

The goals of this discussion section are:

1. connect random walkers with PDEs describing the global motion.

Participation in discussion section counts as 5% of the grade. Completion of the worksheets counts as 20% of the grade. **Submit your worksheet work by March 10th at 2:59pm.**

1. Derive the governing equation, and its parameter, describing the expectation of the number of walkers moving in a two dimensional plane, at location (x, y) at time t if every time step Δt the walkers follow the following rule:
 - Take a step left of length Δx with probability $1/6$
 - Take a step right of length Δx with probability $1/6$
 - Take a step down of length Δy with probability $1/3$
 - Take a step up of length Δy with probability $1/3$You may introduce some coefficients along the way.
2. Submit your work on Catcourses under the assignment **Worksheet 7 as a .pdf.**