## Lecture on August 5th, 2019 Brownian Motion

## 1 Brownian Motion (See Chap 8.1)

- Central Limit Theorem and Invariance Principle.
- Gaussian Process and Central limit principle for random functions.

## 2 Reflection Principle (See Chap 8.2)

- Observations on reflected sample path.
- Theorem on Reflection principle.
- Definition and distributions of hitting time  $\tau_x$ .