

THE STRUCTURE OF STRONGLY STATIONARY SYSTEMS

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A stationary process $\{f_i\}_{i \in \mathbb{N}}$ is strongly stationary if for all positive integers r the processes $\{f_i\}_{i \in \mathbb{N}}$ and $\{f_{ri}\}_{i \in \mathbb{N}}$ have the same distribution. A measure preserving system (X, \mathcal{B}, μ, T) is strongly stationary if for some generating partition \mathcal{P} and for all \mathcal{P} -measurable functions f the stationary processes $\{T^i f\}_{i \in \mathbb{N}}$ are strongly stationary. This new class of partially exchangeable systems was introduced by Furstenberg and Katznelson. They are of particular interest because they reflect several recurrence properties of general measure preserving systems. In this talk we will discuss the structure of strongly stationary measure preserving systems.