

1 Dimensional Probability of Identity, $\psi(x)$

Distance, x

x_l

δ

1

2

Tail Parameter, α

One Long Jump

$$\psi \propto \frac{D_\alpha}{\rho \mu^2} x^{-1-\alpha}$$

One Quick Jump

$$\psi \propto \frac{x^{-1+\alpha}}{D_\alpha \rho}$$

Initial Contact

$$\psi \sim \delta^{-1+\alpha} / (D_\alpha \rho)$$

Superdiffusive Spreading

$$\psi \propto e^{-(x/\bar{x})^{\alpha-1}}$$

Diffusive Spreading

$$\psi \propto e^{-x/\bar{x}}$$

2 Dimensional Probability of Identity, $\psi(x)$

Distance, x

x_l

δ

One Long Jump

$$\psi \propto \frac{D_\alpha}{\rho \mu^2} x^{-2-\alpha}$$

One Quick Jump

$$\psi \propto \frac{x^{-2+\alpha}}{D_\alpha \rho}$$

Diffusive Spreading

$$\psi \sim \frac{\text{Log}(\bar{x}/x)}{D_2 \rho}$$

Initial Contact

$$\psi \sim \delta^{-2+\alpha}/(D_\alpha \rho)$$

Initial Contact

$$\psi \sim \text{Log}(\bar{x}/\delta)/(D_2 \rho)$$

2

Tail Parameter, α