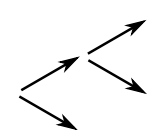


# Poisson Process

# n-stage Bernoulli trial

$$\xi(t) = \sum_{j=-\infty}^{\infty} \delta(t - t_j)$$


$$p = r dt$$

—————→  $t$

time-continuous

—————→  $t$

time-discrete



number of events  
in  $[0, T]$



Poisson distribution

Bernoulli distribution

$$k = \int_0^T dt \xi(t)$$

$$k = \# \text{ "Yes"}$$



if  $\langle k \rangle$  gets large:  
normal approximation

$$\approx N(rT, rT)$$

$$\approx N(np, npq)$$