

## Publications

1. Stable vector bundles on projective spaces in char  $p > 0$ , Math. Ann. 254 (1980), 53 - 72.
2. Some result of systems of finite sets that satisfy a certain intersection condition, (with D. Kleitman, D. Richman, J. Sherer, and D. Sturtevant), Stud. Applied. Math. 5 (1981), 269 - 274.
3. Some stable vector bundles on  $P^4$  and  $P^5$ , Crelle J. 337 (1982), 142 - 153.
4. The ramification divisors for branched coverings of  $P^n$ , Math. Ann. 261 (1982), 483 - 485.
5. Surfaces with a hyperelliptic hyperplane section, Duke Math. J. 50 (1983), 685- 694.
6. Restriction theorems for stable rank 3 vector bundles on  $P^n$ , (with R. Hartshorne and H. Vogelaar), Math. Ann. 259 (1982), 541 - 569.
7. Nondegenerate surfaces of degree  $n + 3$  in  $P^n$ , Crelle J. 351 (1984), 1 - 11.
8. Rank 2 vector bundles on  $P^n$ , Queen's Paper, Pure and Applied Mathematics 67 (1984), 11 - 22.
9. Stable vector bundles on quadric hypersurfaces (with I. Sols), Nagoya J. 96 (1984), 11 - 22.
10. Varieties with small dual varieties II, Duke Math. J. (1985), 895 - 907.
11. An analogue of Max Noether's theorem, Duke Math. J. 52 (1985), 689 - 706.
12. Varieties with small dual varieties I, Invent. Math. 86 (1986), 63 - 74.
13. Hilbert scheme of smooth space curves, Ann. Sci. Ecole Norm. Sup. 4e Serie t.19 (1986), 469 - 478.
14. A remark about the syzygies of generic canonical curves, J. Differential Geom. 26 (1987), 361 - 367.
15. On the irreducibility of the Hilbert scheme of smooth space curves, Proceedings Symp. Pure Math. 46 (1988), 83 - 89.
16. Generalized null correlation bundles, Nagoya Math. J. 3 (1988), 13 - 24.
17. Vanishing theorem for varieties of small codimension, Springer-Verlag Lecture Notes in Math. 1311 (1988), 71 - 75.
18. Varieties cut out by quadrics , (with D. Eisenbud and S. Katz), Springer-Verlag Lecture Notes in Math. 1311 (1988), 51 - 70.
19. Sub-varieties of generic complete intersections , Invent. Math. 94 (1988), 163 - 171.
20. Hilbert scheme of generic complete intersections, in Higher Dimensional Complex Geometry , Asterisques 166 (1989), 129 - 139.

21. Some special Cremona transformations (with N. Shepherd-Barron), *American Journal of Math.* 111 (1990), 783 - 800.
22. Normal sheaves of linear systems on curves , *Contemporary Math* 116 (1991), 9 -18.
23. Vanishing theorems, a theorem of Severi, and equations defining projective varieties (with A. Bertram and R. Lazarsfeld). *Journal of American Math. Soc.* (1991). 587 -602.
24. Sub-varieties of generic complete intersections II , *Math. Ann.* 289 (1991). 465 -471.
25. Stability and restriction of Picard bundles, in *Complex Projective Geometry* (with R. Lazarsfeld), *London Math. Soc. Lecture Notes* (1991), 149 - 157.
26. Subjectivity of the Gaussian maps (with A. Bertram and R. Lazarsfeld), *Proceedings of the USA and USSR Conference, Lecture Notes in Math.* (1991) 1479, 15 - 26.
27. Syzygies and Koszul cohomology of smooth projective varieties of arbitrary dimension (with R. Lazarsfeld). *Invent. Math.* 111 (1993), no. 1, 51-67.
28. On the cohomologies of Cohen Macaulay determinantal subvarieties of  $P^n$  Geometry of Complex Projective Varieties, *Seminar and Conferences*, vol. 9, Mediterranean Press, (1993) 143 - 153.
29. Construction of surfaces  $P^4$  (with F. Schreyer and W. Decker), *Journal of Algebraic Geometry* 2 (1993), 1985 - 237.
30. Global generation of pluricanonical and adjoint linear series on smooth projective threefolds (with R. Lazarsfeld), *J. of American Math. Soc.*, num. 4 (1993), 875 - 905.
31. Sheshadri constants on smooth surfaces (with R. Lazarsfeld), *Journées de Géométrie Algébrique D'Orsay, Astérisques* 218 (1993) 177 - 186.
32. Global generation of linear series on terminal threefolds (with R. Lazarsfeld and V. Masek), *International Journal*, 6 (1994), 1 - 18.
33. Local positivity of ample line bundles (with K. Kuchle and R. Lazarsfeld), *J. Differential Geom.* 42 (1995), no. 2, 193 - 219.
34. Adjoint linear systems , in *Current topics in complex algebraic geometry 1992/1993*, *Math. Sci. Res. Inst. Pub.* 28, Cambridge Univ. Press, Cambridge (1995), 87 - 95.
35. Singularities of theta divisors and the birational geometry of irregular varieties. (with R. Lazarsfeld), *J. Amer. Math. Soc.* 10 (1997), no.1, 243 - 258.
36. Nilpotent cones and sheaves on K3 surfaces. (with R. Donagi and R. Lazarsfeld), in *Birational Algebraic Geometry Contemp. Math.*, vol. 207 *Amer. Math. Soc.*, Providence (1997), 51 - 61.
37. Zero-estimates, intersection theory, and a theorem of Demailly , (with R. Lazarsfeld and M. Nakamaye), *Higher-dimensional complex varieties*, Trento, (1994), 183 - 207.
38. Multiplier ideals, vanishing theorems and applications, *Proc. Sympos. Pure Math. Algebraic Geometry* 62, Part 1, *Amer. Math. Soc. Providence* (1997), 203 - 219.

39. Geometric effective Nullstellenstaz , (with R. Lazarsfeld), *Invent. Math.* 137 (1999), no. 2, 427 - 448.
40. Linear systems with removable base loci, a special issue of *Communications in Algebra* in honor of Robin Hartshorne, vol. 28, no. 12 (2000), 5930 - 5935.
41. A remark on projective embedding of varieties with negative cotangent bundles , (with B. Ilic and R. Lazarsfeld), *Complex Analysis and Algebraic Geometry*, a special volume in memory of Michael Schneider, Walter Gruyter Berlin, New York (2000), 164 - 171.
42. A subadditivity property of multiplier ideals , (with J. Demailly and R. Lazarsfeld), a special volume of *Michigan Journal* in honor of William Fulton, vol. 48, (2000), 137 - 157.
43. Uniform bounds and symbolic powers on smooth varieties. (with R. Lazarsfeld and K. Smith), *Invent. Math.* 144 (2001), no.2, 241–252.
44. Positivity and complexity of ideal sheaves, (with D. Cutkosky and R. Lazarsfeld). *Math. Ann.* 321 (2001) no.2 312-334.
45. Resolution of indeterminacy of pairs, *Algebraic Geometry*, 165-177, de Gruyter, Berlin 2002.
46. Uniform approximation of Abhyankar valuation ideals in smooth function fields, *American Journal of Math.* 125 (2003) 409-440. (with R. Lazarsfeld and K. Smith).
47. Multiplicities and log canonical threshold, *J. of Algebraic Geometry* 13 (2004) 603-615. (with de Fernex and M. Mustata).
48. Bounds for log canonical thresholds with applications to birational rigidity, *Math. Research Letter* 10, 1 -18 (2003). (with T. de Fernex and M. Mustata)
49. Jet schemes, log discrepancies and inversion of adjunction, *Inventiones Math.* 153 (2003) 519-535. (with M. Mustata and Yasuda).
50. Contact loci in arc spaces, *Compositio Math.* 140 (2004) 1229-1244. (with R. Lazarsfeld and M. Mustata).
51. Jumping coefficients of multiplier ideals, *Duke math.* 123 No. 3 (2004) 469-506. (with R. Lazarsfeld, K. Smith, and D. Varolin).
52. Inversion of adjunction for local complete intersection varieties, *American Journal of Math.* 126 (2004) 1355-1365. (with M. Mustata).
53. Asymptotic invariants of line bundles. *Pure and Applied Math. Quarterly*, Vol 1, N0.2 (2005)379- 403. (with R. Lazarsfeld, M. Mustata, M. Nakamaye and M. Popa)
54. Asymptotic invariants of base loci, (with R. Lazarsfeld, M. Mustata, M. Nakamaye and M. Popa) *Ann. Inst. Fourier* 56 (2006) No. 6 1701-1734.
55. Restricted volumes and asymptotic base loci, *American J. Math.* 131 (2009) , n0. 3, 607-651, with R. Lazarsfeld, M. Mustata, M. Nakaymaye and M. Popa.

56. Invariants of singularities of pairs, International Congress of Mathematics, Vol II, 583-602, Eur. Math. Soc. , Zurich, 2006 (with M. Mustata).
57. Divisorial valuations via arcs, Publ. Res. Inst. Math. Sci. 44 (2008) no.2 425-448, (with T. de Fernex and S. Ishii).
58. Global division of cohomology classes via injectivity, Special volume in honor of M. Hochster, Michigan Math. J. 57 (2008) 249-259, (with M. Popa).
59. Jet schemes and singularities, Algebraic Geometry- Seattle 2005 Part 2 5050-546, Proc. Sympos. Pure Math., 80, Part 2, Amer. Math. Soc., Providence, RI, 2009, (with M. Mustata).
60. Generically finite morphisms and formal neighborhood of arcs, Geom. Dedicata 139 (2009) 331-335 (with M. Mustata).
61. A vanishing theorem for log-canonical pairs, America J. Math. 132 2010 (with T. deFernex)
62. Extension of sections via adjoint ideals, Math. Ann. 352 (2012) no. 2 373-408. (with M. Popa).
63. Shokurov's ACC conjecture for log canonical thresholds on smooth varieties, Duke Math. J. 152 (2010) no.1 93-114 (with T. deFernex and M. Mustata)
64. Pseudoeffective and nef classes on abelian varieties, Compositio Math. 147 (2011) no. 6, 1793-1818. (with O. Debarre, R. Lazarsfeld and C. Voisin).
65. Log canonical thresholds on varieties with bounded singularities. Classification of algebraic varieties, 221-257, EMS. Ser. Congr. Rep., Eur. Math. Soc., Zurich, 2011 (with T. deFrenex and M. Mustata0).
66. Multiplier ideals via Mather's discrepancy, ArXiv: 1310.6882 [math. AG] to appear in a Proceeding of a Commutative Algebra Conference at MSRI. , (with S. Ishii and M. Mustata).
67. Asymptotic syzygies of algebraic varieties, Invent. Math 190 (2012) no. 3, 603-646. (with R. Lazarsfeld).
68. Asymptotic of random Betti tables, (to appear in Crelle Journal), (with D. E. Erman and R. Lazarsfeld).
69. Stability of syzygy bundles on algebraic surfaces Math. Res. Lett. 20 (2013) 73-80.(with R. Lazarsfeld and Y. Mustopa).
70. Singularities with respect to Mather-Jacobian discrepancies, to appear in MSRI Publication. (With S. Ishii)
71. The gonality conjecture on syzygies of algebraic curves of large degree, to appear in Inst. Hautes Etudes Sci Publ. Math., (with R. Lazarsfeld).
72. A quick proof of nonvanishing for asymptotic syzygies, (submitted for publication), (with D. Erman and R. Lazarsfeld).