

# Bibliography

- [1] Ahmed, Z., Baruah, N. D., and Dastidar, M. G. New congruences modulo 5 for the number of 2-color partitions. *Journal of Number Theory*, 157:184–198, 2015.
- [2] Andrews, G. E. *Mordell integrals and Ramanujan's "lost" notebook*, In: Analytic Number Theory (Philadelphia, Pa., 1980), 10–18, *Lecture Notes in Mathematics*, 899, Springer, Berlin-New York, 1981.
- [3] Andrews, G. E. The number of smallest parts in the partitions of  $n$ . *Journal für die reine und angewandte Mathematik (Crelle's Journal)*, 624:133–142, 2018.
- [4] Andrews, G. E. and Berndt, B. C. *Ramanujan's Lost Notebook, Part I*. Springer, New York, 2005.
- [5] Andrews, G. E. and Berndt, B. C. *Ramanujan's Lost Notebook, Part V*. Springer, New York, 2018.
- [6] Andrews, G. E., Chan, S. H., and Kim, B. The odd moments of ranks and cranks. *Journal of Combinatorial Theory, Series A*, 120:77–91, 2013.
- [7] Andrews, G. E., Dixit, A., Schultz, D., and Yee, A. J. Overpartitions related to the mock theta function  $\omega(q)$ . *Acta Arithmetica*, 181:253–286, 2017.
- [8] Andrews, G. E., Dixit, A., and Yee, A. J. Partitions associated with the Ramanujan/Watson mock theta functions  $\omega(q)$ ,  $\nu(q)$  and  $\phi(q)$ . *Research in Number Theory*, 1:25 pp., 2015.

- [9] Andrews, G. E., Garvan, F. G., and Liang, J. Combinatorial interpretations of congruences for the spt-function. *The Ramanujan Journal*, 29:321–338, 2012.
- [10] Andrews, G. E. and Hickerson, D. Ramanujan’s ‘lost’ notebook VII: the sixth order mock theta functions. *Advances in Mathematics*, 89:60–105 1991.
- [11] Andrews, G. E., Hirschhorn, M. D., and Sellers, J. A. Arithmetic properties of partitions with even parts distinct. *The Ramanujan Journal*, 23:169–181, 2010.
- [12] Andrews, G. E., Passary, D., Sellers, J. A., and Yee, A. J. Congruences related to the Ramanujan/Watson mock theta functions  $\omega(q)$  and  $\nu(q)$ . *The Ramanujan Journal*, 43:347–357, 2017.
- [13] Appell, P. Sur les fonctions doublement périodiques de troisième espèce. *Annales scientifiques de l’École Normale Supérieure*, 1:135–164, 1884.
- [14] ——. Développements en série des fonctions doublement périodiques de troisième espèce. *Annales scientifiques de l’École Normale Supérieure*, 2:9–36, 1885.
- [15] ——. Sur les fonctions doublement périodiques de troisième espèce. *Annales scientifiques de l’École Normale Supérieure*, 3:9–42, 1886.
- [16] Baruah, N. D. and Begum, N. M. Exact generating functions for the number of partitions into distinct parts. *International Journal of Number Theory*, 14:1995–2011, 2018.
- [17] ——. Proofs of some conjectures of Chan on Appell-Lerch sums. *The Ramanujan Journal*, <https://doi.org/10.1007/s11139-018-0076-x>.
- [18] ——. Generating functions and congruences for some partition functions related to mock theta functions. *International Journal of Number Theory*, revision submitted.
- [19] Berndt, B. C. *Ramanujan’s Notebooks, Part III*. Springer, New York, 1991.

- [20] ——. *Number Theory in the Spirit of Ramanujan*. American Mathematical Society, Providence, RI, 2006.
- [21] Berndt, B.C and Ono, K. *Ramanujan's unpublished manuscript on the partition and tau functions with proofs and commentary*. In: The Andrews Festschrift, D. Foata and G.-N. Han (eds.), Springer-Verlag, Berlin, 39–110, 2001.
- [22] Berndt, B. C. and Rankin, R. A. *Ramanujan: Letters and Commentary*. American Mathematical Society, History of Mathematics Series, Vol. 9:347 pp., 1995.
- [23] Blecher, A. Geometry for totally symmetric plane partitions (TSPPs) with self-conjugate main diagonal. *Utilitas Mathematica*, 88:223–235, 2012.
- [24] Bringmann, K., Jennings-Shaffer, C., and Mahlburg, K. On a modularity conjecture of Andrews, Dixit, Schultz, and Yee for a variation of Ramanujan's  $\omega(q)$ . *Advances in Mathematics*, 325:505–532, 2018.
- [25] Bringmann, K., Lovejoy, J., and Osburn, R. Rank and crank moments for overpartitions. *Journal of Number Theory*, 129:1758–1772, 2009.
- [26] Chan, S. H. Congruences for Ramanujan's  $\phi$  function. *Acta Arithmetica*, 153:161–189, 2012.
- [27] Chan, S. H. and Mao, R. Two congruences for Appell-Lerch sums. *International Journal of Number Theory*, 8:111–123, 2012.
- [28] Chen, S. C. On the number of partitions with distinct even parts. *Discrete Mathematics*, 311:940–943, 2011.
- [29] Chern, S. and Hirschhorn, M. D. Partitions into distinct parts modulo powers of 5. *Annals of Combinatorics*, Special volume in honor of George E. Andrews, to appear.
- [30] Chern, S. and Tang, D. Elementary proofs of congruences modulo 25 for broken  $k$ -diamond partitions. <http://arxiv.org/abs/1807.01890v1> [math.CO] 5 Jul 2018.

- [31] Chern, S. and Wang, C. An infinite family of congruences arising from a second order mock theta function. [arxiv.org/abs/1803.01976](https://arxiv.org/abs/1803.01976) [math.NT] 6 May 2018.
- [32] Choi, Y.-S. Identities for Ramanujan's sixth-order mock theta functions. *Quarterly Journal of Mathematics*, 53:147–159, 2002.
- [33] Cui, S. P. and Gu, N.S.S. Arithmetic properties of  $\ell$ -regular partitions. *Advances in Applied Mathematics*, 51:507–523, 2013.
- [34] Cui, S. P., Gu, N. S. S., and Hao, L.-J. Congruences for some partitions related to mock theta functions. *International Journal of Number Theory*, 14:1055–1071, 2018.
- [35] Ding, H. and Xia, E. X. W. Arithmetic properties for Appell-Lerch Sums. Preprint.
- [36] Dixit, A. and Yee, A. J. Generalized higher order spt-functions. *The Ramanujan Journal*, 31:191–212, 2013. (Special issue in honor of Mourad Ismail and Dennis Stanton)
- [37] Fine, N. J. *Basic Hypergeometric Series and Applications*. American Mathematical Society, Providence, RI, 1988.
- [38] Garthwaite, S. A. The coefficients of the  $\omega(q)$  mock theta function. *International Journal of Number Theory*, 4:1027–1042, 2018.
- [39] Garvan, F. Higher order spt-functions. *Advances in Mathematics*, 228:241–265, 2011.
- [40] Garvan, F., Kim, D., and Stanton, D. Cranks and  $t$ -cores. *Inventiones Mathematicae*, 101:1–17, 1990.
- [41] Garvan, F. and Jennings-Shaffer, C. Exotic Bailey-Slater SPT-functions II: Hecke-Rogers-type double sums and Bailey pairs from groups A, C, E. *Advances in Mathematics*, 299:605–639, 2016.

- [42] Gordon, B. and McIntosh, R. J. A survey of classical mock theta functions. *Partitions, q-series, and modular forms*, 95–144, Dev. Math., 23, Springer, New York.
- [43] Gugg, C. Two modular equations for squares of the Rogers-Ramanujan functions with applications, *The Ramanujan Journal*, 18(2):183–207, 2009.
- [44] Hickerson, D. R. and Mortenson, E. T. Hecke-type double sums, Appell-Lerch sums, and mock theta functions. *Proceedings of the London Mathematical Society*, 109:382–422, 2014.
- [45] ——. Dyson’s Ranks and Appell-Lerch sums. *Mathematische Annalen*, 367:373–395, 2017.
- [46] Hikami, K. Transformation formula of the “second” order mock theta function. *Letters in Mathematical Physics*, 75:93–98, 2006.
- [47] Hirschhorn, M. D. and Hunt, D. C. A simple proof of the Ramanujan conjecture for powers of 5. *Journal für die reine und angewandte Mathematik (Crelle’s Journal)*, 326:1–17, 1981.
- [48] Hirschhorn, M. D. and Sellers, J. A. Arithmetic properties of 1-shell totally symmetric plane partitions. *Bulletin of the Australian Mathematical Society*, 89:473–478, 2014.
- [49] Hirschhorn, M. D. and Sellers, J. A. A congruence modulo 3 for partitions into distinct non-multiples of four *Journal of Integer Sequences*, 17: Article 14.9.6, 2014.
- [50] Jang, M.-J. and Kim, B. On spt-crank-type functions. *The Ramanujan Journal*, 45:211–225, 2018.
- [51] Jennings-Shaffer, C. Another SPT crank for the number of smallest parts in overpartitions with even smallest part. *Journal of Number Theory*, 148:196–203, 2015.

- [52] ——. Higher order SPT functions for overpartitions, overpartitions with smallest part even, and partitions without repeated odd parts. *Journal of Number Theory*, 149:285–312, 2015.
- [53] ——. Exotic Bailey-Slater SPT-functions I: Group A. *Advances in Mathematics*, 305:479–514, 2017.
- [54] Lerch, M. Poznámky k theorii funkcí elliptických. *Rozpravy České Akademie Čísare Františka Josefa Pro Vědy, Slovesnost A Umění v Praze*, 24:465–480, 1892.
- [55] Lovejoy, J. The divisibility and distribution of partitions into distinct parts. *Advances in Mathematics*, 158:253–263, 2001.
- [56] ——. The number of partitions into distinct parts modulo powers of 5. *Bulletin of the London Mathematical Society*, 35:41–46, 2003.
- [57] Merca, M. New relations for the number of partitions with distinct even parts. *Journal of Number Theory*, 176:1–12, 2017.
- [58] Mortenson, E. T. Ramanujan’s  ${}_1\psi_1$  summation, Hecke-type double sums, and Appell-Lerch sums. *The Ramanujan Journal*, 29:121–133, 2012.
- [59] ——. On the dual nature of partial theta functions and Appell-Lerch sums. *Advances in Mathematics*, 264:236–260, 2014.
- [60] Qu, Y. K., Wang, Y. J., and Yao, O. X. M. Generalizations of some conjectures of Chan on congruences for Appell-Lerch sums. *Journal of Mathematical Analysis and Applications*, 460:232–238, 2018.
- [61] Ramanujan, S. Some properties of  $p(n)$ , the number of partitions of  $n$ . *Proceedings of the Cambridge Philosophical Society*, 19:207–210, 1919.
- [62] ——. *The Lost Notebook and Other Unpublished Papers*. Narosa, New Delhi, 1988.

- [63] Rogers, L. J. Second memoir on the expansion of certain infinite products. *Proceedings of the London Mathematical Society*, 25:318–343, 1894.
- [64] Rödseth, Ö. Congruence properties of the partition functions  $q(n)$  and  $q_0(n)$ . *Acta Universitatis Bergensis. Series Mathematica Rumque Naturalium*, 13:27 pp., 1969.
- [65] Tang, D. New congruences for broken  $k$ -diamond partitions. *Journal of Integer Sequences*, 21 no. 2, Art. 18.5.8:10 pp., 2018.
- [66] Waldherr, M. On certain explicit congruences for mock theta functions. *Proceedings of the American Mathematical Society*, 139:865–879, 2011.
- [67] Wang, L. New congruences for partitions related to mock theta functions. *Journal of Number Theory*, 175:51–65, 2017.
- [68] Wolfram, S. *The Mathematica Book*. Cambridge University Press, New York, 1996.
- [69] Xia, E. X. W. New infinite families of congruences modulo 8 for partitions with even parts distinct. *Electronic Journal of Combinatorics*, 21: #P4.8, 2014.
- [70] Xia, E. X. W. A new congruence modulo 25 for 1-shell totally symmetric plane partitions. *Bulletin of the Australian Mathematical Society*, 91:41–46, 2015.
- [71] ——. Arithmetic properties for a partition function related to the Ramanujan/Watson mock theta function  $\omega(q)$ . *The Ramanujan Journal*, 46:545–562, 2018.
- [72] Zhang, W. and Shi, J. Congruences for the coefficients of the mock theta function  $\omega(q)$ . *The Ramanujan Journal*, <https://doi.org/10.1007/s11139-018-0056-1>.
- [73] Zuckerman, H. S. Identities analogous to Ramanujans identities involving the partition function. *Duke Mathematical Journal* 5(1):88-110, 1939.

- [74] Zwegers, S.P. Mock theta functions. PhD thesis, Universiteit Utrecht, 2002.