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Topics in Combinatorics, Algebra and Geometry
Potential Final Project D

Winter Semester
2023-2024

1   The rational zeta map and area preserving involutions

This project concerns learning more about the rational zeta map and potential new progress on area preserving involutions, see [3] as well as [1, 2, 4] for more details.

References

[1] Drew Armstrong, Christopher R. H. Hanusa, and Brant C. Jones. Results and conjectures on simultaneous core partitions. *European J. Combin.*, 41:205–220, 2014.

[2] Drew Armstrong, Nicholas A. Loehr, and Gregory S. Warrington. Sweep maps: a continuous family of sorting algorithms. *Adv. Math.*, 284:159–185, 2015.

[3] Cesar Ceballos, Tom Denton, and Christopher R. H. Hanusa. Combinatorics of the zeta map on rational Dyck paths. *Journal of Combinatorial Theory, Series A*, 141:33–77, 2016.

[4] Hugh Thomas and Nathan Williams. Sweeping up zeta. *Selecta Math. (N.S.)*, 24(3):2003–2034, 2018.