

The Einstein – law (diffusion):

$$\langle R^2 \rangle \approx t$$

Result for the one-dimensional diffusion:

- Left picture: Distribution of the endpoints of a random walk (=diffusion, distance a particle travels) as a function of number of steps (=time). Many averages are used.
- Right picture: The variance of these distributions ($\langle R^2 \rangle$) is indeed exactly linear in time.

