

# Uniform Mean Ergodicity, Quasi-Compactness and Compactness of Koopman Operators

Julian Hölz, Bergische Universität Wuppertal

## Abstract

Each continuous mapping  $\varphi : X \rightarrow X$  on a compact Hausdorff space  $X$  induces a lattice homomorphism

$$T_\varphi : C(X) \rightarrow C(X), \quad f \mapsto f \circ \varphi,$$

on the Banach lattice  $C(X)$  of continuous functions  $f : X \rightarrow \mathbb{C}$ , called the *Koopman operator*. The operator theoretic properties that we examine are *uniform mean ergodicity*, *quasi-compactness* and *compactness* and relate those to more classical properties of dynamical systems.