

# Strongly mixing operators on Hilbert spaces and speed of mixing

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In measurable dynamics, a measurable map  $T: (X, \mathcal{B}, m) \longrightarrow (X, \mathcal{B}, m)$  acting on a probability space is said to be strongly mixing if the probability measure  $m$  is  $T$ -invariant, that is  $m(T^{-1}(A)) = m(A)$  ( $A \in \mathcal{B}$ ), and  $m(T^{-n}(A) \cap B) \xrightarrow{n \rightarrow +\infty} m(A)m(B)$  ( $A, B \in \mathcal{B}$ ). We are interested in the speed of mixing when  $T$  is a bounded linear operator on a separable Hilbert space which is strongly mixing with respect to a Gaussian measure.