

Lecture on August 1st, 2018
Birth and Death Process with absorption

1 Birth and Death Process with absorption (See Chap 6.5)

- Derive first transition probability.
- Introduce embedded Markov chain.
- Using first step analysis to establish the iterative formulas to find probability and mean time of absorption at state 0 given starting from state i . Furthermore, the solutions to these two problems.
- Example: Linear Birth and Death Process.

2 Introduction to Brownian Motion (See Chap 8.1)

- History of Brownian Motion.
- Diffusion equation and transition density function.