Invariant measures of $\mathscr{B}$-free subshifts

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Sarnak [5] turned attention to $\mathscr{B}$-free systems. For $\mathscr{B} \subseteq \mathbb{N}$, the $\mathscr{B}$-free subshift is the orbit closure of the characteristic function of the set of $\mathscr{B}$-free integers. We show that many results about invariant measures, previously only known for the hereditary $\mathscr{B}$-free subshift [4, 1], have their analogues for $\mathscr{B}$-free subshift. In particular, we discuss the recent proof of a conjecture of Keller [3] about a description of such measures. The talk is based on the joint work with Joanna Kułaga-Przymus and Daniel Sell [2].

References

[1] Dymek, A., Kasjan, S., Kułaga-Przymus, J., and Lemańczyk, M. $\mathscr{B}$-free sets and dynamics. *Trans. Amer. Math. Soc. 370*, 8 (2018), 5425–5489.

[2] Dymek, A., Kułaga-Przymus, J., and Sell, D. Invariant measures for $\mathscr{B}$-free systems revisited. *Ergodic Theory Dynam. Systems Published online 2024:1–32. doi:10.1017/etds.2024.7.*

[3] Keller, G. Generalized heredity in $\mathcal{B}$-free systems. *Stoch. Dyn. 21*, 3 (2021), Paper No. 2140008, 19.

[4] Kułaga-Przymus, J., Lemańczyk, M., and Weiss, B. On invariant measures for $\mathcal{B}$-free systems. *Proc. Lond. Math. Soc. (3) 110*, 6 (2015), 1435–1474.

[5] Sarnak, P. Three lectures on the Möbius function, randomness and dynamics. http://publications.ias.edu/sarnak/.