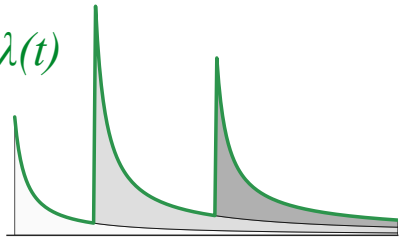


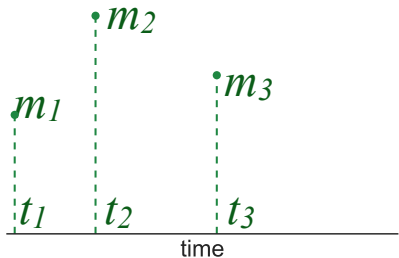
## Hawkes Point Process

event rate

$\lambda(t)$



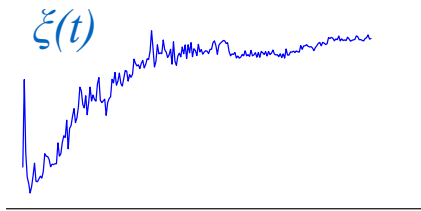
observed  
events



## Hawkes Intensity Process

expected event  
volume

$\xi(t)$



volume of  
exogenous  
promotion

$s(t)$

