

Lecture on August 2nd, 2018  
Brownian Motion

**1 Brownian Motion (See Chap 8.1)**

- Definition of Brownian Motion.
- Mean, Variance, Covariance, Transition probability density of Brownian Motion.
- 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.