PUBLICATION LIST FOR JERZY WEYMAN

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BOOKS

1. Weyman, J., "Cohomology of vector bundles and syzygies," *Cambridge Tracts in Mathematics, no. 149*, Cambridge University Press (2003).
2. Derksen, H., Weyman, J. "Introduction to Quiver Representations", Graduate Studies in Mathematics series, No. 184, AMS, 2017,

RESEARCH PUBLICATIONS

1. On some modules supported in Chow variety (with C. Raicu and S. Sam), to appear in Vietnam Journal of Mathematics, arxiv 2108.10910,
2. Almost Gorenstein determinantal rings of symmetric matrices (with E. Celikbas, N. Endo, Jai Laxmi), submitted, arxiv 2108.07778,
3. Three takes on almost complete intersections of grade 3 (with L. Christensen, O. Veliche), Three takes on almost complete intersections of codimension 3 (pp. 219-281). Springer Nature. https://doi.org/10.1007/978-3-030-89694-2arxiv 2106.14764,
4. Minuscule Schubert varieties of Exceptional type (with S. Filippini, J. Torres), submitted arxiv 2012.11290,
5. Mapping free resolutions of length 3, I (with L. Guerrieri), to appear in Journal of Pure and Applied Algebra, arxiv 2012.08358,
6. Minors of a skew symmetric matrix: A combinatorial approach (with L. Christensen, O. Veliche), arxiv 2007.15118,
7. Spinor structures on free resolutions of of codimension four Gorenstein ideals (with E. Celikbas, Jai Laxmi), arxiv 1912.07510,
8. Schubert varieties and finite free resolutions of length three (with S. Sam), Proceedings of the AMS 149(2021) 1943-1955
9. Linkage classes of grade 3 perfect ideals (with L. Christensen, O. Veliche), J. of Pure and Applied Algebra, vol.224, issue 6, June 2020 article 106185, arxiv 1812.11552,
10. Local cohomology on a subexceptional series of representations (with A. Lorincz), to appear in Annales l"Institute Fourier, arxiv 1910.13820,
11. Koszul modules and Green's conjecture (with M. Aprodu, G. Farkas, S. Papadima, C. Raicu), Invent. Math. Vol. 218 no.3, 657-720,
12. The family of perfect ideals of codimension 3, of type 2 with 5 generators,(with E. Celikbas, J. Laxmi and W. Kraśkiewicz), Proceedings of the AMS, 148(2020) 2745-2755
13. Topological Invariants of Groups and Koszul modules (with M. Aprodu, G. Farkas, S. Papadima, C. Raicu), to appear in Duke Mathematical Journal, arXiv, 1806.01702
14. Syzygies of Determinantal Thickenings and Representations of the General Linear Lie Superalgebra (with C. Raicu), Acta Math Vietnamica 44, 269-284(2019), https://doi.org/10.1007/s40306-018-0282-z
15. Some branching rules for Kac-Moody Lie algebras (with K-H. Lee), Communications of the Korean Mathematical Society, vol. 34, no. 4, 1079-1098,
16. Free resolutions of orbit closures of Dynkin quivers (with A. Lorincz), Transactions of the AMS 372(2019), 2715-2734, arXiv, 1801.00193,
17. Equivariant D-modules on binary cubic forms (with A. Lorincz and C.Raicu), submitted, arXiv 1712.09932,
18. Free resolutions of Dynkin formats and the licci property of grade 3 perfect ideals (with L. Christensen and O. Veliche), Mathematica Scandinavica, vol. 125, no 2 (2019), 163-178,
19. Gale-Robinson cluster algebras: from representations to combinatorial formulas (with M. Glick), arXiv 1710.09765,
20. Embeddings of canonical modules and resolutions of connected sums (with E. Celikbas and J. Laxmi), Journal of Pure and Applied Algebra, vol. 223, no. 1 (2019), 175-187,

21. Extending upper cluster algebras (with Jiarui Fei), to appear in Documenta Mathematica, arXiv 1707.04661,
22. Isotropic Schur Roots, (with C. Paquette), Transformation Groups, 23, no.3 (2018), 841-874. https://doi.org/10.1007/s0 017-9459-0, arXiv 1605.05719,
23. Moduli spaces of representations of special biserial algebras, (with A. Carroll, C. Chindris and R. Kinser), International Mathematical Research Notices, rny028, https://doi.org/10.1093/imrn/rny028,
24. Generic free resolutions and root systems, arXiv 1609.02083, Annales de l'Institute Fourier, 68(3), 2018, p. 1241-1296,
25. The method of shifted partial derivatives cannot separate the permanent from the determinant (with K. Efremenko, J. Landsberg and H. Schenck), Math. Comp. 87 (2018), 2037-2045 , arXiv 1609.02103,
26. Bernstein-Sato polynomials for maximal minors and sub-maximal Pfaffians (with. A. Lorincz, C. Raicu and U. Walther), Advances in Mathematics, 307 (2017), 224-252, arXiv 1601.06688,
27. Trimming a Gorenstein ideal (with. L. Christensen and O. Veliche), arXiv 1512.02720, Journal of Commutative Algebra, vol. 11, no. 3 (2019), 325-339,
28. On minimal free resolutions of sub-permanents and other ideals arising in complexity theory (with K. Efremenko, J. Landsberg and H. Schenck), submitted, arXiv 1504.05171,
29. The syzygies of some thickenings of determinantal ideals (with Claudiu Raicu), arXiv 1411.0151, Proceedings of the A.M.S, 145(2017), 49-59,
30. Local cohomology with support in ideals of symmetric minors and Pfaffians (with C.Raicu), Journal of London Math. Soc., vol 94, no. 3, pp. 709-725,
31. Modulated semi-invariants (with K. Igusa, K. Orr, G. Todorov), arXiv:1507.03051,
32. Module varieties and representation type of finite-dimensional algebras (with C. Chindris and R. Kinser), arXiv:1201.6422, International Mathematics Research Notices (2015), volume 2015, pp. 631-650,
33. Local cohomology with support in generic determinantal ideals (with C.Raicu), Algebra and Number Theory, Vol. 8, issue 5, 1231-1257,
34. Littlewood complexes and analogues of determinantal varieties (with S.Sam), International Mathematical Research Notices May 2014,
35. Top stable degenerations of finite dimensional representations II (with H. Derksen and B. Huisgen-Zimmermann), Advances in Mathematics, Vol. 259(2014), p. 730-765
36. Local cohomology with support in ideals of maximal minors and sub-maximal Pfaffians (with C.Raicu and E. Witt), arxiv 1305.1719, Advances in Mathematics, Vol. 250(2014), p. 596-610
37. Covariants of Θ-orbits for types E_6, E_7, E_8, (with W. Kraśkiewicz, in: Edicioni della Normale, The Seventh European Conference on Combinatorics, Graph theory and Applications, Eurocomb 2013 (edited by Jaroslav Nesetril and Marco Pellegrini), p. 401-406
38. Semi-invariants for gentle string algebras (with A. Carroll), Noncommutative Birational Geometry, Representations and Combinatorics, "Contemporary Mathematics" , Proceeding of the Special AMS session "Noncommutative birational geometry and cluster algebras" held during the Annual meeting of the AMS (Boston, 2012), edited by A. Berenstein, V. Retakh, 111-136, AMS, 2013, arXiv: 1106.0774,
39. Moduli of Abelian varieties, Vinberg theta groups, and free resolutions (with L. Gruson and S. Sam), Commutative Algebra (edited by Irena Peeva), 419-469, Springer, 2013, arXiv:1203.2575,
40. Homology of Littlewood complexes (with S.Sam and A. Snowden), Selecta Mathematica New Series, Vol. 19, Issue 3 (2013), 655-698,
41. Koszul homology of codimension 3 Gorenstein ideals (with S. Sam), arXiv:1203.3168, Proc. of the A.M.S., 142 (2014), 401-408,
42. Pieri resolutions for classical groups (with S. Sam), Journal of Algebra, 329, no. 1(2011), 222-259,
43. An overview of mathematical issues arising in the geometric complexity theory approach to $VP \neq VNP$ (with P. Bürgisser, J. Landsberg, L. Manivel), SIAM J. Comput, 40(4), 1179-1209, (2011),
44. The combinatorics of quiver representations (with H. Derksen), math/0608288, Ann. Inst. Fourier, 61(3), 2011, p. 1061-1131,
45. On the existence of pure resolutions (with D. Eisenbud and G. Floystad), arXiv:0709.1529, Ann. Inst. Fourier, 61(3), 2011, p. 905-926,
46. Quivers with potentials and their representations II: Applications to Cluster Algebras (with H. Derksen and A. Zelevinsky), J. Amer. Math. Soc, 23 (2010), 749-790,
47. Cluster complexes via semi-invariants (with K. Igusa, K. Orr, G. Todorov), Compositio Math, 145(4) (2009), 1001-1034,

48. On secant varieties of compact Hermitian symmetric spaces (with J. Landsberg), J. Pure and Appl. Algebra., 213, no.11, 2075-2086 (2009),
49. Quivers with potential and their representations I: Mutations (with H. Derksen and A. Zelevinsky), Selecta Math., 14 (2008), 59-119,
50. On Ideal Generators for Affine Schubert Varieties, (with V. Kreiman, V. Lakshmibai, P. Magyar), Algebraic Groups and homogeneous spaces, 353-388, Tata Inst. Fund. Res. Stud. Math., Tata Inst. Fund. Res., Mumbai, 2007.
51. Counterexamples to Okounkov's log-concavity conjecture (with C. Chindris and H. Derksen), Compositio Math., 143 (2007), 1545-1557,
52. On the number of subrepresentations of a general quiver representation (with H. Derksen and A. Schofield), J. London Math. Soc. 76, 135-147 (2007),
53. On tangential varieties of rational homogeneous varieties (with J. Landsberg), J. London Math. Soc., 76, 513-530 (2007),
54. On the ideals and singularities of secant varieties of Segre varieties, (with J. Landsberg), Bull. London Math. Soc. 2007 39, 685-697 (2007),
55. On the minimal free resolution of the universal ring for resolutions of length two, (with A. Kustin) J. Algebra, 311, 435-462 (2007),
56. Primary ideals associated to the linear strands of Lascoux's resolution and syzygies of corresponding irreducible representations of the Lie superalgebra gl(m, n), (with K. Akin) J. Algebra, 310, 461-490 (2007),
57. Category localization semantics for specification refinements, (with J. Tomasik), Ann. Math. Artif. Int. 49(2007), 1-4
58. Standard Bases for Affine SL(n)-Modules, (with V. Kreiman, V. Lakshmibai, P. Magyar), International Mathematics Research Notices 2005, No. 21.
59. Application of the geometric technique of calculating syzygies to Rees algebras, J. Algebra, 276, 776-793 (2004).
60. Free resolutions for polynomial functors (with A. Tchernev), J. Algebra, 271, 22-64 (2004).
61. On representations with free modules of covariants (with C. Chang), J. Pure and Applied Algebra, 192, 69-94 (2004).
62. Formalizing classes of information fusion systems, (with M. Kokar, J. Tomasik), Information Fusion: An International Journal on Multi-Sensor, Multi-Source Information Fusion, 5,3, 189-202, (2004)
63. Fitting's Lemma for $\mathbf{Z}/2$-graded modules (with D. Eisenbud), Trans. Am. Math. Soc. 355, 4451-4473 (2003).
64. Cohen-Macaulay properties of Thom-Boardman strata II; the defining ideals of $\Sigma^{i,j}$ (with T. Fukui), Proc. Lond. Math. Soc. 87, 137-163 (2003).
65. Semi-invariants for quivers with relations (with H. Derksen), J. Algebra, 258, 216-227 (2002).
66. On the Littlewood-Richardson polynomials (with H. Derksen), J. Algebra, 255, 247-257 (2002).
67. On canonical decomposition for quiver representations (with H. Derksen), Compositio Math., 133, 245-265 (2002).
68. Generalized quivers associated to reductive groups (with H. Derksen), Colloquium Math., 94 151-173 (2002).
69. Two results on equations of nilpotent orbits, J. Algebraic Geom. 11 791-800 (2002).
70. Algebra and coinvariants and the action of a Coxeter element (with W. Kra śkiewicz), Bayreuther Math. Schr. 63, 265-284 (2001).
71. Semi-invariants of quivers and saturation for Littlewood-Richardson coefficients (with H. Derksen). J. Amer. Math. Soc. 13 467–479 (2000).
72. Graded characters of modules supported in the closure of a nilpotent conjugacy class (with M. Shimozono). European J. Combin. 21 257–288 (2000).
73. Cohen-Macaulay properties of Thom-Boardman strata. I. Morin's ideal.(with T. Fukui) Proc. London Math. Soc. 80 257–303 (2000).
74. Semiinvariants of quivers (with A. Skowroński), Transform. Groups 5, 361-402 (2000).
75. On the Grothendieck group of modules supported in a nilpotent orbit in a Lie algebra $gl(n)$ (with J. Klimek , W. Kraśkiewicz , M. Shimozono) , J. Pure Appl. Algebra 153 237-261 (2000).
76. Symplectic multiple flag varieties of finite type (with P. Magyar and A. Zelevinsky). J. Algebra 230

245–265 (2000)

77. Koszul complexes and hyperdeterminants (with G. Boffi). J. Algebra 230 68–88 (2000).
78. The irreducible tensor representations of gl($m \mid 1$) and their generic homology (with K. Akin). J. Algebra 230 5–23 (2000).
79. Semi-invariants of canonical algebras (with A. Skowroński). Manuscripta Math. 100 391–403 (1999).
80. Bases for coordinate rings of conjugacy classes of nilpotent matrices (with M. Shimozono). J.Algebra 220 1–55 (1999).
81. Multiple flag varieties of finite type (with P. Magyar and A. Zelevinsky). Adv. Math. 141 97–118 (1999).
82. The Grothendieck group of G-equivariant modules over coordinate rings of G-orbits. Colloq. Math. 78 (1998). no. 1, 105–118 (with J. Klimek and W. Kraśkiewicz),
83. The Grothendieck group of $\mathrm{GL}(F) \times \mathrm{GL}(G)$-equivariant modules over the coordinate ring of determinantal varieties. Colloq. Math. 76 243–263 (1998).
84. Minimal free resolutions of determinantal ideals and irreducible representations of the Lie superalgebra gl($m|n$) (with K. Akin). J. Algebra 197 559–583 (1997).
85. A free resolution of a symplectic rank variety (with J. Klimek and W. Kraśkiewicz). J. Algebra 196 475–489 (1997).
86. A formula with nonnegative terms for the degree of the dual variety of a homogeneous space, Proc. Amer. Math. Soc. 125 1–8 (1997) (with C. DeConcini),
87. Singularities of hyperdeterminants . Ann. Inst. Fourier (Grenoble) 46 (1996), 591–644 (with A. Zelevinsky),
88. Determinantal formulas for multigraded resultants. J. Algebraic Geom. 3 (1994). no. 4, 569–597 (with A. Zelevinsky),
89. Multiplicative properties of projectively dual varieties. Manuscripta Math. 82 (1994). no. 2, 139–148 (with A. Zelevinsky),
90. Calculating discriminants by higher direct images. Trans. Amer. Math. Soc. 343 (1994). no. 1, 367–389
91. Gordan ideals in the theory of binary forms. J. Algebra 161 (1993). no. 2, 370–391,
92. On the Hilbert functions of multiplicity ideals. J. Algebra 161 (1993). no. 2, 358–369,
93. Some open problems in invariant theory. Free resolutions in commutative algebra and algebraic geometry (Sundance, UT, 1990). 139–146, Res. Notes Math., 2, Jones and Bartlett, Boston, MA, 1992,
94. Multiplicities of points on a Schubert variety in a minuscule G/P, Adv. Math. 84 (1990). no. 2, 179–208 (with V. Lakshmibai),
95. A short proof of a theorem of M. Hashimoto, J. Algebra 134 (1990). no. 1, 144–156 (with J. Roberts),
96. On the generic free resolutions. J. Algebra 128 (1990). no. 1, 1–44 (with P. Pragacz),
97. The equations of conjugacy classes of nilpotent matrices. Invent. Math. 98 (1989). no. 2, 229–245,
98. On the structure of free resolutions of length 3. J. Algebra 126 (1989). no. 1, 1–33,
99. K-theory of twisted Grassmannians. K-Theory 3 (1989). no. 2, 99–121 (with M. Levine and V. Srinivas),
100. The equations of strata for binary forms. J. Algebra 122 (1989). no. 1, 244–249,
101. Pieri's formulas for classical groups. Invariant theory (Denton, TX, 1986). 177–184, Contemp. Math., 88, Amer. Math. Soc., Providence, RI, 1989,
102. Multiplicities of points on a Schubert variety in a minuscule G/P. C. R. Acad. Sci. Paris Sr. I Math. 307 (1988). no. 20, 993–996 (with V. Lakshmibai),
103. Representation-theoretic interpretation of a formula of D. E. Littlewood. Math. Proc. Cambridge Philos. Soc. 103 (1988). no. 2, 193–196 (with T. Józefiak),
104. On the construction of resolutions of determinantal ideals: a survey. Seminaire d'algbre Paul Dubreil et Marie-Paule Malliavin, 37me anne (Paris, 1985), 73–92, Lecture Notes in Math., 1220, Springer, Berlin-New York, 1986 (with P. Pragacz),
105. Complexes associated with trace and evaluation. Another approach to Lascoux's resolution. Adv. in Math. 57 (1985). no. 2, 163–207 (with P. Pragacz),
106. Symmetric functions and Koszul complexes. Adv. in Math. 56 (1985). no. 1, 1–8 (with T. Józefiak),
107. Schur functors and Schur complexes. Adv. in Math. 44 (1982). no. 3, 207–278 (with K. Akin and D. Buchsbaum),
108. Resolutions of determinantal varieties and tensor complexes associated with symmetric and antisymmetric matrices. Young tableaux and Schur functors in algebra and geometry (Toruń, 1980), pp. 109–189, Asterisque, 87-88, Soc. Math. France, Paris, 1981 (with T. Józefiak and P. Pragacz),

109. Resolutions of determinantal ideals: the submaximal minors. Adv. in Math. 39 (1981). no. 1, 1–30 (with K. Akin and D. Buchsbaum),
110. Resolutions of the exterior and symmetric powers of a module. J. Algebra 58 (1979). no. 2, 333–341,
111. Quotients of Cohen-Macaulay rings and perfect ideals. Bull. Acad. Polon. Sci. Sr. Sci. Math. Astronom. Phys. 26 (1978). no. 6, 475–476 (with T. Józefiak),

PREPRINTS

1. Periodic trees and semi-invariants (with K. Igusa and G. Todorov), arXiv 1407.0619,
2. Geometry of orbit closures for the representations associated to gradings of Lie algebras of types E_7 (with W.Kraśkiewicz), arXiv:1301.0720,
3. Noncommutative desingularizations of orbit closures for some representations of GL_n (with G.Zhao), arxiv, 1204.0488,
4. Geometry of orbit closures for the representations associated to gradings of Lie algebras of types E_6, F_4, G_2 (with W.Kraśkiewicz), arXiv:1201.1102,
5. Generic decompositions and semi-invariants for string algebras (with W.Kraśkiewicz), arXiv:11035415,
6. Degree bounds for invariants and covariants of binary forms (with H. Kraft) (2005).

EXPOSITORY WRITINGS

1. Remembering David Buchsbaum (with D. Eisenbud), Notices Math. Amer. Soc., January 2022.
2. Andrei Zelevinsky, 1953 – 2013 (with A. Berenstein, J. Bernstein, B. Feigin, S. Fomin, M. Kapranov), Transformation Groups, 2014.
3. Representations of quivers, (with H. Derksen), Notices of the A.M.S. 52 200–206 (2005).
4. A note about David Buchsbaum, (with D. Eisenbud). J. Algebra, 230 1–4 (2000).
5. Review of the book "Determinantal Varieties" by W. Bruns and U. Vetter, Bulletin of the AMS, Vol. 22, No.2, April 1990, 357-361.