

LIST OF PUBLICATIONS

Mark David Haiman

1984

1. *The Theory of Linear Lattices*. Ph.D. thesis, M.I.T. (1984).

1985

2. *Linear lattice proof theory, an overview*. Universal Algebra and Lattice Theory: Proceedings, Charleston, 1984, Springer Lecture Notes in Math. **1149** (1985) 129–141.
3. *Two notes on the Arguesian identity*. Algebra Universalis **21** (1985) 167–171.
4. *Proof theory for linear lattices*. Advances in Math. **58**, no. 3 (1985) 209–242.

1987

5. *Arguesian lattices which are not linear*. Bull. Amer. Math. Soc. (NS) **16**, no. 1 (1987) 121–123.

1989

6. (with W. Schmitt) *Incidence algebra antipodes and Lagrange inversion in one and several variables*. J. Combinatorial Theory (A) **50**, no. 2 (1989) 172–185.
7. *On mixed insertion, symmetry, and shifted Young tableaux*. J. Combinatorial Theory (A) **50**, no. 2 (1989) 196–225.

1991

8. *A simple and relatively efficient triangulation of the n -cube*. Discrete and Computational Geometry **6** (1991) 287–289.
9. *Arguesian lattices which are not type-1*. Algebra Universalis **28** (1991) 128–137.

1992

10. *Dual equivalence with applications, including a conjecture of Proctor*. Discrete Mathematics **99** (1992) 79–113.
11. (with D. Kim) *A characterization of generalized staircases*. Discrete Mathematics **99** (1992) 115–122.

1993

12. *Noncommutative rational power series and algebraic generating functions.* Europ. J. Combinatorics **14** (1993) 335–339.
13. *Hecke algebra characters and immanant conjectures.* J. Amer. Math. Soc. **6** (1993) 569–595.
14. (with A. M. Garsia) *A graded representation model for Macdonald's polynomials.* Proc. Nat. Acad. Sci. U.S.A. **90** (1993) 3607–3610.

1994

15. *Conjectures on the quotient ring by diagonal invariants.* J. Alg. Combinatorics **3** (1994) 17–76.
16. *On realization of Björner's 'continuous partition lattice' by measurable partitions.* Trans. Amer. Math. Soc. **343**, No. 2 (1994) 695–711.

1995

17. (with A. M. Garsia) *Factorizations of Pieri rules for Macdonald polynomials.* Discrete Mathematics **139** (1995) 219–256.
18. (with S. Billey) *Schubert polynomials for the classical groups.* J. Amer. Math. Soc. **8** No. 2 (1995) 443–482.

1996

19. (with A. M. Garsia) *A remarkable q, t -Catalan sequence and q -Lagrange inversion.* J. Alg. Combinatorics **5** (1996) 191–244.
20. (with A. M. Garsia) *Some natural bigraded S_n modules and q, t -Kostka coefficients.* Electronic J. Combinatorics **3**, No. 2: Foata Festschrift (1996) R24, 60 pp.

1998

21. *t, q -Catalan numbers and the Hilbert scheme,* Discrete Mathematics **193** (1998) 201–224.
22. (with W. Brockman) *Nilpotent orbit varieties and the atomic decomposition of the q -Kostka polynomials.* Canadian Journal of Mathematics **50** (1998) 525–537.
23. (with A. M. Garsia) *A random q, t -hook walk and a sum of Pieri coefficients.* J. Combinatorial Theory (A) **82**, no. 1 (1998) 74–111.

1999

24. *Macdonald polynomials and geometry.* New perspectives in algebraic combinatorics, MSRI Publications **37** (1999) 207–254.

25. (with F. Bergeron, N. Bergeron, A. M. Garsia and G. Tesler) *Lattice diagram polynomials and extended Pieri rules*. Advances in Math. **142** (1999) 244–334, arXiv:math/9809126
26. (with A. M. Garsia and G. Tesler) *Explicit plethysic formulas for Macdonald q, t -Kostka coefficients*. The Andrews Festschrift (Maratea, 1998), Seminaire Lotharingien **42** (1999) Art. B42m, 45pp. (electronic).
27. (with F. Bergeron, A. M. Garsia, and G. Tesler) *Identities and Positivity Conjectures for some remarkable Operators in the Theory of Symmetric Functions*. Methods and Applications of Analysis **6**, No. 3 (1999) 363–420.

2001

28. *Hilbert schemes, polygraphs, and the Macdonald positivity conjecture*. J. Amer. Math. Soc. **14** (2001) 941–1006, arXiv:math/0010246.
29. *Vanishing theorems and character formulas for the Hilbert scheme of points in the plane (abbreviated version)*. Physics and Combinatorics 2000: Proceedings of the Nagoya 2000 International Workshop, A. N. Kirillov and N. Liskova, eds.. World Scientific (2001) 1–21.

2002

30. *Notes on Macdonald polynomials and the geometry of Hilbert schemes*. In *Symmetric Functions 2001: Surveys of Developments and Perspectives*. Proceedings of the NATO Advanced Study Institute held in Cambridge, June 25–July 6, 2001. Edited by Sergey Fomin. NATO Science Series II: Mathematics, Physics and Chemistry, **74**. Kluwer Academic Publishers, Dordrecht (2002) 1–64.
31. *Vanishing theorems and character formulas for the Hilbert scheme of points in the plane*. Invent. Math. **149**, no. 2 (2002) 371–407, arXiv:math.AG/0201148

2003

32. *Combinatorics, symmetric functions and Hilbert schemes*. Current Developments in Mathematics, 2002, edited by D. Jerison, G. Lusztig, B. Mazur, T. Mrowka, W. Schmid, R. Stanley and S.-T. Yau. International Press Books (2003) 39–112.

2004

33. (with B. Sturmfels) *Multigraded Hilbert schemes*. J. Alg. Geom. **13** (2004) 725–769, arXiv:math/0201271
34. *Commutative algebra of n points in the plane* (with an appendix by Ezra Miller). In Trends in Commutative Algebra, MSRI Publications **51** (2004) 153–180.

2005

35. (with J. Haglund, N. Loehr, J. B. Remmel and A. Ulyanov) *A combinatorial formula for the character of the diagonal coinvariants*. *Duke Math. J.* **126** (2005), no. 2, 195–232. arXiv:math/0310424
36. (with J. Haglund and N. Loehr) *A Combinatorial Formula for Macdonald Polynomials*. *J. Amer. Math. Soc.* **18** (2005) 735–761. arXiv:math/0409538
37. (with J. Haglund and N. Loehr) *Combinatorial theory of Macdonald polynomials I: Proof of Haglund’s formula*. *Proc. Natl. Acad. Sci.* **102** (2005), no. 8, 2690–2696.

2006

38. *Cherednik algebras, Macdonald polynomials and combinatorics*. Proceedings of the International Congress of Mathematicians, Madrid, 2006, Vol III, 843–872.

2007

39. (with A. Woo) *Geometry of q and q, t -analogs in combinatorial enumeration*. In *Geometric Combinatorics*, Miller, Reiner, and Sturmfels, eds., IAS/Park City Math. Series **13** (2007), 207–248.

2008

40. (with J. Haglund and N. Loehr) *A combinatorial formula for nonsymmetric Macdonald polynomials*. *Amer. J. Math.* **130**, no. 2 (2008), 359–383. arXiv:math/0601693

2009

41. (with I. Grojnowski) *Affine Hecke algebras and positivity of LLT and Macdonald polynomials*. Preprint, UC Berkeley.

2013

42. (with F. Bergeron) *Tableaux formulas for Macdonald polynomials*. *Internat. J. Algebra Comput.* **23** (2013), 833–852.

2021

43. (with J. Blasiak, J. Morse, A. Pun and G. Seelinger) *A shuffle theorem for paths under any line*. Submitted June 2021 to *Forum of Math, Pi*. arXiv:2102.07931.
44. (with J. Blasiak, J. Morse, A. Pun and G. Seelinger) *A proof of the extended Delta conjecture*. Submitted June 2021 to *Forum of Math, Pi*. arXiv:2102.08815.