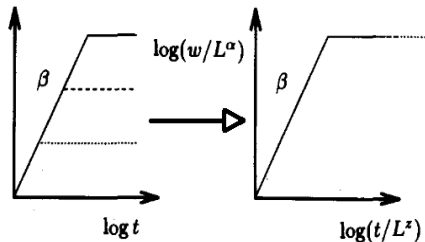- Dynamic Scaling:

$$W(L, t) \sim t^{\beta} \rightarrow W_{sat} \sim L^{\alpha},$$

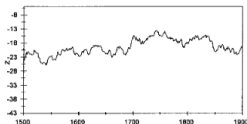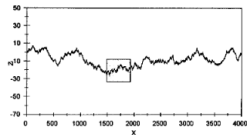$$t_{\times} \sim L^{z}, \ \xi_{\parallel} \sim t^{1/z} \rightarrow L,$$

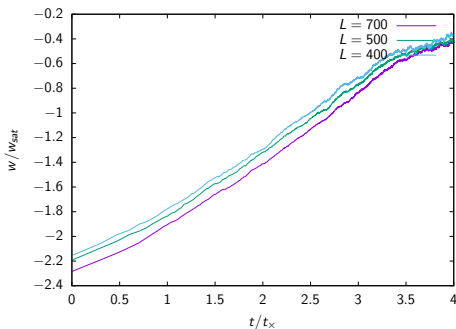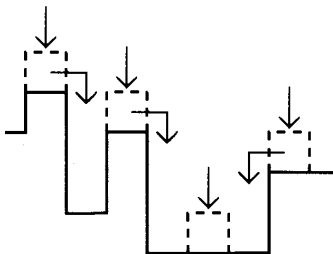$$\frac{W(L, t)}{L^{\alpha}} \sim f(\frac{t}{L^{z}})$$

- Self affinity:

$$|h(x_1) - h(x_2)| \sim |x_1 - x_2|^{\alpha}$$

Surfaces are
self-affine random
fractals.

Random deposition with surface relaxation:

Edward-Wilkinson equation:

$$\frac{\partial h}{\partial t} = \nu \nabla^2 h + \eta(x, t)$$
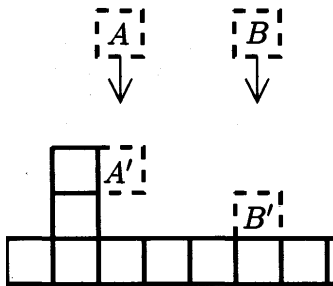
Invariant under,

$$x \to bx, \ h \to b^\alpha h, \ t \to b^z t$$

$$\alpha = \frac{2 - d}{2} \ (0.49)$$
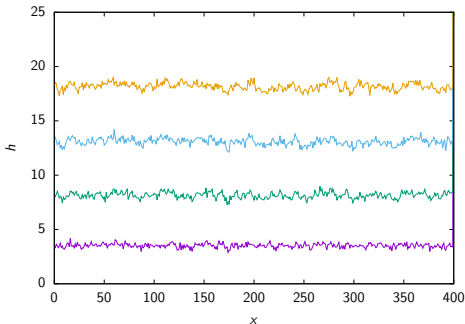
$$\beta = \frac{2 - d}{4} \ (0.25 \pm 0.02)$$

$$z = 2$$

Ballistic deposition:

KPZ equation:

$$\frac{\partial h}{\partial t} = \nu\nabla^2 h + \frac{\lambda}{2}(\nabla h)^2 + \eta(x, t)$$

ν, λ and D change under scaling

For $d = 1$;

$$\alpha = \frac{1}{2} \ (0.45)$$

$$\beta = \frac{1}{3} \ (0.34 \pm 0.03)$$

$$z = \frac{3}{2}$$