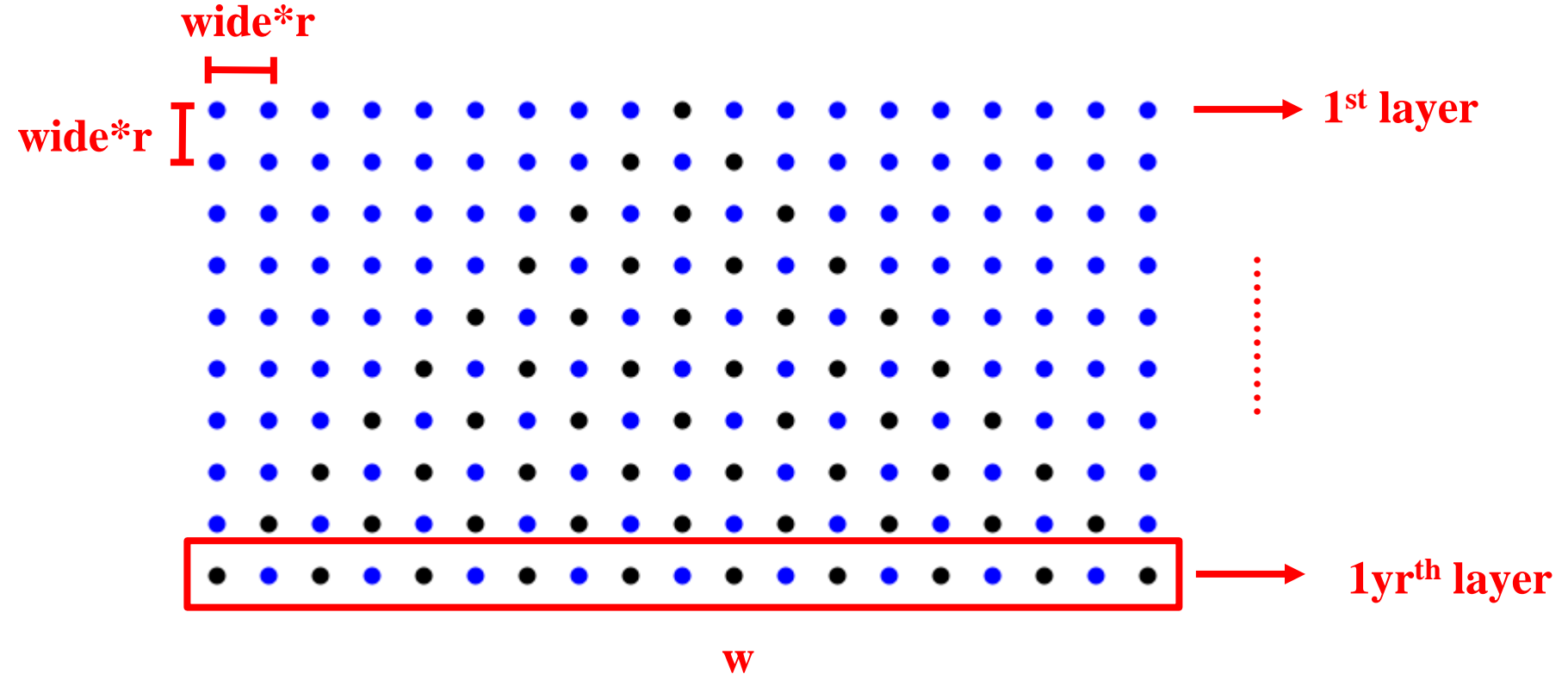


Bean Machine Distribution Simulation

Author: HBY coding academic

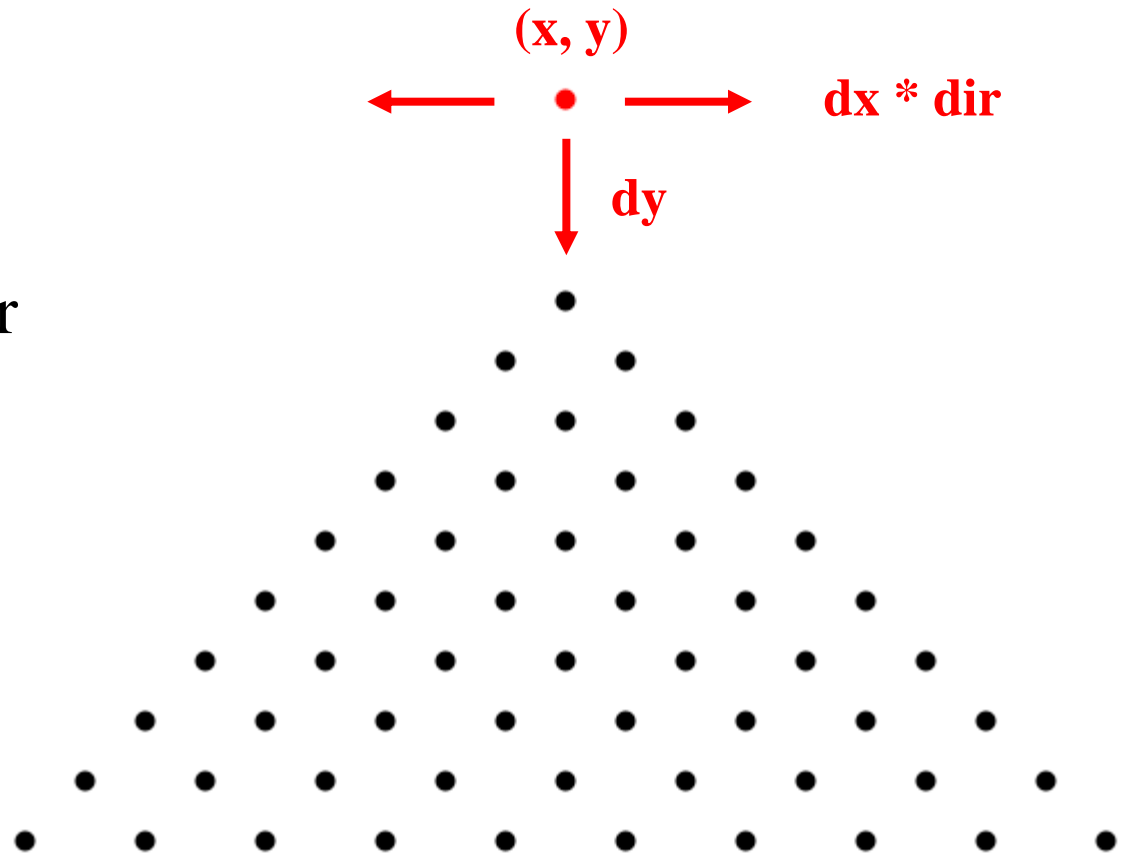
Parameters for bean machine

- pin layer: l_{yr}
- max pin: w
- wide: wide
- multiplier: r



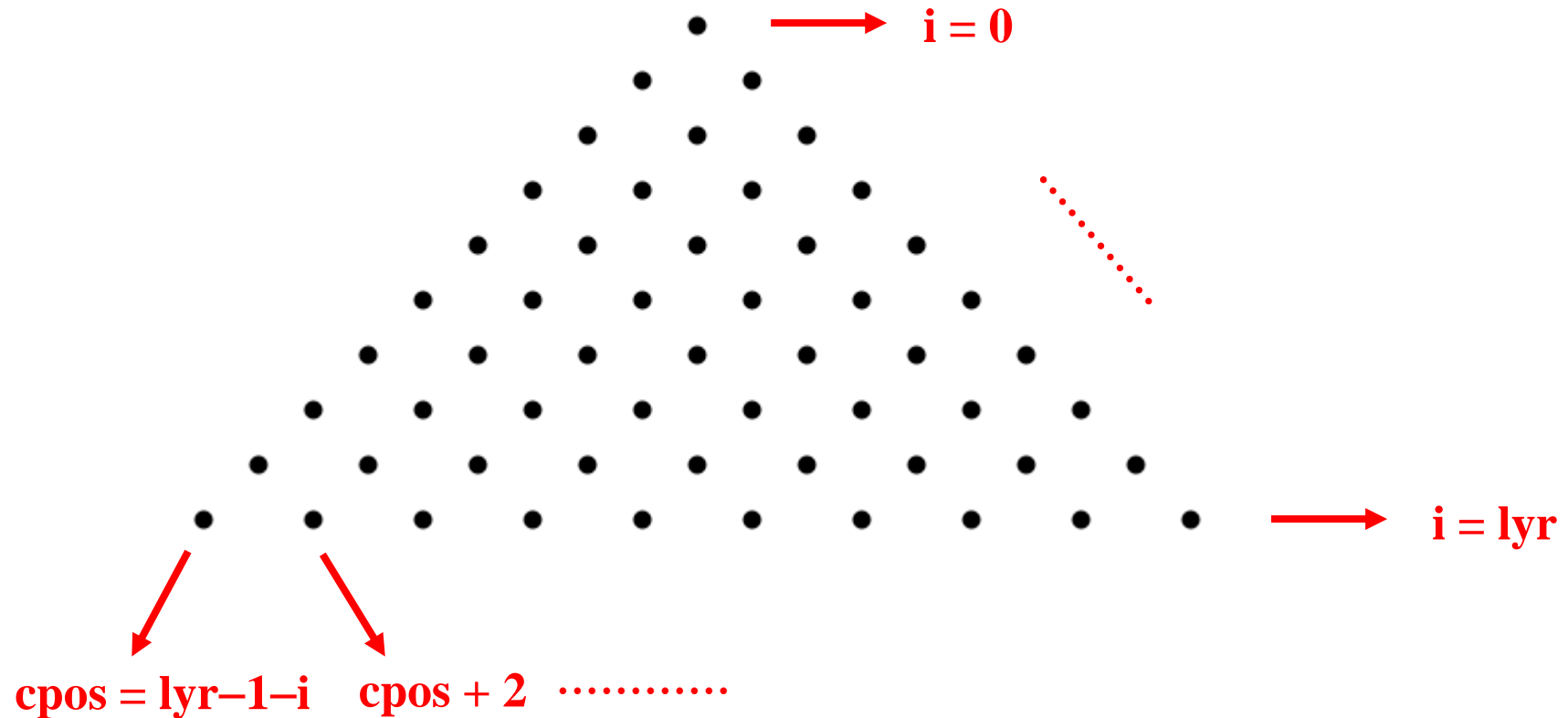
Marble structure

- **Marble(x, y, dir, dx, dy)**
 - ▣ x position of a marble: x
 - ▣ y position of a marble: y
 - ▣ horizontal speed: dx
 - ▣ horizontal speed direction: dir
 - $\text{dir} = 1 \text{ or } -1$
 - ▣ vertical speed: dy



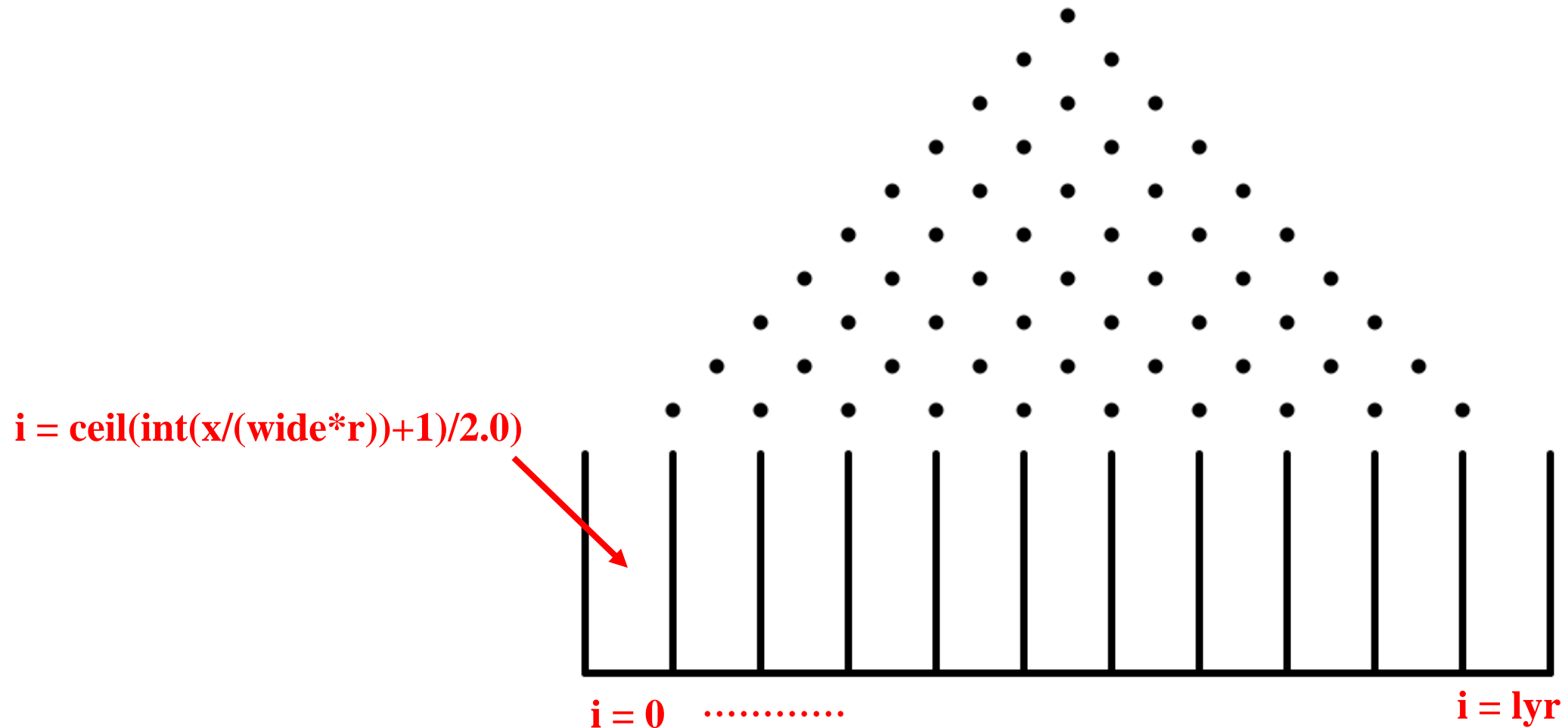
Bean machine setup

- first pin at each layer: cpos



Distribution

- count the number of marbles fell into the specific buckets



Parameters for distribution simulation

- falling velocity: speed
- number of marbles dropped at once: MaxNbMarble
- probability for falling to right: prob (obtain different distributions)