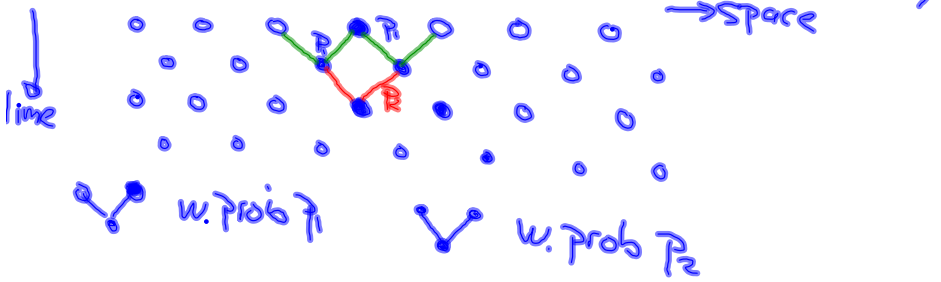
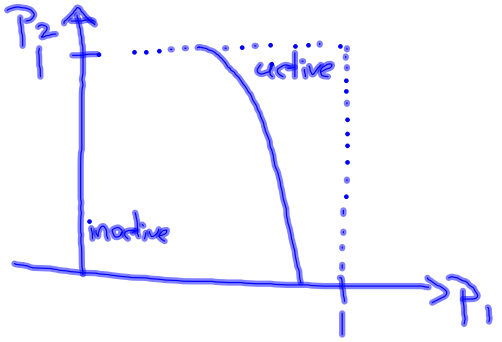
DP & DDE

directed percolation delay diff eqs.

Domany Kinzel mod. (Haye Hinrichsen)





Oct 28-16:33

Oct 28-16:57

delayed maps

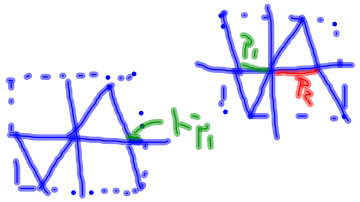
$$x_{n+1} = f(x_{n-\tau}, \underbrace{x_{n+1-\tau}}_{\sigma_{n+1-\tau}})$$

$\sigma_n = \mathrm{Sign}(x_n)$

$$x_{n+1} = f(x_{n-\tau}, \sigma_{n+1-\tau})$$

$f(x,+)$

$f(x,-)$



$x \in [-1,1]$

$\sigma_n = 0$ if $x_n \in I_0$

1 if $x_n \in I_1$

$\sigma_0, \sigma_1, \sigma_2, \ldots$

MTH ASU

Oct 28-17:22

DDE

$$\dot{x}(t) = f(x(t)) + g(x(t-\tau)) \cdot \delta_T(t-a)$$

$$x_{n+1} = x_n'' + x_{n-\tau}''$$

$$\dot{\varphi}_\nu = 1 + \sum_\mu \sin(\varphi_\nu - \varphi_\mu) A_{\nu\mu}$$

Oct 28-17:47