

Publication List

William J. Keith

August 15, 2018

Papers

- 1.) Ranks of Partitions and Durfee Symbols. Ph.D. Thesis, PSU, June 2007.
URL: <http://etda.libraries.psu.edu/theses/approved/WorldWideIndex/ETD-2026/index.html>
- 2.) Translation: Dieter Stockhofe, *Bijektive Abbildungen auf der Menge der Partitionen einer Natürlichen Zahl*. Appendix to thesis; see above.
- 3.) Distribution of the full rank in residue classes for odd modulus. *Discrete Mathematics* 309 (16), 28 August 2009, pp. 4960-4968. Extract of thesis. URL: <http://dx.doi.org/10.1016/j.disc.2009.02.032> .
- 4.) A bijective toolkit for signed partitions. *Annals of Combinatorics*, (2011) Volume 15, Number 1, 95-117. doi: 10.1007/s00026-011-0085-6
- 5.) Sequences of density $\zeta(k) - 1$. *INTEGERS* 10 (2010), Article A19, 233-241. URL: <http://www.emis.de/journals/INTEGERS/papers/k19/k19.pdf>
- 6.) Proof of a conjectured q, t -Schröder identity. *Discrete Mathematics*, Volume 310, Issue 19, 6 October 2010, Pages 2489-2494
- 7.) Recursively self-conjugate partitions. *Proceedings, INTEGERS Conference 2009*. URL: <http://www.integers-ejcnt.org/vol11a.html>, Article 12.
- 8.) A bijection for partitions with initial repetitions. *Ramanujan Journal*, Vol. 27 (2), 2011. doi:10.1007/s11139-011-9298-x
- 9.) (Joint w/ Rishi Nath, CUNY-York) Partitions with prescribed hooksets. *J. Comb. and Num. Thy*, Volume 3 (1) 2011. Preprint: <http://arXiv.org/abs/1011.1945>
- 10.) The 2-adic valuation of plane partitions and totally symmetric partitions. *Elec. Journ. of Comb.*, Volume 19 (2012), paper 48.
- 11.) (Joint w/ Robert Boyer, Drexel University) Stabilization of coefficients for partition polynomials. *INTEGERS* 13 (2013), article 56.
- 12.) A Ramanujan congruence analogue for Han's hook-length formula mod 5, and other symmetries. *Acta Arith.* 160 (2013), 303-315
- 13.) (Joint with Ângela Mestre, Univ. of Lisbon, and Christian Brouder, IPMPC) Closed forms for a multigraph enumeration. *Journal of Combinatorics and Number Theory*, 2015 Vol. 6 Number 2, pp. 37-51
- 14.) Congruences for 9-regular partitions modulo 3. *Ramanujan J.*, October 2014, Volume 35, Issue 1, pp 157-164
- 15.) (Joint w/ Giampiero Chiaselotti and Paolo Oliverio, Univ. della Calabria) Two Self-Dual Lattices of Signed Integer Partitions. *Appl. Math. and Inf.*

- Sci., Volume 8, No. 6 (Nov. 2014), 3191-3199. Volume 8, No. 6 (Nov. 2014), PP:3191-3199. doi:10.12785/amis/080661
- 16.) Congruences for m -regular partitions modulo 4. INTEGERS 15A (2015), <http://www.integers-ejcnt.org/vol15a.html>, paper #A11
17. Restricted k -colored partitions. Ramanujan J., May 2016, Volume 40, Issue 1, pp 7192. doi:10.1007/s11139-015-9704-x
- 18.) Partitions with a small number of part sizes. Int. J. Number Theory, 13, 229 (2017). doi:10.1142/S1793042117500130
- 19.) The part-frequency matrices of a partition. Proceedings of the Kliakhandler Conference 2015. doi:10.13069/jacodesmath.41075
- 20.) (Joint w/ undergraduate Sean Grindatti) Fair choice sequences. Involve 12 (2019) 1, 13-30. doi:10.2140/involve.2019.12.13
- 21.) (Joint with Fabrizio Zanella and graduate student Samuel Judge) On the density of odd values of the partition function. Annals of Combinatorics. <https://link.springer.com/article/10.1007/s00026-018-0397-x>
- 22.) (Joint with Xinhua Xiong) Euler's partition theorem for all moduli and new companions to Rogers-Ramanujan-Andrews-Gordon identities. To appear, Ramanujan J.
- 23.) (Joint with Don Kreher and Dalibor Fronček) A note on nearly platonic graphs. Australasian Journal of Combinatorics **70(1)** (2017), pp. 86-103
- 23a.) (Joint with Don Kreher and Dalibor Fronček) Corrigendum to: A note on nearly platonic graphs. Australasian Journal of Combinatorics **72(1)** (2018), page 163
- 24.) Partitions into parts simultaneously regular, distinct and/or flat. Combinatorial and Additive Number Theory II: CANT, New York, NY, USA, 2015 and 2016. Springer Proceedings in Mathematics & Statistics, Volume 220. <http://www.springer.com/us/book/9783319680309>
- 25.) Major index over descent for pattern-avoiding permutations. INTEGERS 18 (2018), <http://math.colgate.edu/integers/vol18.html>, paper #A55
- 26.) Families of major index distributions: closed forms and unimodality. Submitted, J. Combin. Theory Ser. A.
- 27.) Second differences of Gaussian coefficients. In preparation for submission, summer 2018
- 28.) (Joint w/ undergraduate Emily Anible) Extended results on the truncations of the Han/Nekrasov/Okounkov hooklength formula. Expected submission, summer/fall 2018

Contributed and Invited Talks

1. October 2018, INTEGERS Conference 2018 (planned): Second differences of the q -binomial coefficients.
2. July 2018, Combinatory Analysis 2018, Pennsylvania State University (Invited): Unimodality of q -Binomial Differences via Kirillov/Reshetikhin

3. Jan 2018, Joint Math Meetings 2018 San Diego, AMS Special Session on Special Functions and Combinatorics (contributed): Refinements by descents of the q -analog of the Frame-Robinson-Thrall formula
4. May 2017, CANT 2017, CUNY GC: Maj over descent for pattern avoidance classes.
5. January 2017, Joint Math Meetings 2017 Atlanta, Special Session on Partition Theory and Related Topics (Invited): Parity similarity formulas for partitions and multipartitions (work joint w/ F. Zanello and S. Judge)
6. November 2017 Partitions Seminar, Pennsylvania State University (Invited): Parity similarity formulas for partitions and multipartitions (work joint w/ F. Zanello and S. Judge)
7. October 2016, INTEGERS Conference 2016: Partitions into a small number of part sizes
8. September 2016, Combinatorics Seminar, Michigan Tech: Partitions into a small number of part sizes
9. May 2016 CANT 2016, CUNY GC: Partitions into parts simultaneously regular, distinct and/or flat
10. Jan 2016, Joint Meetings of the AMS and the MAA: General contributed session on number theory: Partitions into parts simultaneously regular, distinct, and/or flat
11. Aug 2015, Kliakhandler Conference, Michigan Tech: *The part-frequency matrices of a partition*
12. Aug 2015, Illinois Number Theory Conference: *The part-frequency matrices of a partition*
13. Jan-Mar 2014, Combinatorics Seminar, Michigan Tech: *An introduction to partition theory* (4-part series)
14. Oct 2014, Combinatorics Seminar, Michigan Tech: *Colored partitions with restrictions on the number of colors appearing*
15. Sep 2014, AMS Central Section Meeting: *Restricted k -colored partitions*
16. Apr 2014, Combinatorics Seminar, Michigan Tech: *m -Regular partitions and eta-function symmetries*
17. Apr 2014, UMN-Duluth Combinatorics Seminar: *m -Regular partitions and eta-function symmetries*
18. October 2013, Combinatorics Seminar, Michigan Tech: *The Robinson-Schensted-Knuth Algorithm: a gentle introduction*

19. May 2013 , Departmental Colloquium, Western Illinois University: *The Indeterminate Multipartition*
20. April 2013, Number Theory Seminar, Univ. of Illinois Urbana-Champaign (Invited): *The Indeterminate Multipartition*
21. Dec 2011, Seminário do CELC, Univ. Lisbon: *Ramanujan congruence analogues for the Han/Nekrasov-Okounkov formula*
22. Oct 2011, Integers Conference 2011, University of West Georgia: *Ramanujan congruence analogues for the Han/Nekrasov-Okounkov formula*
23. Sep 2011, 67th Séminaire Lotharingien de Combinatoire, Bertinoro, Italy: *Vexillary involutions and Motzkin paths* (joint w/Maria Torres and Fátima Rodrigues)
24. Mar 2011, Combinatorics Seminar, University of Coimbra: *Counting simultaneous s/t -core partitions* (50 min. version)
25. Mar 2011, q -Series Conference 2011, Georgia Southern University: *Counting simultaneous s/t -core partitions* (20 min. version)
26. Nov 2010, Seminário do CELC, Univ. Lisbon: *Partitions as a bridge between settings*
27. Jan 2010, Combinatorics and Probability Seminar, Univ. of Penn. *Proof of a conjectured q, t -Schröder identity*
28. Nov 2009, CUNY-York Number Theory Seminar: *Recursively Self-Conjugate Partitions* (50 min. version)
29. Oct 2009, INTEGERS 2009, AMS 2009 East. Sec. Mtg (Invited): *Recursively Self-Conjugate Partitions* (20 min. version)
30. Dec 2008, Combinatory Analysis 2008, Penn State: *Partitions in \mathbb{Z}_p*
31. Feb 2008, Departmental Colloquium, Drexel University: *Signed Partitions: New Theorems for Old*
32. April 2007, Graduate Student Combinatorics Conf., U. Washington: *Flat Partitions, Permutation Descents, and Classical Partition Identities*
33. Oct 2006, Midwest Number Theory Conf. for Graduate Students IV, U. Illinois: *Congruences for the Full Rank*
34. April 2006, Graduate Student Combinatorics Conf., U. Wisconsin-Madison: *Lecture Hall Partitions Generalized Toward Glaisher*
35. Feb 2004, Partitions Seminar, Penn State: *Fibonacci-Like Sequences Among Hyperbinary Partitions*