(a)

$\partial\Omega$

$\mathbf{x_0}$

$\partial\mathcal{U}$

$\mathbf{n_0}$

Ω

$\mathbf{n}$
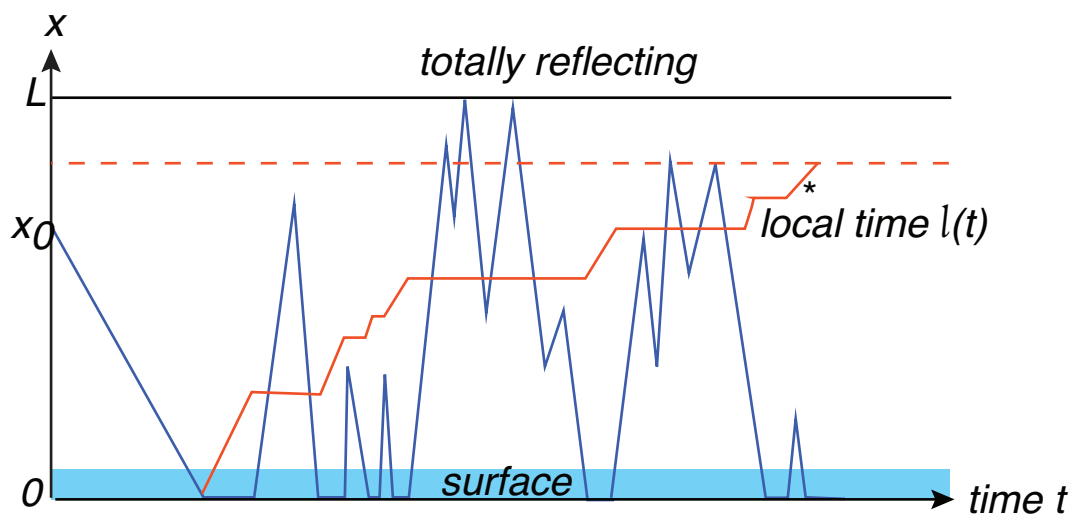
(b)

$\partial\Omega$

$\mathbf{x_0}$

$\mathcal{U}$ trap

Ω

Probability of adsorption depends on the amount of particle/surface contact time (a) Brownian local time (b) Brownian occupation time

x

L

totally reflecting

x_0

local time $l(t)$

*

0

surface

time t

Adsorption occurs when local time crosses a random threshold

Robin BVP

local time rhreshold distribution
Ψ = exponential

local time propagator
$\mathcal{P}(\mathbf{x},z,t)$

inverse LT

$\mathcal{P}(\mathbf{x},l,t)$

$\Psi(l)$

$p^{\Psi}(x,\mathbf{t})$