys. **08** (2011) 094, [arXiv:1106.3854 \[hep-th\]](#).
88. (with W. Taylor), *Matter and singularities*, J. High Energy Phys. **01** (2012) 022, [arXiv:1106.3563 \[hep-th\]](#).
89. (with A. Grassi), *Anomalies and the Euler characteristic of elliptic Calabi–Yau threefolds*, Commun. Number Theory Phys. **6** (2012) 51–127, [arXiv:1109.0042 \[hep-th\]](#).
90. (with P. S. Aspinwall), *Quivers from matrix factorizations*, Comm. Math. Phys. **313** (2012) 607–633, [arXiv:1005.1042 \[hep-th\]](#).
91. (with W. Taylor), *Classifying bases for 6D F-theory models*, Central Eur. J. Phys. **10** (2012) 1072–1088, [arXiv:1201.1943 \[hep-th\]](#).
92. ———, *Toric bases for 6D F-theory models*, Fortschr. Phys. **60** (2012) 1187–1216, [arXiv:1204.0283 \[hep-th\]](#).
93. (with D. S. Park), *F-theory and the Mordell–Weil group of elliptically-fibered Calabi–Yau threefolds*, J. High Energy Phys. **10** (2012) 128, [arXiv:1208.2695 \[hep-th\]](#).
94. (with H. Jockers, V. Kumar, J. M. Lapan, and M. Romo), *Nonabelian 2D gauge theories for determinantal Calabi–Yau varieties*, J. High Energy Phys. **11** (2012) 166, [arXiv:1205.3192 \[hep-th\]](#).
95. (with C. Curto), *Threefold flops via matrix factorization*, J. Algebraic Geom. **22** (2013) 599–627, [arXiv:math.AG/0611014](#).
96. (with J. Halverson and V. Kumar), *New methods for characterizing phases of 2D supersymmetric gauge theories*, J. High Energy Phys. **9** (2013) 143, [arXiv:1305.3278 \[hep-th\]](#).
97. (with K. Intriligator, H. Jockers, P. Mayr, and M. R. Plesser), *Conifold transitions in M-theory on Calabi–Yau fourfolds with background fluxes*, Adv. Theor. Math. Phys. **17** (2013) 601–699, [arXiv:1203.6662 \[hep-th\]](#).
98. (with H. Jockers, V. Kumar, J. M. Lapan, and M. Romo), *Two-sphere partition functions and Gromov–Witten invariants*, Commun. Math. Phys. **325** (2014) 1139–1170, [arXiv:1208.6244 \[hep-th\]](#).
99. (with J. J. Heckman and C. Vafa), *On the classification of 6D SCFTs and generalized ADE orbifolds*, J. High Energy Phys. **05** (2014) 028, [arXiv:1312.5746 \[hep-th\]](#).
100. (with H. Hayashi, C. Lawrie, and S. Schäfer-Nameki), *Box graphs and singular fibers*, J. High Energy Phys. **05** (2014) 048, [arXiv:1402.2653 \[hep-th\]](#).

101. (with V. Braun), *F-theory on genus-one fibrations*, J. High Energy Phys. **08** (2014) 132, [arXiv:1401.7844 \[hep-th\]](#).
102. (with C. Mayrhofer, O. Till, and T. Weigand), *Mordell–Weil torsion and the global structure of gauge groups in F-theory*, J. High Energy Phys. **10** (2014) 016, [arXiv:1405.3656 \[hep-th\]](#).
103. (with J. Halverson, H. Jockers, and J. Lapan), *Perturbative corrections to Kähler moduli spaces*, Commun. Math. Phys. **333** (2015) 1563–1584, [arXiv:1308.2157 \[hep-th\]](#).
104. (with J. Halverson), *The landscape of M-theory compactifications on seven-manifolds with G_2 holonomy*, J. High Energy Phys. **04** (2015) 047, [arXiv:1412.4123 \[hep-th\]](#).
105. (with W. Taylor), *Non-Higgsable clusters for 4D F-theory models*, J. High Energy Phys. **05** (2015) 080, [arXiv:1412.6112 \[hep-th\]](#).
106. (with J. J. Heckman and C. Vafa), *Erratum: On the classification of 6D SCFTs and generalized ADE orbifolds*, J. High Energy Phys. **06** (2015) 017.
107. (with M. Del Zotto, J. J. Heckman, and D. Park), *6D SCFTs and gravity*, J. High Energy Phys. **06** (2015) 158, [arXiv:1412.6526 \[hep-th\]](#).
108. (with A. Malmendier), *$K3$ surfaces, modular forms, and non-geometric heterotic compactifications*, Lett. Math. Phys. **105** (2015) 1085–1118, [arXiv:1406.4873 \[hep-th\]](#).
109. (with J. J. Heckman, T. Rudelius, and C. Vafa), *Atomic classification of 6D SCFTs*, Fortschr. Phys. **63** (2015) 468–530, [arXiv:1502.05405 \[hep-th\]](#).
110. (with M. R. Plesser), *Special Lagrangian torus fibrations of complete intersection Calabi–Yau manifolds: a geometric conjecture*, Nuclear Phys. B **898** (2015) 751–770, [arXiv:1504.08337 \[math.AG\]](#).
111. (with J. J. Heckman, T. Rudelius, and C. Vafa), *Geometry of 6D RG flows*, J. High Energy Phys. **09** (2015) 052, [arXiv:1505.00009 \[hep-th\]](#).
112. (with L. Bhardwaj, M. Del Zotto, J. J. Heckman, T. Rudelius, and C. Vafa), *F-theory and the classification of little strings*, Phys. Rev. D **93** (2016) 086002, [arXiv:1511.05565 \[hep-th\]](#).
113. (with J. Halverson), *On gauge enhancement and singular limits in G_2 compactifications of M-theory*, J. High Energy Phys. **04** (2016) 100, [arXiv:1507.05965 \[hep-th\]](#).
114. (with M. Bertolini and P. R. Merks), *On the global symmetries of 6D superconformal field theories*, J. High Energy Phys. **07** (2016) 005, [arXiv:1510.08056 \[hep-th\]](#).
115. (with W. Taylor), *Sections, multisections, and $U(1)$ fields in F-theory*, J. Singularities **15** (2016) 126–149, [arXiv:1404.1527 \[hep-th\]](#).
116. (with C. Vafa), *F-theory and $N=1$ SCFTs in four dimensions*, J. High Energy Phys. **08** (2016) 070, [arXiv:1604.03560 \[hep-th\]](#).
117. (with T. Rudelius), *F-theory and unpaired tensors in 6D SCFTs and LSTs*, Fortschr. Phys. **64** (2016) 645–656, [arXiv:1605.08045 \[hep-th\]](#).
118. (with D. S. Park), *Tall sections from non-minimal transformations*, J. High Energy Phys. **10** (2016) 033, [arXiv:1606.07444 \[hep-th\]](#).
119. (with H. Jockers, S. Katz, and M. R. Plesser), *$SU(N)$ transitions in M-theory on Calabi–Yau fourfolds and background fluxes*, Commun. Math. Phys. **351** (2017) 837–871, [arXiv:1602.07693 \[hep-th\]](#).
120. (with M. Del Zotto and J. J. Heckman), *6D SCFTs and phases of 5d theories*, J. High Energy Phys. **09** (2017) 147, [arXiv:1703.02981 \[hep-th\]](#).
121. *Gromov–Witten invariants and localization*, J. Phys. A: Math. Theor. **50** (2017) 443004, [arXiv:1608.02956 \[hep-th\]](#).

122. (with D. Klevers, N. Raghuram, and W. Taylor), *Exotic matter on singular divisors in F-theory*, J. High Energy Phys. **11** (2017) 124, [arXiv:1706.08194 \[hep-th\]](#).
123. (with R. Donagi), *Conformal field theories and compact curves in moduli spaces*, J. High Energy Phys. **05** (2018) 021, [arXiv:1709.05355 \[hep-th\]](#).
124. (with L. Bhardwaj, Y. Tachikawa, and A. Tomasiello), *The frozen phase of F-theory*, J. High Energy Phys. **08** (2018) 138, [arXiv:1805.09070 \[hep-th\]](#).
125. (with D. S. Park and W. Taylor), *Non-Higgsable abelian gauge symmetry and F-theory on fiber products of rational elliptic surfaces*, Adv. Theor. Math. Phys. **22** (2018) 167–236, [arXiv:1610.06929 \[hep-th\]](#).
126. (with A. P. Braun, M. Del Zotto, J. Halverson, M Larfors, and S. Schäfer-Nameki), *Infinitely many M2-instanton corrections to M-theory on G_2 -manifolds*, J. High Energy Phys. **09** (2018) 077, [arXiv:1803.02343 \[hep-th\]](#).
127. (with F. Apruzzi, J. J. Heckman, and L. Tizzano), *4D gauge theories with conformal matter*, J. High Energy Phys. **09** (2018) 088, [arXiv:1803.00582 \[hep-th\]](#).
128. *Geometry and physics: An overview*, Topology and Quantum Theory in Interaction (David Ayala, Daniel S. Freed, and Ryan E. Grady, eds.), Contemp. Math., vol. 718, Amer. Math. Soc., Providence, R.I., 2018, pp. 1–13, [arXiv:1805.06932 \[math.HO\]](#).
129. (with A. Collinucci, M. Fazzi and R. Valandro), *High electric charges in M-theory from quiver varieties*, J. High Energy Phys. **11** (2019) 111, [arXiv:1906.02202 \[hep-th\]](#).
130. (with S. Schäfer-Nameki and B. Willett), *Higher-form symmetries in 5d*, JHEP **9** (2020) 024, [arXiv:2005.12296 \[hep-th\]](#).
131. (with T. Maxfield and M. R. Plesser), *Mirror symmetry and partition functions*, [arXiv:1902.05552 \[hep-th\]](#).

(Revised May 7, 2021)