

Filtered Probability

A probability space is (Ω, \mathcal{F}, P) .

\mathcal{F} is subset 2^Ω

$P : \mathcal{F} \rightarrow [0, 1]$

Exercise: Define σ . Show that intersection of σ algebra is also a σ algebra.

A collection $\{\mathcal{F}_n\}_{n \geq 0}$ of σ algebras is called a filtration if $\mathcal{F}_k \subset \mathcal{F}_{k+1}$ for all $k \geq 0$.