Department of Mathematics, BGU

BGU Probability and Ergodic Theory (PET) seminar

On *Thursday, February ,22 2024*

At *11:10 – 12:00*

In *101-*

Michael Lin (BGU)

will talk about

Unfiorm ergodicity and the one-sided ergodic Hilbert transform

Abstract: Let T be a bounded linear operator on a Banach space X satisfying $\lVert T^n\rVert/n\rightarrow .0$ We prove that T is unfiormly ergodic fi and only fi the one-sided ergodic Hilbert transform $H(T)x:=\lim_{n\rightarrow \infty}\sum_{k=1}^nk^{-1}T^kx$ converges for every $x\in \overline{(I-T)X}$. When T is a power-bounded (or more generally (C,α) bounded for some $0<\alpha<1$), then T us unfiormly ergodic fi and only fi the domain of H equals $(I-T)X$.