Eda Cesaratto Universidad Nacional de General Sarmiento

Poisson genericity in numeration systems with exponentially mixing probabilities

Abstract: We define Poisson genericity for infinite sequences in any finite or countable alphabet and with an invariant exponentially-mixing probability measure. A sequence is Poisson generic if the number of occurrences of blocks of symbols asymptotically follows a Poisson law as the block length increases. We prove that almost all sequences are Poisson generic. Our result generalizes Peres and Weiss' theorem about Poisson genericity of integer bases numeration systems and applies to exponentially mixing numeration systems. In particular, we obtain that for almost all real numbers their continued fraction expansions are Poisson generic.

Joint work with Nicolás Álvarez, Verónica Becher and Martín Mereb.