



Project

“Poisson process”

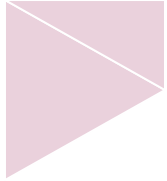
Siméon Denis Poisson





Counting process

1. $\{C(t), t \geq 0\}$
2. $C(t) \geq 0$, $C(t) \in (0, 1, 2, \dots, n)$ for all $t \geq 0$
3. $C(t)$ is nondecreasing in t , $C(t) - C(s)$ equals the number of events in the time interval $(s, t]$, $s < t$



Poisson process

A Poisson process $\{N(t), t \geq 0\}$ is a counting process with the following additional properties:

1. $N(0) = 0$.
2. The process has stationary and independent increments.
3. $P(N(t) = n) = e^{-\lambda t} ((\lambda t)^n / n!)$, $n = 0, 1, 2, \dots$



Where do we use it?

Thank you for listening.