

Weighted shifts are among the most studied operators in Linear Dynamics. Various dynamical properties have been characterized in terms of weights for these operators such as hypercyclicity [1], topological mixing [2], chaos [3] and frequent hypercyclicity [4]. In a joint work with Dimitris Papathanasiou [5], we have replaced the scalar weights by operators and investigated the dynamical properties of this new family. The aim of this talk will be to highlight the differences between scalar weights and operator weights, as well as the links between an operator  $T$  and the associated shift.

## References

- [1] Salas, H. N. Hypercyclic weighted shifts. *Trans. Amer. Math. Soc.*, 347:993–1004, 1995.
- [2] Costakis, G. and Sambarino, M. Topologically mixing hypercyclic operators. *Proc. Amer. Math. Soc.*, 132:385–389, 2004.
- [3] Grosse-Erdmann, K.-G. Hypercyclic and chaotic weighted shifts. *Studia Math.*, 139:47–68, 2000.
- [4] Bayart, F. and Ruzsa, I. Z. Difference sets and frequently hypercyclic weighted shifts. *Ergodic Theory Dynam. Systems*, 35:691–709, 2015.
- [5] Menet, Q. and Papathanasiou D. Dynamics of weighted shifts on  $\ell^p$ -sums and  $c_0$ -sums. *Adv. Math.*, 470, 2025.