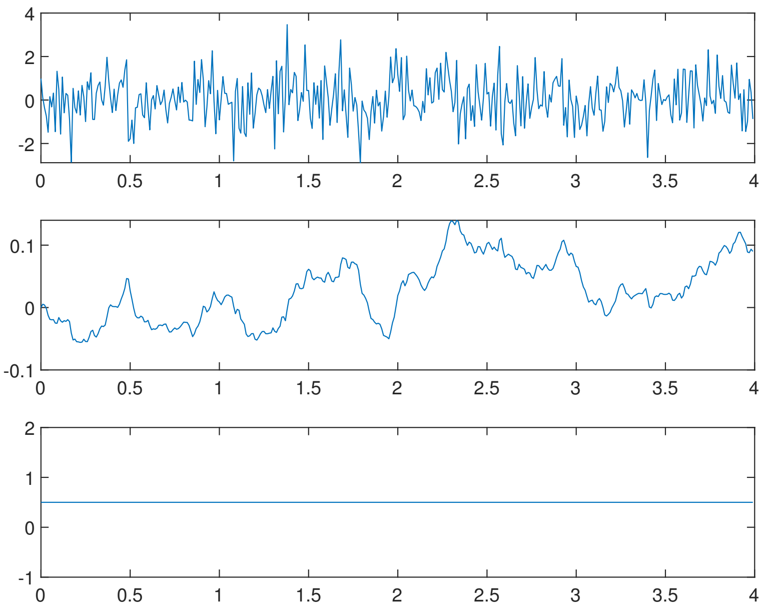
Lecture 3: Brief Review of Random Process

- random process: average (time, ensemble), stationary, ergodic, autocorrelation function, power spectral density, noise
- **white Gaussian noise**

Question: which one is Gaussian?



Homework

(1) Let a random process $Y(t)$ be defined by $Y(t) = X$, where X is a uniform random variable $[-1, 1]$

- Is $Y(t)$ (wide-sense) stationary?
- Is $Y(t)$ ergodic?
- Draw the autocorrelation function of $Y(t)$.